

|                                                                                                  |                                                                                                                  |                  |                     |                |            |                |               |                                                                                                                                                                            |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------|---------------------|----------------|------------|----------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <br><b>NISOC</b> | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |                  |                     |                |            |                |               | <br> |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                                      |                  |                     |                |            |                |               |                                                                                                                                                                            |                     |
| شماره پیمان:<br>053 - 073 - 9184                                                                 | پروژه<br>BK                                                                                                      | بسته کاری<br>GCS | صادر کننده<br>PEDCO | تسهیلات<br>120 | رشته<br>IN | نوع مدرک<br>DT | سریال<br>0006 | نسخه<br>D03                                                                                                                                                                | شماره صفحه: 1 از 28 |

## طرح نگهداشت و افزایش تولید 27 مخزن

### DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

#### نگهداشت و افزایش تولید میدان نفتی بینک

|      |          |                           |               |             |                |                 |
|------|----------|---------------------------|---------------|-------------|----------------|-----------------|
|      |          |                           |               |             |                |                 |
|      |          |                           |               |             |                |                 |
| D03  | FEB.2024 | AFC                       | P.Hajisadeghi | M.Fakharian | S.Faramarzpour |                 |
| D02  | MAY.2023 | AFC                       | P.Hajisadeghi | M.Fakharian | A.M.Mohseni    |                 |
| D01  | DEC.2022 | IFA                       | P.Hajisadeghi | M.Fakharian | M.Mehrshad     |                 |
| D00  | MAR.2022 | IFC                       | P.Hajisadeghi | M.Fakharian | M.Mehrshad     |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by:  | Checked by: | Approved by:   | CLIENT Approval |

Class: 1

CLIENT Doc. Number: F9Z-708927

status:

**IDC:** Inter-Discipline Check

**IFC:** Issued For Comment

**IFA:** Issued For Approval

**AFD:** Approved For Design

**AFC:** Approved For Construction

**AFP:** Approved For Purchase

**AFQ:** Approved For Quotation

**IFI:** Issued For Information

**AB-R:** As-Built for CLIENT Review

**AB-A:** As-Built - Approved



NISOC

تکده‌اشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

|                  |       |           |            |         |      |          |       |      |                     |
|------------------|-------|-----------|------------|---------|------|----------|-------|------|---------------------|
| شماره پیمان:     | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه | شماره صفحه: 2 از 28 |
| 053 - 073 - 9184 | BK    | GCS       | PEDCO      | 120     | IN   | DT       | 0006  | D03  |                     |

## REVISION RECORD SHEET

| Page | D00 | D01 | D02 | D03 | D04 | Page | D00 | D01 | D02 | D03 | D04 |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1    | X   | X   | X   | X   |     | 65   |     |     |     |     |     |
| 2    | X   | X   | X   | X   |     | 66   |     |     |     |     |     |
| 3    | X   | X   |     | X   |     | 67   |     |     |     |     |     |
| 4    | X   | X   |     |     |     | 68   |     |     |     |     |     |
| 5    | X   | X   | X   | X   |     | 69   |     |     |     |     |     |
| 6    | X   | X   | X   | X   |     | 70   |     |     |     |     |     |
| 7    | X   | X   | X   | X   |     | 71   |     |     |     |     |     |
| 8    | X   | X   | X   | X   |     | 72   |     |     |     |     |     |
| 9    | X   | X   | X   | X   |     | 73   |     |     |     |     |     |
| 10   | X   | X   | X   | X   |     | 74   |     |     |     |     |     |
| 11   | X   | X   | X   | X   |     | 75   |     |     |     |     |     |
| 12   | X   | X   | X   | X   |     | 76   |     |     |     |     |     |
| 13   | X   | X   | X   | X   |     | 77   |     |     |     |     |     |
| 14   | X   | X   | X   | X   |     | 78   |     |     |     |     |     |
| 15   | X   | X   | X   | X   |     | 79   |     |     |     |     |     |
| 16   | X   | X   | X   | X   |     | 80   |     |     |     |     |     |
| 17   | X   | X   | X   | X   |     | 81   |     |     |     |     |     |
| 18   | X   | X   | X   | X   |     | 82   |     |     |     |     |     |
| 19   | X   | X   | X   | X   |     | 83   |     |     |     |     |     |
| 20   | X   | X   | X   | X   |     | 84   |     |     |     |     |     |
| 21   | X   | X   | X   | X   |     | 85   |     |     |     |     |     |
| 22   | X   | X   | X   | X   |     | 86   |     |     |     |     |     |
| 23   | X   | X   | X   | X   |     | 87   |     |     |     |     |     |
| 24   | X   | X   | X   | X   |     | 88   |     |     |     |     |     |
| 25   | X   | X   | X   | X   |     | 89   |     |     |     |     |     |
| 26   | X   | X   | X   | X   |     | 90   |     |     |     |     |     |
| 27   | X   | X   | X   | X   |     | 91   |     |     |     |     |     |
| 28   | X   | X   |     | X   |     | 92   |     |     |     |     |     |
| 29   | X   | X   |     |     |     | 93   |     |     |     |     |     |
| 30   | X   | X   |     |     |     | 94   |     |     |     |     |     |
| 31   | X   | X   |     |     |     | 95   |     |     |     |     |     |
| 32   | X   | X   |     |     |     | 96   |     |     |     |     |     |
| 33   | X   | X   |     |     |     | 97   |     |     |     |     |     |
| 34   | X   | X   |     |     |     | 98   |     |     |     |     |     |
| 35   | X   | X   |     |     |     | 99   |     |     |     |     |     |
| 36   | X   | X   |     |     |     | 100  |     |     |     |     |     |
| 37   | X   | X   |     |     |     | 101  |     |     |     |     |     |
| 38   | X   | X   |     |     |     | 102  |     |     |     |     |     |
| 39   |     |     |     |     |     | 103  |     |     |     |     |     |
| 40   |     |     |     |     |     | 104  |     |     |     |     |     |
| 41   |     |     |     |     |     | 105  |     |     |     |     |     |
| 42   |     |     |     |     |     | 106  |     |     |     |     |     |
| 43   |     |     |     |     |     | 107  |     |     |     |     |     |
| 44   |     |     |     |     |     | 108  |     |     |     |     |     |
| 45   |     |     |     |     |     | 109  |     |     |     |     |     |
| 46   |     |     |     |     |     | 110  |     |     |     |     |     |
| 47   |     |     |     |     |     | 111  |     |     |     |     |     |
| 48   |     |     |     |     |     | 112  |     |     |     |     |     |
| 49   |     |     |     |     |     | 113  |     |     |     |     |     |
| 50   |     |     |     |     |     | 114  |     |     |     |     |     |
| 51   |     |     |     |     |     | 115  |     |     |     |     |     |
| 52   |     |     |     |     |     | 116  |     |     |     |     |     |
| 53   |     |     |     |     |     | 117  |     |     |     |     |     |
| 54   |     |     |     |     |     | 118  |     |     |     |     |     |
| 55   |     |     |     |     |     | 119  |     |     |     |     |     |
| 56   |     |     |     |     |     | 120  |     |     |     |     |     |
| 57   |     |     |     |     |     | 121  |     |     |     |     |     |
| 58   |     |     |     |     |     | 122  |     |     |     |     |     |
| 59   |     |     |     |     |     | 123  |     |     |     |     |     |
| 60   |     |     |     |     |     | 124  |     |     |     |     |     |
| 61   |     |     |     |     |     | 125  |     |     |     |     |     |
| 62   |     |     |     |     |     | 126  |     |     |     |     |     |
| 63   |     |     |     |     |     | 127  |     |     |     |     |     |
| 64   |     |     |     |     |     | 128  |     |     |     |     |     |

|                                                                                               |                                                                                                                  |       |           |           |         |      |          |                                                                                    |      |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------|-----------|-----------|---------|------|----------|------------------------------------------------------------------------------------|------|
| <br><br>NISOC | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p> |       |           |           |         |      |          |  |      |
|                                                                                               | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                                      |       |           |           |         |      |          |                                                                                    |      |
|                                                                                               | شماره پیمان:                                                                                                     | پروژه | بسته کاری | صادرکننده | تجهیزات | رشته | نوع مدرک | سریال                                                                              | نسخه |
| 053 - 073 - 9184                                                                              | BK                                                                                                               | GCS   | PEDCO     | 120       | IN      | DT   | 0006     | D03                                                                                |      |

#### REFERENCE DOCUMENTS :

D03

REV.

|                                                                        |                               |     |
|------------------------------------------------------------------------|-------------------------------|-----|
| Specification For Instrumentation                                      | BK-GNRAL-PEDCO-000-IN-SP-0001 | D04 |
| Process Basis Of Design                                                | BK-GNRAL-PEDCO-000-PR-DB-0001 | D08 |
| Piping Material Specification                                          | BK-GCS-PEDCO-120-PI-SP-0001   | D05 |
| Hazardous Area Classification Layout                                   | BK-GCS-PEDCO-120-SA-PY-0002   | D01 |
| Instrument & Control System Design Criteria                            | BK-GCS-PEDCO-120-IN-DC-0002   | D02 |
| Symbol & Legend For PFD and P&ID                                       | BK-GCS-PEDCO-120-PR-PI-0001   | D04 |
| P&ID - Gas Compression Inlet Gas Pipeline (Binak)                      | BK-GCS-PEDCO-120-PR-PI-0002   | D07 |
| P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)                   | BK-GCS-PEDCO-120-PR-PI-0003   | D07 |
| P&ID - Slug Catcher System                                             | BK-GCS-PEDCO-120-PR-PI-0004   | D07 |
| P&ID - Gas Compression Inlet Knock Out Drum                            | BK-GCS-PEDCO-120-PR-PI-0005   | D07 |
| P&ID - 1st Stage Gas Compression Suction Drums                         | BK-GCS-PEDCO-120-PR-PI-0006   | D07 |
| P&ID - 1st Stage Gas Compression Compressors                           | BK-GCS-PEDCO-120-PR-PI-0007   | D07 |
| P&ID - 1st Stage Gas Compression Air Coolers                           | BK-GCS-PEDCO-120-PR-PI-0008   | D07 |
| P&ID - 2nd Stage Gas Compression Suction Drums                         | BK-GCS-PEDCO-120-PR-PI-0009   | D07 |
| P&ID - 2nd Stage Gas Compression Compressors                           | BK-GCS-PEDCO-120-PR-PI-0010   | D06 |
| P&ID - 2nd Stage Gas Compression Air Coolers                           | BK-GCS-PEDCO-120-PR-PI-0011   | D07 |
| P&ID - 2nd Stage Gas Compression Discharge Drum                        | BK-GCS-PEDCO-120-PR-PI-0012   | D07 |
| P&ID - Gas Compression Dehydration Package                             | BK-GCS-PEDCO-120-PR-PI-0013   | D07 |
| P&ID - Lean Glycol Storage Tank                                        | BK-GCS-PEDCO-120-PR-PI-0014   | D07 |
| P&ID - Instrument & Plant Air System                                   | BK-GCS-PEDCO-120-PR-PI-0015   | D07 |
| P&ID - Nitrogen Generation System                                      | BK-GCS-PEDCO-120-PR-PI-0016   | D07 |
| P&ID - Close Drain System                                              | BK-GCS-PEDCO-120-PR-PI-0017   | D07 |
| P&ID - Corrosion Inhibitor Package                                     | BK-GCS-PEDCO-120-PR-PI-0018   | D07 |
| P&ID - Methanol Injection Package                                      | BK-GCS-PEDCO-120-PR-PI-0019   | D06 |
| P&ID - LP Flare System                                                 | BK-GCS-PEDCO-120-PR-PI-0020   | D07 |
| P&ID - Oily Water Sewer                                                | BK-GCS-PEDCO-120-PR-PI-0021   | D05 |
| P&ID - Fuel Gas System                                                 | BK-GCS-PEDCO-120-PR-PI-0022   | D07 |
| P&ID - Diesel Oil System                                               | BK-GCS-PEDCO-120-PR-PI-0023   | D07 |
| P&ID - Potable Water System                                            | BK-GCS-PEDCO-120-PR-PI-0024   | D06 |
| P&ID - Glycol Sump Drum                                                | BK-GCS-PEDCO-120-PR-PI-0025   | D07 |
| P&ID - Fire Water Network                                              | BK-GCS-PEDCO-120-SA-PI-0001   | D04 |
| P&ID - Total Flooding System For Extension of Existing Elect. Building | BK-GCS-PEDCO-120-SA-PI-0002   | D02 |

|                                                                                               |                                                                                                                  |           |            |         |      |          |       |                                                                                    |                     |
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|                                                                                               | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                                      |           |            |         |      |          |       |                                                                                    |                     |
| شماره پیمان:                                                                                  | پروژه                                                                                                            | بسته کاری | صادر کننده | تجهیزات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 4 از 28 |
| 053 - 073 - 9184                                                                              | BK                                                                                                               | GCS       | PEDCO      | 120     | IN   | DT       | 0006  | D03                                                                                |                     |

#### GENERAL NOTES:

- 1- Wetted part shall be in according to NACE MR-0175/ISO 15156.
- 2- The torque tube connection with the displacer chamber shall be flanged.
- 3- All transmitters shall be equipped with internal diagnostics software.
- 4- Vendor to follow materials indicated in the Data Sheets, related wetted parts, these materials can be as the minimum and shall be verified by vendor.
- 5- A material certificate to EN 10204: 2004 type 3.1 shall be provided for each process wetted part.
- 6- Any pressure bearing welds shall be subject to 100% radiography inspection by qualified welding NDT inspectors.
- 7- All transmitters shall have output short circuit & reverse polarity protection.
- 8- The transmitter digital electronics shall have a non-volatile EEPROM memory to be used for storing the configuration data of sensor.
- 9- Material Test Certificates and Calibration shall submit for each Level Transmitter by vendor.
- 10- Sunshade to be considered for all electronic parts.
- 11- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.
- 12- Environmental condition for field instrumentation of Binak oilfield shall be considered as per the following (According to "BK-GNRL-PEDCO-000-PR-DB-0001: Process Basis Of Design":

Maximum ambient temperature: 50 (°C)  
Minimum ambient temperature: 5 (°C)  
Maximum steel surface exposed to sun: 85 (°C)  
Maximum summer dry bulb: - (°C)  
DB/RH for Summer HVAC Design: 41 °C / 61 %  
DB FOR Winter HVAC Design: 6 °C

#### Relative Humidity:

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

- 13- Tag plate as per Specification for Instrumentation, shall be stainless steel 304 SS (VTC). Following details shall be engraved on them:

- Tag Number
- Range Limit
- Service
- Manufacture Model

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|---------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                     |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 5 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                     |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                   |               |                              |  |                   |           |                                       |  |             |  |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------|--|-------------------|-----------|---------------------------------------|--|-------------|--|--------|
| GENERAL                                                                                                                                                                                                              | 1             | Tag Number                   |  |                   |           | LIT-2117                              |  |             |  |        |
|                                                                                                                                                                                                                      | 2             | Service                      |  |                   |           | Gas Compression Inlet Knock Out Drum  |  |             |  |        |
|                                                                                                                                                                                                                      | 3             | Location                     |  |                   |           | V-2105                                |  |             |  |        |
|                                                                                                                                                                                                                      | 4             | Mounting Type                |  |                   |           | External                              |  |             |  |        |
|                                                                                                                                                                                                                      | 5             | Application                  |  |                   |           | Level Control                         |  |             |  |        |
|                                                                                                                                                                                                                      | 6             | P&ID No.                     |  |                   |           | BK-GCS-PEDCO-120-PR-PI-0005-D07       |  |             |  |        |
|                                                                                                                                                                                                                      | 7             | RFI Protection               |  |                   |           | Tropicalisation                       |  | NEEDED      |  | NEEDED |
| PROCESS CONDITIONS                                                                                                                                                                                                   | 8             | Upper Liquid                 |  |                   |           | Process Gas                           |  |             |  |        |
|                                                                                                                                                                                                                      | 9             | Lower Liquid                 |  |                   |           | Hydrocarbon Drain                     |  |             |  |        |
|                                                                                                                                                                                                                      | 10            | Density Lower                |  | Density Upper     |           | 842.6 Kg/m3                           |  | 6.165 Kg/m3 |  |        |
|                                                                                                                                                                                                                      | 11            | Design Pressure              |  | Normal Pressure   |           | Fv/9 barg                             |  | 5.3 barg    |  |        |
|                                                                                                                                                                                                                      | 12            | Design Temp.                 |  | Normal Temp.      |           | 85 °C                                 |  | 37.17 °C    |  |        |
|                                                                                                                                                                                                                      | 13            | Viscosity Low.               |  | Viscosity Up      |           | 0.69 cp                               |  | 0.011 cp    |  |        |
| BODY / GAGE                                                                                                                                                                                                          | 14            | Body/Cage Material           |  |                   |           | C.S. (Note 2)                         |  |             |  | D03    |
|                                                                                                                                                                                                                      | 15            | Body/Cage Rating             |  |                   |           | 300#                                  |  |             |  |        |
|                                                                                                                                                                                                                      | 16            | Connection Size & Location   |  |                   |           | 2" , ANSI Flange, 300#RF side         |  |             |  |        |
|                                                                                                                                                                                                                      | 17            | -                            |  |                   |           | -                                     |  |             |  |        |
|                                                                                                                                                                                                                      | 18            | Flange Material              |  |                   |           | C.S.                                  |  |             |  |        |
|                                                                                                                                                                                                                      | 19            | Length of Center To Center   |  |                   |           | 813 mm (32"), (Note1)                 |  |             |  |        |
|                                                                                                                                                                                                                      | 20            | Case Mounting                |  |                   |           | VTA                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 21            | Rotatable Head               |  |                   |           | Yes                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 22            | Orientation                  |  |                   |           | Side, Side with vent/drain connection |  |             |  |        |
|                                                                                                                                                                                                                      | 23            | Cooling Extension            |  |                   |           | N.A.                                  |  |             |  |        |
| DISPLACER                                                                                                                                                                                                            | 24            | Sensor Type                  |  |                   |           | Displacer                             |  |             |  |        |
|                                                                                                                                                                                                                      | 25            | Sensor Quantity              |  |                   |           | 1                                     |  |             |  |        |
|                                                                                                                                                                                                                      | 26            | Sensor Dimention             |  |                   |           | VTA                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 27            | Selected Standard Span       |  |                   |           | VTA                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 28            | Insertion Depth              |  |                   |           | N/A                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 29            | Displacer Extension Material |  |                   |           | N/A                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 30            | Displacer or Float Material  |  |                   |           | S.S. 316L                             |  |             |  |        |
|                                                                                                                                                                                                                      | 31            | Spring Material              |  | Torque Tube Mtrl. |           | VTA                                   |  | Inconel     |  |        |
| 32                                                                                                                                                                                                                   | Trim Material |                              |  |                   | S.S. 316L |                                       |  |             |  |        |
| TRANSMITTER                                                                                                                                                                                                          | 33            | Function                     |  |                   |           | Level Transmitter                     |  |             |  |        |
|                                                                                                                                                                                                                      | 34            | Output                       |  |                   |           | 4-20 mA, SMART , HART                 |  |             |  | D03    |
|                                                                                                                                                                                                                      | 35            | Set Range                    |  | Min.              |           | Max.                                  |  | 0           |  | 100%   |
|                                                                                                                                                                                                                      | 36            | Calibration Range            |  |                   |           | 0-700 mm                              |  |             |  | D03    |
|                                                                                                                                                                                                                      | 37            | Ingress Protection           |  |                   |           | IP65                                  |  |             |  |        |
|                                                                                                                                                                                                                      | 38            | Mounting Location            |  |                   |           | Side Mounted                          |  |             |  |        |
|                                                                                                                                                                                                                      | 39            | Connection Size & Location   |  |                   |           | VTA                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 40            | Ex Protection                |  |                   |           | Zone 2, EEx ia IIB T4                 |  |             |  |        |
|                                                                                                                                                                                                                      | 41            | Power Supply                 |  | Cable Entry       |           | 24 VDC, loop powered                  |  | M20x1.5     |  |        |
|                                                                                                                                                                                                                      | 42            | Accuracy                     |  |                   |           | ±0.1% of calibrated span              |  |             |  |        |
|                                                                                                                                                                                                                      | 43            | Integral Indicator           |  | Write Protection  |           | Digital LCD                           |  | Yes         |  |        |
|                                                                                                                                                                                                                      | 44            | Zero/Span Adjustment         |  |                   |           | VTA                                   |  |             |  |        |
|                                                                                                                                                                                                                      | 45            | Termination Type             |  |                   |           | Screw terminal                        |  |             |  |        |
|                                                                                                                                                                                                                      | 46            | Case Material                |  |                   |           | VTA Low Copper Die-Cast Aluminum      |  |             |  | D03    |
| 47                                                                                                                                                                                                                   | SIL Rating    |                              |  |                   | SIL 1     |                                       |  |             |  |        |
| OPTIONS                                                                                                                                                                                                              | 48            | Cable Gland                  |  |                   |           | M20x1.5 , EExd                        |  |             |  |        |
|                                                                                                                                                                                                                      | 49            | Vent/Drain Connection        |  |                   |           | 3/4" NPT -with 3/4" isolation valve   |  |             |  |        |
|                                                                                                                                                                                                                      | 50            | Compliance Code              |  |                   |           | -                                     |  |             |  |        |
|                                                                                                                                                                                                                      | 51            | Custom Tag                   |  |                   |           | S.S. permanent attached               |  |             |  |        |
| PURCHASE                                                                                                                                                                                                             | 52            | Manufacturer                 |  |                   |           | VTA Will be finalized later           |  |             |  | D03    |
|                                                                                                                                                                                                                      | 53            | Model                        |  |                   |           | VTA Will be finalized later           |  |             |  |        |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. |               |                              |  |                   |           |                                       |  |             |  |        |
| 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.                                                                                                                    |               |                              |  |                   |           |                                       |  |             |  |        |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|---------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                     |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 6 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                     |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |      |                                                                                           |                   |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|-------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |      | LIT-2118                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |      | Gas Compression Inlet Knock Out Drum                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |      | V-2105                                                                                    |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0005-D07                                                           |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED      |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |      | 842.6 Kg/m3                                                                               |                   | 6.165 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |      | Fv/9 barg                                                                                 |                   | 5.3 barg    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |      | 85 °C                                                                                     |                   | 37.17 °C    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.69 cp                                                                                   |                   | 0.011 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |      | 356 mm (14")                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |             |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |             |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |      | 4-20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |             |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%        |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |      | 0-250 mm                                                                                  |                   |             |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |             |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |             |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |             |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |             |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5     |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |             |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes         |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |             |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |             |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |             |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |      | SIL a <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |             |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |             |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |             |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |      |                                                                                           |                   |             |  |

|                                                                                                  |                                                                                                      |                |                                                                                    |              |          |              |             |           |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------------------|--------------|----------|--------------|-------------|-----------|---------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                |  |              |          |              |             |           |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |                |                                                                                    |              |          |              |             |           |                     |
| شماره پیمان: 053 - 073 - 9184                                                                    | پروژه: BK                                                                                            | بسته کاری: GCS | صادر کننده: PEDCO                                                                  | تجهیزات: 120 | رشته: IN | نوع مدرک: DT | سریال: 0006 | نسخه: D03 | شماره صفحه: 7 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |             |                              |                    |                                          |                   |            |      |  |  |  |
|----------------------------------------------------|-------------|------------------------------|--------------------|------------------------------------------|-------------------|------------|------|--|--|--|
| GENERAL                                            | 1           | Tag Number                   |                    | LIT-2121A                                |                   |            |      |  |  |  |
|                                                    | 2           | Service                      |                    | 1st Stage Gas Compression Suction Drums  |                   |            |      |  |  |  |
|                                                    | 3           | Location                     |                    | V-2101-A                                 |                   |            |      |  |  |  |
|                                                    | 4           | Mounting Type                |                    | External                                 |                   |            |      |  |  |  |
| PROCESS CONDITIONS                                 | 5           | Level Control                |                    | Level Control                            |                   |            |      |  |  |  |
|                                                    | 6           | Process ID                   |                    | BK-GCS-PEDCO-120-PR-PI-0006-D07 (1 of 3) |                   |            |      |  |  |  |
|                                                    | 7           | NEEDED                       |                    | NEEDED                                   |                   |            |      |  |  |  |
|                                                    | 8           | Process Gas                  |                    |                                          |                   |            |      |  |  |  |
|                                                    | 9           | Hydrocarbon Drain            |                    |                                          |                   |            |      |  |  |  |
|                                                    | 10          | Density Lower                | Density Upper      | 842.7 Kg/m3                              |                   | 5.97 Kg/m3 |      |  |  |  |
|                                                    | 11          | Design Pressure              | Normal Pressure    | F.V/20 barg                              |                   | 4.9 barg   |      |  |  |  |
|                                                    | 12          | Design Temp.                 | Normal Temp.       | 85 °C                                    |                   | 36.92 °C   |      |  |  |  |
|                                                    | 13          | Viscosity Low.               | Viscosity Up       | 0.69 cp                                  |                   | 0.01 cp    |      |  |  |  |
|                                                    | BODY / GAGE | 14                           | Body/Cage Material |                                          | C.S. (Note 2)     |            |      |  |  |  |
| 15                                                 |             | Body/Cage Rating             |                    | 300#                                     |                   |            |      |  |  |  |
| 16                                                 |             | Connection Size & Location   |                    | 2" , ANSI Flange, 300#RF side            |                   |            |      |  |  |  |
| 17                                                 |             |                              |                    |                                          |                   |            |      |  |  |  |
| 18                                                 |             | Flange Material              |                    | C.S.                                     |                   |            |      |  |  |  |
| 19                                                 |             | Length of Center To Center   |                    | 813 mm (32")                             |                   |            |      |  |  |  |
| 20                                                 |             | Case Mounting                |                    | VTA                                      |                   |            |      |  |  |  |
| 21                                                 |             | Rotatable Head               |                    | Yes                                      |                   |            |      |  |  |  |
| 22                                                 |             | Orientation                  |                    | Side, Side with vent/drain connection    |                   |            |      |  |  |  |
| 23                                                 |             | Torque Tube Type             |                    | Yes                                      |                   |            |      |  |  |  |
| DISPLACER                                          | 24          | Sensor Type                  |                    | Displacer                                |                   |            |      |  |  |  |
|                                                    | 25          | Sensor Quantity              |                    | 1                                        |                   |            |      |  |  |  |
|                                                    | 26          | Sensor Dimention             |                    | VTA                                      |                   |            |      |  |  |  |
|                                                    | 27          | Selected Standard Span       |                    | VTA                                      |                   |            |      |  |  |  |
|                                                    | 28          | Insertion Depth              |                    | N/A                                      |                   |            |      |  |  |  |
|                                                    | 29          | Displacer Extension Material |                    | N/A                                      |                   |            |      |  |  |  |
|                                                    | 30          | Displacer or Float Material  |                    | S.S. 316L                                |                   |            |      |  |  |  |
|                                                    | 31          | Spring Material              | Torque Tube Mtrl.  | VTA                                      |                   | Inconel    |      |  |  |  |
|                                                    | 32          | Trim Material                |                    | S.S. 316L                                |                   |            |      |  |  |  |
|                                                    | TRANSMITTER | 33                           | Function           |                                          | Level Transmitter |            |      |  |  |  |
| 34                                                 |             | Output                       |                    | 4-20 mA, SMART , HART                    |                   |            |      |  |  |  |
| 35                                                 |             | Set Range                    | Min.               | Max.                                     | 0                 |            | 100% |  |  |  |
| 36                                                 |             | Calibration Range            |                    | 0-700 mm                                 |                   |            |      |  |  |  |
| 37                                                 |             | Ingress Protection           |                    | IP65                                     |                   |            |      |  |  |  |
| 38                                                 |             | Mounting Location            |                    | Side Mounted                             |                   |            |      |  |  |  |
| 39                                                 |             | Connection Size & Location   |                    | VTA                                      |                   |            |      |  |  |  |
| 40                                                 |             | Ex Protection                |                    | Zone 2, EEx ia IIB T4                    |                   |            |      |  |  |  |
| 41                                                 |             | Power Supply                 | Cable Entry        | 24 VDC, loop powered                     |                   | M20x1.5    |      |  |  |  |
| 42                                                 |             | Accuracy                     |                    | ±0.1% of calibrated span                 |                   |            |      |  |  |  |
| 43                                                 |             | Integral Indicator           | Write Protection   | Digital LCD                              |                   | No         |      |  |  |  |
| 44                                                 |             | Zero/Span Adjustment         |                    | Required                                 |                   |            |      |  |  |  |
| 45                                                 |             | Termination Type             |                    | Screw terminal                           |                   |            |      |  |  |  |
| 46                                                 |             | Case Material                |                    | VTA Low Copper Die-Cast Aluminum         |                   |            |      |  |  |  |
| 47                                                 |             | SIL Rating                   |                    | N/A                                      |                   |            |      |  |  |  |
| OPTIONS                                            | 48          | Cable Gland                  |                    | M20x1.5 , EExd                           |                   |            |      |  |  |  |
|                                                    | 49          | Vent/Drain Connection        |                    | 3/4" NPT -with 3/4" isolation valve      |                   |            |      |  |  |  |
|                                                    | 50          |                              |                    |                                          |                   |            |      |  |  |  |
|                                                    | 51          | Custom Tag                   |                    | S.S. permanent attached                  |                   |            |      |  |  |  |
| PURCHASE                                           | 52          | Manufacturer                 |                    | Will be finalized later                  |                   |            |      |  |  |  |
|                                                    | 53          | Model                        |                    | Will be finalized later                  |                   |            |      |  |  |  |

**Notes:**  
 VTA: Vendor to advice  
 1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.  
 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|---------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                     |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 8 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                     |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                |    |                              |  |                   |  |                                         |  |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------|--|-------------------|--|-----------------------------------------|--|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                           | 1  | Tag Number                   |  |                   |  | LIT-2122A                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 2  | Service                      |  |                   |  | 1st Stage Gas Compression Suction Drums |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 3  | Location                     |  |                   |  | V-2101-A                                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 4  | Mounting Type                |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 5  | Application                  |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 6  | P&ID No.                     |  |                   |  | PR-PI-0006-D07 (1 of 3)                 |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 7  | RFI Protection               |  |                   |  | NEEDED                                  |  |            |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                | 8  | Upper Liquid                 |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 9  | Lower Liquid                 |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 10 | Density Lower                |  | Density Upper     |  | 842.7 Kg/m3                             |  | 5.97 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                   | 11 | Design Pressure              |  | Normal Pressure   |  | F.V/20 barg                             |  | 4.9 barg   |  |
|                                                                                                                                                                                                                                                                                                                                   | 12 | Design Temp.                 |  | Normal Temp.      |  | 85 °C                                   |  | 36.92 °C   |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                       | 13 | Viscosity Low.               |  | Viscosity Up      |  | 0.69 cp                                 |  | 0.01 cp    |  |
|                                                                                                                                                                                                                                                                                                                                   | 14 | Body/Cage Material           |  |                   |  | C.S. (Note 2) D03                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 15 | Body/Cage Rating             |  |                   |  | 300#                                    |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 16 | Connection Size & Location   |  |                   |  | 2" , ANSI Flange, 300#RF side           |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 17 | -                            |  |                   |  | -                                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 18 | Flange Material              |  |                   |  | C.S. A105 NACE H.R.modified             |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 19 | Length of Center To Center   |  |                   |  | 1219 mm (48")                           |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 20 | Case Mounting                |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 21 | Rotatable Head               |  |                   |  | Yes                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 22 | Orientation                  |  |                   |  | Side, Side with vent/drain connection   |  |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                         | 23 | Torque Tube Type             |  |                   |  | Yes                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 24 | Sensor Type                  |  |                   |  | Displacer                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 25 | Sensor Quantity              |  |                   |  | 1                                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 26 | Sensor Dimention             |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 27 | Selected Standard Span       |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 28 | Insertion Depth              |  |                   |  | N/A                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 29 | Displacer Extension Material |  |                   |  | N/A                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 30 | Displacer or Float Material  |  |                   |  | S.S. 316L                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 31 | Spring Material              |  | Torque Tube Mtrl. |  | VTA                                     |  | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                   | 32 | Trim Material                |  |                   |  | S.S. 316L                               |  |            |  |
| TRANSMITTER                                                                                                                                                                                                                                                                                                                       | 33 | Function                     |  |                   |  | Level Transmitter                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 34 | Output                       |  |                   |  | 4~20 mA, SMART , HART D03               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 35 | Set Range                    |  | Min.              |  | Max.                                    |  | 0 100%     |  |
|                                                                                                                                                                                                                                                                                                                                   | 36 | Calibration Range            |  |                   |  | 0-1100 mm                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 37 | Ingress Protection           |  |                   |  | IP65                                    |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 38 | Mounting Location            |  |                   |  | Side Mounted                            |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 39 | Connection Size & Location   |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 40 | Ex Protection                |  |                   |  | Zone 2, EEx ia IIB T4                   |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 41 | Power Supply                 |  | Cable Entry       |  | 24 VDC, loop powered                    |  | M20x1.5    |  |
|                                                                                                                                                                                                                                                                                                                                   | 42 | Accuracy                     |  |                   |  | ±0.1% of calibrated span                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 43 | Integral Indicator           |  | Write Protection  |  | Digital LCD                             |  | Yes        |  |
|                                                                                                                                                                                                                                                                                                                                   | 44 | Zero/Span Adjustment         |  |                   |  | Required                                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 45 | Termination Type             |  |                   |  | Screw terminal                          |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 46 | Case Material                |  |                   |  | VTA Low Copper Die-Cast Aluminum        |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 47 | SIL Rating                   |  |                   |  | SIL 2 D03                               |  |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                           | 48 | Cable Gland                  |  |                   |  | M20x1.5 , EExd                          |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 49 | Vent/Drain Connection        |  |                   |  | 3/4" NPT -with 3/4" isolation valve     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 50 | -                            |  |                   |  | -                                       |  |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                          | 51 | Custom Tag                   |  |                   |  | S.S. permanent attached                 |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 52 | Manufacturer                 |  |                   |  | Will be finalized later                 |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 53 | Model                        |  |                   |  | Will be finalized later                 |  |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. D03<br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03 |    |                              |  |                   |  |                                         |  |            |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    |                     |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|------------------------------------------------------------------------------------|---------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |  |                     |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |                                                                                    |                     |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال                                                                              | نسخه                |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006                                                                               | D03                 |
|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    | شماره صفحه: 9 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                |             |                              |                       |                   |  |                                       |                                     |            |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|-----------------------|-------------------|--|---------------------------------------|-------------------------------------|------------|--|--|
| GENERAL                                                                                                                                                                                                                                                                                                                           | 1           | Tag Number                   |                       |                   |  | LIT-2121B                             |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 2           | Service                      |                       |                   |  | Compression Suction Drums             |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 3           | Location                     |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 4           | Mounting Type                |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 5           | Application                  |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 6           | P&ID No.                     |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 7           | RFI Protection               |                       |                   |  | NEEDED                                |                                     |            |  |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                | 8           | Upper Liquid                 |                       |                   |  | Process Gas                           |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 9           | Lower Liquid                 |                       |                   |  | Hydrocarbon Drain                     |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 10          | Density Lower                |                       | Density Upper     |  | 842.7 Kg/m3                           |                                     | 5.97 Kg/m3 |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 11          | Design Pressure              |                       | Normal Pressure   |  | F.V/20 barg                           |                                     | 4.9 barg   |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 12          | Design Temp.                 |                       | Normal Temp.      |  | 85 °C                                 |                                     | 36.92 °C   |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 13          | Viscosity Low.               |                       | Viscosity Up      |  | 0.69 cp                               |                                     | 0.01 cp    |  |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                       | 14          | Body/Cage Material           |                       |                   |  | C.S. (Note 2) D03                     |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 15          | Body/Cage Rating             |                       |                   |  | 300#                                  |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 16          | Connection Size & Location   |                       |                   |  | 2" , ANSI Flange, 300#RF side         |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 17          |                              |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 18          | Flange Material              |                       |                   |  | C.S. A105 NACE H.R.modified           |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 19          | Length of Center To Center   |                       |                   |  | 813 mm (32")                          |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 20          | Case Mounting                |                       |                   |  | VTA                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 21          | Rotatable Head               |                       |                   |  | Yes                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 22          | Orientation                  |                       |                   |  | Side, Side with vent/drain connection |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 23          | Torque Tube Type             |                       |                   |  | Yes                                   |                                     |            |  |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                         | 24          | Sensor Type                  |                       |                   |  | Displacer                             |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 25          | Sensor Quantity              |                       |                   |  | 1                                     |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 26          | Sensor Dimention             |                       |                   |  | VTA                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 27          | Selected Standard Span       |                       |                   |  | VTA                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 28          | Insertion Depth              |                       |                   |  | N/A                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 29          | Displacer Extension Material |                       |                   |  | N/A                                   |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 30          | Displacer or Float Material  |                       |                   |  | S.S. 316L                             |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 31          | Spring Material              |                       | Torque Tube Mtrl. |  | VTA                                   |                                     | Inconel    |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 32          | Trim Material                |                       |                   |  | S.S. 316L                             |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | TRANSMITTER | 33                           | Function              |                   |  |                                       | Level Transmitter                   |            |  |  |
| 34                                                                                                                                                                                                                                                                                                                                |             | Output                       |                       |                   |  | 4-20 mA, SMART , HART D03             |                                     |            |  |  |
| 35                                                                                                                                                                                                                                                                                                                                |             | Set Range                    |                       | Min.              |  | Max.                                  |                                     | 0 100%     |  |  |
| 36                                                                                                                                                                                                                                                                                                                                |             | Calibration Range            |                       |                   |  | 0-700 mm                              |                                     |            |  |  |
| 37                                                                                                                                                                                                                                                                                                                                |             | Ingress Protection           |                       |                   |  | IP65                                  |                                     |            |  |  |
| 38                                                                                                                                                                                                                                                                                                                                |             | Mounting Location            |                       |                   |  | Side Mounted                          |                                     |            |  |  |
| 39                                                                                                                                                                                                                                                                                                                                |             | Connection Size & Location   |                       |                   |  | VTA                                   |                                     |            |  |  |
| 40                                                                                                                                                                                                                                                                                                                                |             | Ex Protection                |                       |                   |  | Zone 2, EEx ia IIB T4                 |                                     |            |  |  |
| 41                                                                                                                                                                                                                                                                                                                                |             | Power Supply                 |                       | Cable Entry       |  | 24 VDC, loop powered                  |                                     | M20x1.5    |  |  |
| 42                                                                                                                                                                                                                                                                                                                                |             | Accuracy                     |                       |                   |  | ±0.1% of calibrated span              |                                     |            |  |  |
| 43                                                                                                                                                                                                                                                                                                                                |             | Integral Indicator           |                       | Write Protection  |  | Digital LCD                           |                                     | No         |  |  |
| 44                                                                                                                                                                                                                                                                                                                                |             | Zero/Span Adjustment         |                       |                   |  | Required                              |                                     |            |  |  |
| 45                                                                                                                                                                                                                                                                                                                                |             | Termination Type             |                       |                   |  | Screw terminal                        |                                     |            |  |  |
| 46                                                                                                                                                                                                                                                                                                                                |             | Case Material                |                       |                   |  | VTA Low Copper Die-Cast Aluminum D03  |                                     |            |  |  |
| 47                                                                                                                                                                                                                                                                                                                                |             | SIL Rating                   |                       |                   |  | N/A                                   |                                     |            |  |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                           |             | 48                           | Cable Gland           |                   |  |                                       | M20x1.5 , EExd                      |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   |             | 49                           | Vent/Drain Connection |                   |  |                                       | 3/4" NPT -with 3/4" isolation valve |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 50          |                              |                       |                   |  |                                       |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 51          | Custom Tag                   |                       |                   |  | S.S. permanent attached               |                                     |            |  |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                          | 52          | Manufacturer                 |                       |                   |  | Will be finalized later               |                                     |            |  |  |
|                                                                                                                                                                                                                                                                                                                                   | 53          | Model                        |                       |                   |  | Will be finalized later               |                                     |            |  |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. D03<br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03 |             |                              |                       |                   |  |                                       |                                     |            |  |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال                                                                              | نسخه                 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006                                                                               | D03                  |
|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    | شماره صفحه: 10 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                |             |                              |          |                   |  |                                         |                   |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|--|-----------------------------------------|-------------------|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                           | 1           | Tag Number                   |          |                   |  | LIT-2122B                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 2           | Service                      |          |                   |  | 1st Stage Gas Compression Section Drums |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 3           | Location                     |          |                   |  |                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 4           | Mounting Type                |          |                   |  |                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 5           | Application                  |          |                   |  |                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 6           | P&ID No.                     |          |                   |  | 2-PI-0006-D07 (2 of 3)                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 7           | RFI Protection               |          |                   |  | NEEDED                                  |                   |            |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                | 8           | Upper Liquid                 |          |                   |  | Process Gas                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 9           | Lower Liquid                 |          |                   |  | Hydrocarbon Drain                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 10          | Density Lower                |          | Density Upper     |  | 842.7 Kg/m3                             |                   | 5.97 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                   | 11          | Design Pressure              |          | Normal Pressure   |  | F.V/20 barg                             |                   | 4.9 barg   |  |
|                                                                                                                                                                                                                                                                                                                                   | 12          | Design Temp.                 |          | Normal Temp.      |  | 85 °C                                   |                   | 36.92 °C   |  |
|                                                                                                                                                                                                                                                                                                                                   | 13          | Viscosity Low.               |          | Viscosity Up      |  | 0.69 cp                                 |                   | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                       | 14          | Body/Cage Material           |          |                   |  | C.S. (Note 2) D03                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 15          | Body/Cage Rating             |          |                   |  | 300#                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 16          | Connection Size & Location   |          |                   |  | 2" , ANSI Flange, 300#RF side           |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 17          |                              |          |                   |  |                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 18          | Flange Material              |          |                   |  | C.S. A105 NACE H.R.modified             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 19          | Length of Center To Center   |          |                   |  | 1219 mm (48")                           |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 20          | Case Mounting                |          |                   |  | VTA                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 21          | Rotatable Head               |          |                   |  | Yes                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 22          | Orientation                  |          |                   |  | Side, Side with vent/drain connection   |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 23          | Torque Tube Type             |          |                   |  | Yes                                     |                   |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                         | 24          | Sensor Type                  |          |                   |  | Displacer                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 25          | Sensor Quantity              |          |                   |  | 1                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 26          | Sensor Dimention             |          |                   |  | VTA                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 27          | Selected Standard Span       |          |                   |  | VTA                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 28          | Insertion Depth              |          |                   |  | N/A                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 29          | Displacer Extension Material |          |                   |  | N/A                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 30          | Displacer or Float Material  |          |                   |  | S.S. 316L                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 31          | Spring Material              |          | Torque Tube Mtrl. |  | VTA                                     |                   | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                   | 32          | Trim Material                |          |                   |  | S.S. 316L                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | TRANSMITTER | 33                           | Function |                   |  |                                         | Level Transmitter |            |  |
| 34                                                                                                                                                                                                                                                                                                                                |             | Output                       |          |                   |  | 4-20 mA, SMART , HART D03               |                   |            |  |
| 35                                                                                                                                                                                                                                                                                                                                |             | Set Range                    |          | Min.              |  | Max.                                    |                   | 0 100%     |  |
| 36                                                                                                                                                                                                                                                                                                                                |             | Calibration Range            |          |                   |  | 0-1100mm                                |                   |            |  |
| 37                                                                                                                                                                                                                                                                                                                                |             | Ingress Protection           |          |                   |  | IP65                                    |                   |            |  |
| 38                                                                                                                                                                                                                                                                                                                                |             | Mounting Location            |          |                   |  | Side Mounted                            |                   |            |  |
| 39                                                                                                                                                                                                                                                                                                                                |             | Connection Size & Location   |          |                   |  | VTA                                     |                   |            |  |
| 40                                                                                                                                                                                                                                                                                                                                |             | Ex Protection                |          |                   |  | Zone 2, EEx ia IIB T4                   |                   |            |  |
| 41                                                                                                                                                                                                                                                                                                                                |             | Power Supply                 |          | Cable Entry       |  | 24 VDC, loop powered                    |                   | M20x1.5    |  |
| 42                                                                                                                                                                                                                                                                                                                                |             | Accuracy                     |          |                   |  | ±0.1% of calibrated span                |                   |            |  |
| 43                                                                                                                                                                                                                                                                                                                                |             | Integral Indicator           |          | Write Protection  |  | Digital LCD                             |                   | Yes        |  |
| 44                                                                                                                                                                                                                                                                                                                                |             | Zero/Span Adjustment         |          |                   |  | Required                                |                   |            |  |
| 45                                                                                                                                                                                                                                                                                                                                |             | Termination Type             |          |                   |  | Screw terminal                          |                   |            |  |
| 46                                                                                                                                                                                                                                                                                                                                |             | Case Material                |          |                   |  | VTA Low Copper Die-Cast Aluminum        |                   |            |  |
| 47                                                                                                                                                                                                                                                                                                                                |             | SIL Rating                   |          |                   |  | SIL 2 D03                               |                   |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                           | 48          | Cable Gland                  |          |                   |  | M20x1.5 , EExd                          |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 49          | Vent/Drain Connection        |          |                   |  | 3/4" NPT -with 3/4" isolation valve     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 50          |                              |          |                   |  |                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 51          | Custom Tag                   |          |                   |  | S.S. permanent attached                 |                   |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                          | 52          | Manufacturer                 |          |                   |  | Will be finalized later                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 53          | Model                        |          |                   |  | Will be finalized later                 |                   |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. D03<br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03 |             |                              |          |                   |  |                                         |                   |            |  |

|                                                                                                  |                                                                                                      |                  |                                                                                    |                |            |                |               |             |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|----------------|------------|----------------|---------------|-------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                  |  |                |            |                |               |             |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |                  |                                                                                    |                |            |                |               |             |                      |
| شماره پیمان:<br>053 - 073 - 9184                                                                 | پروژه<br>BK                                                                                          | بسته کاری<br>GCS | صادر کننده<br>PEDCO                                                                | تسهیلات<br>120 | رشته<br>IN | نوع مدرک<br>DT | سریال<br>0006 | نسخه<br>D03 | شماره صفحه: 11 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |    |                              |                   |                      |                                         |            |      |  |  |
|----------------------------------------------------|----|------------------------------|-------------------|----------------------|-----------------------------------------|------------|------|--|--|
| GENERAL                                            | 1  | Tag Number                   |                   |                      | LIT-2121C                               |            |      |  |  |
|                                                    | 2  | Service                      |                   |                      | 1st Stage Gas Compression Suction Drums |            |      |  |  |
|                                                    | 3  | Location                     |                   |                      |                                         |            |      |  |  |
|                                                    | 4  | Mounting Type                |                   |                      |                                         |            |      |  |  |
|                                                    | 5  | Application                  |                   |                      |                                         |            |      |  |  |
|                                                    | 6  | P&ID No.                     |                   |                      | 20-PR-PI-0006-D07 (3 of 3)              |            |      |  |  |
|                                                    | 7  | RFI Protection               |                   |                      | NEEDED                                  |            |      |  |  |
| PROCESS CONDITIONS                                 | 8  | Upper Liquid                 |                   |                      | Process Gas                             |            |      |  |  |
|                                                    | 9  | Lower Liquid                 |                   |                      | Hydrocarbon Drain                       |            |      |  |  |
|                                                    | 10 | Density Lower                | Density Upper     | 842.7 Kg/m3          |                                         | 5.97 Kg/m3 |      |  |  |
|                                                    | 11 | Design Pressure              | Normal Pressure   | F.V/20 barg          |                                         | 4.9 barg   |      |  |  |
|                                                    | 12 | Design Temp.                 | Normal Temp.      | 85 °C                |                                         | 36.92 °C   |      |  |  |
| BODY / GAGE                                        | 13 | Viscosity Low.               | Viscosity Up      | 0.69 cp              |                                         | 0.01 cp    |      |  |  |
|                                                    | 14 | Body/Cage Material           |                   |                      | C.S. (Note 2) D03                       |            |      |  |  |
|                                                    | 15 | Body/Cage Rating             |                   |                      | 300#                                    |            |      |  |  |
|                                                    | 16 | Connection Size & Location   |                   |                      | 2" , ANSI Flange, 300#RF side           |            |      |  |  |
|                                                    | 17 |                              |                   |                      |                                         |            |      |  |  |
|                                                    | 18 | Flange Material              |                   |                      | C.S. A105 NACE H.R.modified             |            |      |  |  |
|                                                    | 19 | Length of Center To Center   |                   |                      | 813 mm (32")                            |            |      |  |  |
|                                                    | 20 | Case Mounting                |                   |                      | VTA                                     |            |      |  |  |
|                                                    | 21 | Rotatable Head               |                   |                      | Yes                                     |            |      |  |  |
|                                                    | 22 | Orientation                  |                   |                      | Side, Side with vent/drain connection   |            |      |  |  |
| DISPLACER                                          | 23 | Torque Tube Type             |                   |                      | Yes                                     |            |      |  |  |
|                                                    | 24 | Sensor Type                  |                   |                      | Displacer                               |            |      |  |  |
|                                                    | 25 | Sensor Quantity              |                   |                      | 1                                       |            |      |  |  |
|                                                    | 26 | Sensor Dimention             |                   |                      | VTA                                     |            |      |  |  |
|                                                    | 27 | Selected Standard Span       |                   |                      | VTA                                     |            |      |  |  |
|                                                    | 28 | Insertion Depth              |                   |                      | N/A                                     |            |      |  |  |
|                                                    | 29 | Displacer Extension Material |                   |                      | N/A                                     |            |      |  |  |
|                                                    | 30 | Displacer or Float Material  |                   |                      | S.S. 316L                               |            |      |  |  |
|                                                    | 31 | Spring Material              | Torque Tube Mtrl. | VTA                  |                                         | Inconel    |      |  |  |
|                                                    | 32 | Trim Material                |                   |                      | S.S. 316L                               |            |      |  |  |
| TRANSMITTER                                        | 33 | Function                     |                   |                      | Level Transmitter                       |            |      |  |  |
|                                                    | 34 | Output                       |                   |                      | 4-20 mA, SMART , HART D03               |            |      |  |  |
|                                                    | 35 | Set Range                    | Min.              | Max.                 | 0                                       |            | 100% |  |  |
|                                                    | 36 | Calibration Range            |                   |                      | 0-700 mm                                |            |      |  |  |
|                                                    | 37 | Ingress Protection           |                   |                      | IP65                                    |            |      |  |  |
|                                                    | 38 | Mounting Location            |                   |                      | Side Mounted                            |            |      |  |  |
|                                                    | 39 | Connection Size & Location   |                   |                      | VTA                                     |            |      |  |  |
|                                                    | 40 | Ex Protection                |                   |                      | Zone 2, EEx ia IIB T4                   |            |      |  |  |
|                                                    | 41 | Power Supply                 | Cable Entry       | 24 VDC, loop powered |                                         | M20x1.5    |      |  |  |
|                                                    | 42 | Accuracy                     |                   |                      | ±0No.1% of calibrated span              |            |      |  |  |
|                                                    | 43 | Integral Indicator           | Write Protection  | Digital LCD          |                                         | No         |      |  |  |
|                                                    | 44 | Zero/Span Adjustment         |                   |                      | Required                                |            |      |  |  |
|                                                    | 45 | Termination Type             |                   |                      | Screw terminal                          |            |      |  |  |
|                                                    | 46 | Case Material                |                   |                      | VTA Low Copper Die-Cast Aluminum        |            |      |  |  |
|                                                    | 47 | SIL Rating                   |                   |                      | N/A D03                                 |            |      |  |  |
| OPTIONS                                            | 48 | Cable Gland                  |                   |                      | M20x1.5 , EExd                          |            |      |  |  |
|                                                    | 49 | Vent/Drain Connection        |                   |                      | 3/4" NPT -with 3/4" isolation valve     |            |      |  |  |
|                                                    | 50 |                              |                   |                      |                                         |            |      |  |  |
|                                                    | 51 | Custom Tag                   |                   |                      | S.S. permanent attached                 |            |      |  |  |
| PURCHASE                                           | 52 | Manufacturer                 |                   |                      | Will be finalized later                 |            |      |  |  |
|                                                    | 53 | Model                        |                   |                      | Will be finalized later                 |            |      |  |  |

**Notes:**  
 VTA: Vendor to advice  
 1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. D03  
 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 28 از 12 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                |    |                              |  |                   |  |                                         |  |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------|--|-------------------|--|-----------------------------------------|--|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                           | 1  | Tag Number                   |  |                   |  | LIT-2122C                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 2  | Service                      |  |                   |  | 1st Stage Gas Compression Section Drums |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 3  | Location                     |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 4  | Mounting Type                |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 5  | Application                  |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 6  | P&ID No.                     |  |                   |  | PI-0006-D07 (3 of 3)                    |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 7  | RFI Protection               |  |                   |  | NEEDED                                  |  |            |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                | 8  | Upper Liquid                 |  |                   |  | Process Gas                             |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 9  | Lower Liquid                 |  |                   |  | Hydrocarbon Drain                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 10 | Density Lower                |  | Density Upper     |  | 842.7 Kg/m3                             |  | 5.97 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                   | 11 | Design Pressure              |  | Normal Pressure   |  | F.V/20 barg                             |  | 4.9 barg   |  |
|                                                                                                                                                                                                                                                                                                                                   | 12 | Design Temp.                 |  | Normal Temp.      |  | 85 °C                                   |  | 36.92 °C   |  |
|                                                                                                                                                                                                                                                                                                                                   | 13 | Viscosity Low.               |  | Viscosity Up      |  | 0.69 cp                                 |  | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                       | 14 | Body/Cage Material           |  |                   |  | C.S. (Note 2) D03                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 15 | Body/Cage Rating             |  |                   |  | 300#                                    |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 16 | Connection Size & Location   |  |                   |  | 2" , ANSI Flange, 300#RF side           |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 17 |                              |  |                   |  |                                         |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 18 | Flange Material              |  |                   |  | C.S. A105 NACE H.R.modified             |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 19 | Length of Center To Center   |  |                   |  | 1219 mm (48")                           |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 20 | Case Mounting                |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 21 | Rotatable Head               |  |                   |  | Yes                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 22 | Orientation                  |  |                   |  | Side, Side with vent/drain connection   |  |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                         | 23 | Torque Tube Type             |  |                   |  | Yes                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 24 | Sensor Type                  |  |                   |  | Displacer                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 25 | Sensor Quantity              |  |                   |  | 1                                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 26 | Sensor Dimention             |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 27 | Selected Standard Span       |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 28 | Insertion Depth              |  |                   |  | N/A                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 29 | Displacer Extension Material |  |                   |  | N/A                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 30 | Displacer or Float Material  |  |                   |  | S.S. 316L                               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 31 | Spring Material              |  | Torque Tube Mtrl. |  | VTA                                     |  | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                   | 32 | Trim Material                |  |                   |  | S.S. 316L                               |  |            |  |
| TRANSMITTER                                                                                                                                                                                                                                                                                                                       | 33 | Function                     |  |                   |  | Level Transmitter                       |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 34 | Output                       |  |                   |  | 4-20 mA, SMART , HART D03               |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 35 | Set Range                    |  | Min.              |  | Max.                                    |  | 0 100%     |  |
|                                                                                                                                                                                                                                                                                                                                   | 36 | Calibration Range            |  |                   |  | 0-1100mm                                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 37 | Ingress Protection           |  |                   |  | IP65                                    |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 38 | Mounting Location            |  |                   |  | Side Mounted                            |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 39 | Connection Size & Location   |  |                   |  | VTA                                     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 40 | Ex Protection                |  |                   |  | Zone 2, EEx ia IIB T4                   |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 41 | Power Supply                 |  | Cable Entry       |  | 24 VDC, loop powered                    |  | M20x1.5    |  |
|                                                                                                                                                                                                                                                                                                                                   | 42 | Accuracy                     |  |                   |  | ±0.1% of calibrated span                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 43 | Integral Indicator           |  | Write Protection  |  | Digital LCD                             |  | Yes        |  |
|                                                                                                                                                                                                                                                                                                                                   | 44 | Zero/Span Adjustment         |  |                   |  | Required                                |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 45 | Termination Type             |  |                   |  | Screw terminal                          |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 46 | Case Material                |  |                   |  | VTA Low Copper Die-Cast Aluminum        |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 47 | SIL Rating                   |  |                   |  | SIL 2 D03                               |  |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                           | 48 | Cable Gland                  |  |                   |  | M20x1.5 , EExd                          |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 49 | Vent/Drain Connection        |  |                   |  | 3/4" NPT -with 3/4" isolation valve     |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 50 |                              |  |                   |  |                                         |  |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                          | 51 | Custom Tag                   |  |                   |  | S.S. permanent attached                 |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 52 | Manufacturer                 |  |                   |  | Will be finalized later                 |  |            |  |
|                                                                                                                                                                                                                                                                                                                                   | 53 | Model                        |  |                   |  | Will be finalized later                 |  |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. D03<br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. D03 |    |                              |  |                   |  |                                         |  |            |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 13 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |             |                   |      |                                                                                                  |                   |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|-------------|-------------------|------|--------------------------------------------------------------------------------------------------|-------------------|-------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |             |                   |      | LIT-2131A                                                                                        |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |             |                   |      | 2nd Stage Gas Compression Suction Drums                                                          |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |             |                   |      | V-2102-A                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |             |                   |      | External                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |             |                   |      | Level Control                                                                                    |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |             |                   |      | BK-GCS-PEDCO-120-PR-PI-0009-D07 (1 of 3)                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |             | Tropicalisation   |      | NEEDED                                                                                           |                   | NEEDED      |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |             |                   |      | Process Gas                                                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |             |                   |      | Hydrocarbon Drain                                                                                |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |             | Density Upper     |      | 829.1 Kg/m3                                                                                      |                   | 18.28 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |             | Normal Pressure   |      | F.V/22 barg                                                                                      |                   | 18.3 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |             | Normal Temp.      |      | 115.4 °C                                                                                         |                   | 60 °C       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |             | Viscosity Up      |      | 0.44 cp                                                                                          |                   | 0.01 cp     |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |             |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>                    |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |             |                   |      | 300#                                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |             |                   |      | 2" , ANSI Flange, 300#RF side                                                                    |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |             |                   |      | -                                                                                                |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |             |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span>        |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |             |                   |      | 813 mm (32")                                                                                     |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |             |                   |      | VTA                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |             |                   |      | Yes                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |             |                   |      | Side, Side with vent/drain connection                                                            |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |             |                   |      | Yes                                                                                              |                   |             |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |             |                   |      | Displacer                                                                                        |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |             |                   |      | 1                                                                                                |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |             |                   |      | VTA                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |             |                   |      | VTA                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |             |                   |      | N/A                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |             |                   |      | N/A                                                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |             |                   |      | S.S. 316L                                                                                        |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |             | Torque Tube Mtrl. |      | VTA                                                                                              |                   | Inconel     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |             |                   |      | S.S. 316L                                                                                        |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function    |                   |      |                                                                                                  | Level Transmitter |             |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |             |                   |      | 4~20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>            |                   |             |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |             | Min.              | Max. | 0                                                                                                |                   | 100%        |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |             |                   |      | 0-700mm                                                                                          |                   |             |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |             |                   |      | IP65                                                                                             |                   |             |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |             |                   |      | Side Mounted                                                                                     |                   |             |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |             |                   |      | VTA                                                                                              |                   |             |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |             |                   |      | Zone 2, EEx ia IIB T4                                                                            |                   |             |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |             | Cable Entry       |      | 24 VDC, loop powered                                                                             |                   | M20x1.5     |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |             |                   |      | ±0.1% of calibrated span                                                                         |                   |             |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |             | Write Protection  |      | Digital LCD                                                                                      |                   | No          |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |             |                   |      | Required                                                                                         |                   |             |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |             |                   |      | Screw terminal                                                                                   |                   |             |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |             |                   |      | VTA Low Copper Die-Cast Aluminum <span style="border: 1px solid black; padding: 2px;">D03</span> |                   |             |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |             |                   |      | N/A                                                                                              |                   |             |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | 48                           | Cable Gland |                   |      |                                                                                                  | M20x1.5 , EExd    |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |             |                   |      | 3/4" NPT -with 3/4" isolation valve                                                              |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |             |                   |      | -                                                                                                |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |             |                   |      | S.S. permanent attached                                                                          |                   |             |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |             |                   |      | Will be finalized later                                                                          |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |             |                   |      | Will be finalized later                                                                          |                   |             |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |             |                   |      |                                                                                                  |                   |             |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 14 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |      |                                                                                           |                   |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|-------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |      | LIT-2132A                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |      | 2nd Stage Gas Compression Suction Drums                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |      | V-2102-A                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0009-D07 (1 of 3)                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED      |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |      | 829.1 Kg/m3                                                                               |                   | 18.28 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |      | F.V/22 barg                                                                               |                   | 18.3 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |      | 115.4 °C                                                                                  |                   | 60 °C       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.44 cp                                                                                   |                   | 0.01 cp     |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |      | 1219 mm (48")                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |             |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |             |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |      | 4~20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |             |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%        |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |      | 0-1100mm                                                                                  |                   |             |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |             |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |             |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |             |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |             |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5     |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |             |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes         |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |             |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |             |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |             |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |      | SIL 2 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |             |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |             |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |             |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |      |                                                                                           |                   |             |  |



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

## احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

شماره پیمان:

053 - 073 - 9184

شماره صفحه: 15 از 28

100

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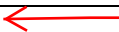
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## DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)

|                    |                  |                              |                                                                                                                        |                      |             |
|--------------------|------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|
| GENERAL            | 1                | Tag Number                   | LIT-2131B                                                                                                              |                      |             |
|                    | 2                | Service                      | 2nd Stage Gas Compression Suction Drums                                                                                |                      |             |
|                    | 3                | Location                     | V-2102-B                                                                                                               |                      |             |
|                    | 4                | Mounting Type                | External                                                                                                               |                      |             |
|                    | 5                | Application                  | Level Control                                                                                                          |                      |             |
|                    | 6                | P&ID No.                     | BK-GCS-PEDCO-120-PR-PI-0009-D07 (2 of 3)                                                                               |                      |             |
|                    | 7                | RFI Protection               | Tropicalisation                                                                                                        | NEEDED               | NEEDED      |
| PROCESS CONDITIONS | 8                | Upper Liquid                 | Process Gas                                                                                                            |                      |             |
|                    | 9                | Lower Liquid                 | Hydrocarbon Drain                                                                                                      |                      |             |
|                    | 10               | Density Lower                | Density Upper                                                                                                          | 829.1 Kg/m3          | 18.28 Kg/m3 |
|                    | 11               | Design Pressure              | Normal Pressure                                                                                                        | F.V/22 barg          | 18.3 barg   |
|                    | 12               | Design Temp.                 | Normal Temp.                                                                                                           | 115.4 °C             | 60 °C       |
|                    | 13               | Viscosity Low.               | Viscosity Up                                                                                                           | 0.44 cp              | 0.01 cp     |
| BODY / GAGE        | 14               | Body/Cage Material           | C.S. (Note 2)                       |                      |             |
|                    | 15               | Body/Cage Rating             | 300#                                                                                                                   |                      |             |
|                    | 16               | Connection Size & Location   | 2" , ANSI Flange, 300#RF side                                                                                          |                      |             |
|                    | 17               | -                            | -                                                                                                                      |                      |             |
|                    | 18               | Flange Material              | C.S.                                |                      |             |
|                    | 19               | Length of Center To Center   | 813 mm (32")                                                                                                           |                      |             |
|                    | 20               | Case Mounting                | VTA                                                                                                                    |                      |             |
|                    | 21               | Rotatable Head               | Yes                                                                                                                    |                      |             |
|                    | 22               | Orientation                  | Side, Side with vent/drain connection                                                                                  |                      |             |
| 23                 | Torque Tube Type | Yes                          |                                                                                                                        |                      |             |
| DISPLACER          | 24               | Sensor Type                  | Displacer                                                                                                              |                      |             |
|                    | 25               | Sensor Quantity              | 1                                                                                                                      |                      |             |
|                    | 26               | Sensor Dimention             | VTA                                                                                                                    |                      |             |
|                    | 27               | Selected Standard Span       | VTA                                                                                                                    |                      |             |
|                    | 28               | Insertion Depth              | N/A                                                                                                                    |                      |             |
|                    | 29               | Displacer Extension Material | N/A                                                                                                                    |                      |             |
|                    | 30               | Displacer or Float Material  | S.S. 316L                                                                                                              |                      |             |
|                    | 31               | Spring Material              | Torque Tube Mtrl.                                                                                                      | VTA                  | Inconel     |
| 32                 | Trim Material    | S.S. 316L                    |                                                                                                                        |                      |             |
| TRANSMITTER        | 33               | Function                     | Level Transmitter                 |                      |             |
|                    | 34               | Output                       | 4~20 mA, SMART, HART                                                                                                   |                      |             |
|                    | 35               | Set Range                    | Min.                                                                                                                   | Max.                 | 0 100%      |
|                    | 36               | Calibration Range            | 0-700mm                                                                                                                |                      |             |
|                    | 37               | Ingress Protection           | IP65                                                                                                                   |                      |             |
|                    | 38               | Mounting Location            | Side Mounted                                                                                                           |                      |             |
|                    | 39               | Connection Size & Location   | VTA                                                                                                                    |                      |             |
|                    | 40               | Ex Protection                | Zone 2, EEx ia IIB T4                                                                                                  |                      |             |
|                    | 41               | Power Supply                 | Cable Entry                                                                                                            | 24 VDC, loop powered | M20x1.5     |
|                    | 42               | Accuracy                     | ±0.1% of calibrated span                                                                                               |                      |             |
|                    | 43               | Integral Indicator           | Write Protection                                                                                                       | Digital LCD          | No          |
|                    | 44               | Zero/Span Adjustment         | Required                                                                                                               |                      |             |
|                    | 45               | Termination Type             | Screw terminal                                                                                                         |                      |             |
|                    | 46               | Case Material                | VTA Low Copper Die-Cast Aluminum  |                      |             |
|                    | 47               | SIL Rating                   | N/A                                                                                                                    |                      |             |
| OPTIONS            | 48               | Cable Gland                  | M20x1.5 , EExd                                                                                                         |                      |             |
|                    | 49               | Vent/Drain Connection        | 3/4" NPT -with 3/4" isolation valve                                                                                    |                      |             |
|                    | 50               | -                            | -                                                                                                                      |                      |             |
|                    | 51               | Custom Tag                   | S.S. permanent attached                                                                                                |                      |             |
| PURCHASE           | 52               | Manufacturer                 | Will be finalized later                                                                                                |                      |             |
|                    | 53               | Model                        | Will be finalized later                                                                                                |                      |             |

**Notes:**

VTA: Vendor to advice

1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.

2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

D03

D03

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 16 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |  |                                                                                           |                   |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|--|-------------------------------------------------------------------------------------------|-------------------|-------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |  | LIT-2132B                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |  | 2nd Stage Gas Compression Suction Drums                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |  | V-2102-B                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |  | External                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |  | Level Control                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |  | BK-GCS-PEDCO-120-PR-PI-0009-D07 (2 of 3)                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |  | NEEDED                                                                                    |                   | NEEDED      |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |  | Process Gas                                                                               |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |  | Hydrocarbon Drain                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |  | 829.1 Kg/m3                                                                               |                   | 18.28 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |  | F.V/22 barg                                                                               |                   | 18.3 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |  | 115.4 °C                                                                                  |                   | 60 °C       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |  | 0.44 cp                                                                                   |                   | 0.01 cp     |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |  | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |  | 300#                                                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |  | 2" , ANSI Flange, 300#RF side                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |  | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |  | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |  | 1219 mm (48")                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |  | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |  | Yes                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |  | Side, Side with vent/drain connection                                                     |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |  | Yes                                                                                       |                   |             |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |  | Displacer                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |  | 1                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |  | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |  | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |  | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |  | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |  | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |  | VTA                                                                                       |                   | Inconel     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |  | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |  |                                                                                           | Level Transmitter |             |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |  | 4-20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |             |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              |  | 0                                                                                         |                   | 100%        |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |  | 0-1100mm                                                                                  |                   |             |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |  | IP65                                                                                      |                   |             |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |  | Side Mounted                                                                              |                   |             |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |  | VTA                                                                                       |                   |             |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |  | Zone 1, EEx ia IIB T4                                                                     |                   |             |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |  | 24 VDC, loop powered                                                                      |                   | M20x1.5     |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |  | ±0.1% of calibrated span                                                                  |                   |             |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |  | Digital LCD                                                                               |                   | Yes         |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |  | Required                                                                                  |                   |             |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |  | Screw terminal                                                                            |                   |             |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |  | VTA Low Copper Die-Cast Aluminum                                                          |                   |             |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |  | SIL 2 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |             |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |  | M20x1.5 , EExd                                                                            |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |  | 3/4" NPT -with 3/4" isolation valve                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |  | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |  | S.S. permanent attached                                                                   |                   |             |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |  | Will be finalized later                                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |  | Will be finalized later                                                                   |                   |             |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |  |                                                                                           |                   |             |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال                                                                              | نسخه                 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006                                                                               | D03                  |
|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    | شماره صفحه: 17 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                      |             |                              |                       |                   |  |                                                                    |                                     |             |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|-----------------------|-------------------|--|--------------------------------------------------------------------|-------------------------------------|-------------|--|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                 | 1           | Tag Number                   |                       |                   |  | LIT-2131C                                                          |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 2           | Service                      |                       |                   |  | 2nd Stage Gas Compression Suction Drums                            |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 3           | Location                     |                       |                   |  | V-2102-C                                                           |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 4           | Mounting Type                |                       |                   |  | External                                                           |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 5           | Application                  |                       |                   |  | Level Control                                                      |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 6           | P&ID No.                     |                       |                   |  | BK-GCS-PEDCO-120-PR-PI-0009-D07 (3 of 3)                           |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 7           | RFI Protection               |                       | Tropicalisation   |  | NEEDED                                                             |                                     | NEEDED      |  |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                      | 8           | Upper Liquid                 |                       |                   |  | Process Gas                                                        |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 9           | Lower Liquid                 |                       |                   |  | Hydrocarbon Drain                                                  |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 10          | Density Lower                |                       | Density Upper     |  | 829.1 Kg/m3                                                        |                                     | 18.28 Kg/m3 |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 11          | Design Pressure              |                       | Normal Pressure   |  | F.V/22 barg                                                        |                                     | 18.3 barg   |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 12          | Design Temp.                 |                       | Normal Temp.      |  | 115.4 °C                                                           |                                     | 60 °C       |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 13          | Viscosity Low.               |                       | Viscosity Up      |  | 0.44 cp                                                            |                                     | 0.01 cp     |  |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                             | 14          | Body/Cage Material           |                       |                   |  | C.S. (Note 2) <span style="float: right;">D03</span>               |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 15          | Body/Cage Rating             |                       |                   |  | 300#                                                               |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 16          | Connection Size & Location   |                       |                   |  | 2" , ANSI Flange, 300#RF side                                      |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 17          | -                            |                       |                   |  | -                                                                  |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 18          | Flange Material              |                       |                   |  | C.S. <span style="float: right;">A105 NACE<br/>H.R.modified</span> |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 19          | Length of Center To Center   |                       |                   |  | 813 mm (32")                                                       |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 20          | Case Mounting                |                       |                   |  | VTA                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 21          | Rotatable Head               |                       |                   |  | Yes                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 22          | Orientation                  |                       |                   |  | Side, Side with vent/drain connection                              |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 23          | Torque Tube Type             |                       |                   |  | Yes                                                                |                                     |             |  |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                               | 24          | Sensor Type                  |                       |                   |  | Displacer                                                          |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 25          | Sensor Quantity              |                       |                   |  | 1                                                                  |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 26          | Sensor Dimention             |                       |                   |  | VTA                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 27          | Selected Standard Span       |                       |                   |  | VTA                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 28          | Insertion Depth              |                       |                   |  | N/A                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 29          | Displacer Extension Material |                       |                   |  | N/A                                                                |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 30          | Displacer or Float Material  |                       |                   |  | S.S. 316L                                                          |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 31          | Spring Material              |                       | Torque Tube Mtrl. |  | VTA                                                                |                                     | Inconel     |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 32          | Trim Material                |                       |                   |  | S.S. 316L                                                          |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | TRANSMITTER | 33                           | Function              |                   |  |                                                                    | Level Transmitter                   |             |  |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                      |             | Output                       |                       |                   |  | 4~20 mA, SMART , HART <span style="float: right;">D03</span>       |                                     |             |  |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                      |             | Set Range                    |                       | Min.              |  | Max.                                                               |                                     | 0 100%      |  |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                      |             | Calibration Range            |                       |                   |  | 0-700mm                                                            |                                     |             |  |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                      |             | Ingress Protection           |                       |                   |  | IP65                                                               |                                     |             |  |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                      |             | Mounting Location            |                       |                   |  | Side Mounted                                                       |                                     |             |  |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                      |             | Connection Size & Location   |                       |                   |  | VTA                                                                |                                     |             |  |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                      |             | Ex Protection                |                       |                   |  | Zone 2, EEx ia IIB T4                                              |                                     |             |  |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                      |             | Power Supply                 |                       | Cable Entry       |  | 24 VDC, loop powered                                               |                                     | M20x1.5     |  |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                      |             | Accuracy                     |                       |                   |  | ±0.1% of calibrated span                                           |                                     |             |  |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                      |             | Integral Indicator           |                       | Write Protection  |  | Digital LCD                                                        |                                     | No          |  |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                      |             | Zero/Span Adjustment         |                       |                   |  | Required                                                           |                                     |             |  |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                      |             | Termination Type             |                       |                   |  | Screw terminal                                                     |                                     |             |  |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                      |             | Case Material                |                       |                   |  | VTA Low Copper Die-Cast Aluminum                                   |                                     |             |  |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                      |             | SIL Rating                   |                       |                   |  | N/A <span style="float: right;">D03</span>                         |                                     |             |  |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                 |             | 48                           | Cable Gland           |                   |  |                                                                    | M20x1.5 , EExd                      |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         |             | 49                           | Vent/Drain Connection |                   |  |                                                                    | 3/4" NPT -with 3/4" isolation valve |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 50          | -                            |                       |                   |  | -                                                                  |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 51          | Custom Tag                   |                       |                   |  | S.S. permanent attached                                            |                                     |             |  |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                | 52          | Manufacturer                 |                       |                   |  | Will be finalized later                                            |                                     |             |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                         | 53          | Model                        |                       |                   |  | Will be finalized later                                            |                                     |             |  |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="float: right;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="float: right;">D03</span> |             |                              |                       |                   |  |                                                                    |                                     |             |  |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 18 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |      |                                                                                           |                   |             |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|-------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |      | LIT-2132C                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |      | 2nd Stage Gas Compression Suction Drums                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |      | V-2102-C                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0009-D07 (3 of 3)                                                  |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED      |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |      | 829.1 Kg/m3                                                                               |                   | 18.28 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |      | F.V/22 barg                                                                               |                   | 18.3 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |      | 115.4 °C                                                                                  |                   | 60 °C       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.44 cp                                                                                   |                   | 0.01 cp     |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |      | 1219 mm (48")                                                                             |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |             |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |             |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |      | 4-20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |             |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%        |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |      | 0-1100 mm                                                                                 |                   |             |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |             |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |             |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |             |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |             |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5     |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |             |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes         |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |             |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |             |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |             |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |      | SIL 2 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |             |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |      | -                                                                                         |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |             |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |             |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |      |                                                                                           |                   |             |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال                                                                              | نسخه                 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006                                                                               | D03                  |
|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    | شماره صفحه: 19 از 28 |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |             |                              |                       |                   |  |                                       |                                     |             |  |  |
|----------------------------------------------------|-------------|------------------------------|-----------------------|-------------------|--|---------------------------------------|-------------------------------------|-------------|--|--|
| GENERAL                                            | 1           | Tag Number                   |                       |                   |  | LIT-2141                              |                                     |             |  |  |
|                                                    | 2           | Service                      |                       |                   |  | Gas Compression Discharge Drum        |                                     |             |  |  |
|                                                    | 3           | Location                     |                       |                   |  | V-2103                                |                                     |             |  |  |
|                                                    | 4           | Mounting Type                |                       |                   |  | External                              |                                     |             |  |  |
|                                                    | 5           | Application                  |                       |                   |  | Level Control                         |                                     |             |  |  |
|                                                    | 6           | P&ID No.                     |                       |                   |  | BK-GCS-PEDCO-120-PR-PI-0012-D07       |                                     |             |  |  |
|                                                    | 7           | RFI Protection               |                       | Tropicalisation   |  | NEEDED                                |                                     | NEEDED      |  |  |
| PROCESS CONDITIONS                                 | 8           | Upper Liquid                 |                       |                   |  | Process Gas                           |                                     |             |  |  |
|                                                    | 9           | Lower Liquid                 |                       |                   |  | Hydrocarbon Drain                     |                                     |             |  |  |
|                                                    | 10          | Density Lower                |                       | Density Upper     |  | 982 Kg/m3                             |                                     | 59.63 Kg/m3 |  |  |
|                                                    | 11          | Design Pressure              |                       | Normal Pressure   |  | F.V/62 barg                           |                                     | 53.90 barg  |  |  |
|                                                    | 12          | Design Temp.                 |                       | Normal Temp.      |  | 130 °C                                |                                     | 60 °C       |  |  |
|                                                    | 13          | Viscosity Low.               |                       | Viscosity Up      |  | 0.49 cp                               |                                     | 0.01 cp     |  |  |
| BODY / GAGE                                        | 14          | Body/Cage Material           |                       |                   |  | C.S. (Note 2)                         |                                     |             |  |  |
|                                                    | 15          | Body/Cage Rating             |                       |                   |  | 600#                                  |                                     |             |  |  |
|                                                    | 16          | Connection Size & Location   |                       |                   |  | 2" , ANSI Flange, 600#RF side         |                                     |             |  |  |
|                                                    | 17          | -                            |                       |                   |  | -                                     |                                     |             |  |  |
|                                                    | 18          | Flange Material              |                       |                   |  | C.S.                                  |                                     |             |  |  |
|                                                    | 19          | Length of Center To Center   |                       |                   |  | 813 mm (32")                          |                                     |             |  |  |
|                                                    | 20          | Case Mounting                |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 21          | Rotatable Head               |                       |                   |  | Yes                                   |                                     |             |  |  |
|                                                    | 22          | Orientation                  |                       |                   |  | Side, Side with vent/drain connection |                                     |             |  |  |
|                                                    | 23          | Torque Tube Type             |                       |                   |  | Yes                                   |                                     |             |  |  |
| DISPLACER                                          | 24          | Sensor Type                  |                       |                   |  | Displacer                             |                                     |             |  |  |
|                                                    | 25          | Sensor Quantity              |                       |                   |  | 1                                     |                                     |             |  |  |
|                                                    | 26          | Sensor Dimention             |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 27          | Selected Standard Span       |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 28          | Insertion Depth              |                       |                   |  | N/A                                   |                                     |             |  |  |
|                                                    | 29          | Displacer Extension Material |                       |                   |  | N/A                                   |                                     |             |  |  |
|                                                    | 30          | Displacer or Float Material  |                       |                   |  | S.S. 316L                             |                                     |             |  |  |
|                                                    | 31          | Spring Material              |                       | Torque Tube Mtrl. |  | VTA                                   |                                     | Inconel     |  |  |
|                                                    | 32          | Trim Material                |                       |                   |  | S.S. 316L                             |                                     |             |  |  |
|                                                    | TRANSMITTER | 33                           | Function              |                   |  |                                       | Level Transmitter                   |             |  |  |
| 34                                                 |             | Output                       |                       |                   |  | 4-20 mA, SMART , HART                 |                                     |             |  |  |
| 35                                                 |             | Set Range                    |                       | Min.              |  | Max.                                  |                                     | 0 100%      |  |  |
| 36                                                 |             | Calibration Range            |                       |                   |  | 0-700mm                               |                                     |             |  |  |
| 37                                                 |             | Ingress Protection           |                       |                   |  | IP65                                  |                                     |             |  |  |
| 38                                                 |             | Mounting Location            |                       |                   |  | Side Mounted                          |                                     |             |  |  |
| 39                                                 |             | Connection Size & Location   |                       |                   |  | VTA                                   |                                     |             |  |  |
| 40                                                 |             | Ex Protection                |                       |                   |  | Zone 2, EEx ia IIB T4                 |                                     |             |  |  |
| 41                                                 |             | Power Supply                 |                       | Cable Entry       |  | 24 VDC, loop powered                  |                                     | M20x1.5     |  |  |
| 42                                                 |             | Accuracy                     |                       |                   |  | ±0.1% of calibrated span              |                                     |             |  |  |
| 43                                                 |             | Integral Indicator           |                       | Write Protection  |  | Digital LCD                           |                                     | No          |  |  |
| 44                                                 |             | Zero/Span Adjustment         |                       |                   |  | Required                              |                                     |             |  |  |
| 45                                                 |             | Termination Type             |                       |                   |  | Screw terminal                        |                                     |             |  |  |
| 46                                                 |             | Case Material                |                       |                   |  | VTA Low Copper Die-Cast Aluminum      |                                     |             |  |  |
| 47                                                 |             | SIL Rating                   |                       |                   |  | N/A                                   |                                     |             |  |  |
| OPTIONS                                            |             | 48                           | Cable Gland           |                   |  |                                       | M20x1.5 , EExd                      |             |  |  |
|                                                    |             | 49                           | Vent/Drain Connection |                   |  |                                       | 3/4" NPT -with 3/4" isolation valve |             |  |  |
|                                                    | 50          | -                            |                       |                   |  | -                                     |                                     |             |  |  |
|                                                    | 51          | Custom Tag                   |                       |                   |  | S.S. permanent attached               |                                     |             |  |  |
| PURCHASE                                           | 52          | Manufacturer                 |                       |                   |  | Will be finalized later               |                                     |             |  |  |
|                                                    | 53          | Model                        |                       |                   |  | Will be finalized later               |                                     |             |  |  |

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**Notes:**  
 VTA: Vendor to advice  
 1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.  
 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       | <br> |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                                                                                                           |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                                                                                                                      |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                                                                                                       |
| شماره صفحه: 20 از 28                                                                             |                                                                                                      |           |            |        |      |          |       |                                                                                                                                                                           |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |             |                              |                       |                   |  |                                       |                                     |             |  |  |
|----------------------------------------------------|-------------|------------------------------|-----------------------|-------------------|--|---------------------------------------|-------------------------------------|-------------|--|--|
| GENERAL                                            | 1           | Tag Number                   |                       |                   |  | LIT-2142                              |                                     |             |  |  |
|                                                    | 2           | Service                      |                       |                   |  | Compression Discharge Drum            |                                     |             |  |  |
|                                                    | 3           | Location                     |                       |                   |  | V-2103                                |                                     |             |  |  |
|                                                    | 4           | Mounting Type                |                       |                   |  | External                              |                                     |             |  |  |
|                                                    | 5           | Application                  |                       |                   |  | Level Control                         |                                     |             |  |  |
|                                                    | 6           | P&ID No.                     |                       |                   |  | BK-GCS-PEDCO-120-PR-PI-0012-D07       |                                     |             |  |  |
|                                                    | 7           | RFI Protection               |                       | Tropicalisation   |  | NEEDED                                |                                     | NEEDED      |  |  |
| PROCESS CONDITIONS                                 | 8           | Upper Liquid                 |                       |                   |  | Process Gas                           |                                     |             |  |  |
|                                                    | 9           | Lower Liquid                 |                       |                   |  | Hydrocarbon Drain                     |                                     |             |  |  |
|                                                    | 10          | Density Lower                |                       | Density Upper     |  | 982 Kg/m3                             |                                     | 59.63 Kg/m3 |  |  |
|                                                    | 11          | Design Pressure              |                       | Normal Pressure   |  | F.V/62 barg                           |                                     | 53.90 barg  |  |  |
|                                                    | 12          | Design Temp.                 |                       | Normal Temp.      |  | 130 °C                                |                                     | 60 °C       |  |  |
|                                                    | 13          | Viscosity Low.               |                       | Viscosity Up      |  | 0.49 cp                               |                                     | 0.01 cp     |  |  |
| BODY / GAGE                                        | 14          | Body/Cage Material           |                       |                   |  | C.S. (Note 2)                         |                                     |             |  |  |
|                                                    | 15          | Body/Cage Rating             |                       |                   |  | 600#                                  |                                     |             |  |  |
|                                                    | 16          | Connection Size & Location   |                       |                   |  | 2" , ANSI Flange, 600#RF side         |                                     |             |  |  |
|                                                    | 17          | -                            |                       |                   |  | -                                     |                                     |             |  |  |
|                                                    | 18          | Flange Material              |                       |                   |  | C.S.                                  |                                     |             |  |  |
|                                                    | 19          | Length of Center To Center   |                       |                   |  | 1219 mm (48")                         |                                     |             |  |  |
|                                                    | 20          | Case Mounting                |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 21          | Rotatable Head               |                       |                   |  | Yes                                   |                                     |             |  |  |
|                                                    | 22          | Orientation                  |                       |                   |  | Side, Side with vent/drain connection |                                     |             |  |  |
|                                                    | 23          | Torque Tube Type             |                       |                   |  | Yes                                   |                                     |             |  |  |
| DISPLACER                                          | 24          | Sensor Type                  |                       |                   |  | Displacer                             |                                     |             |  |  |
|                                                    | 25          | Sensor Quantity              |                       |                   |  | 1                                     |                                     |             |  |  |
|                                                    | 26          | Sensor Dimention             |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 27          | Selected Standard Span       |                       |                   |  | VTA                                   |                                     |             |  |  |
|                                                    | 28          | Insertion Depth              |                       |                   |  | N/A                                   |                                     |             |  |  |
|                                                    | 29          | Displacer Extension Material |                       |                   |  | N/A                                   |                                     |             |  |  |
|                                                    | 30          | Displacer or Float Material  |                       |                   |  | S.S. 316L                             |                                     |             |  |  |
|                                                    | 31          | Spring Material              |                       | Torque Tube Mtrl. |  | VTA                                   |                                     | Inconel     |  |  |
|                                                    | 32          | Trim Material                |                       |                   |  | S.S. 316L                             |                                     |             |  |  |
|                                                    | TRANSMITTER | 33                           | Function              |                   |  |                                       | Level Transmitter                   |             |  |  |
| 34                                                 |             | Output                       |                       |                   |  | 4-20 mA, SMART , HART                 |                                     |             |  |  |
| 35                                                 |             | Set Range                    |                       | Min.              |  | Max.                                  |                                     | 0           |  |  |
| 36                                                 |             | Calibration Range            |                       |                   |  | 0-1100 mm                             |                                     |             |  |  |
| 37                                                 |             | Ingress Protection           |                       |                   |  | IP65                                  |                                     |             |  |  |
| 38                                                 |             | Mounting Location            |                       |                   |  | Side Mounted                          |                                     |             |  |  |
| 39                                                 |             | Connection Size & Location   |                       |                   |  | VTA                                   |                                     |             |  |  |
| 40                                                 |             | Ex Protection                |                       |                   |  | Zone 2, EEx ia IIB T4                 |                                     |             |  |  |
| 41                                                 |             | Power Supply                 |                       | Cable Entry       |  | 24 VDC, loop powered                  |                                     | M20x1.5     |  |  |
| 42                                                 |             | Accuracy                     |                       |                   |  | ±0.1% of calibrated span              |                                     |             |  |  |
| 43                                                 |             | Integral Indicator           |                       | Write Protection  |  | Digital LCD                           |                                     | Yes         |  |  |
| 44                                                 |             | Zero/Span Adjustment         |                       |                   |  | Required                              |                                     |             |  |  |
| 45                                                 |             | Termination Type             |                       |                   |  | Screw terminal                        |                                     |             |  |  |
| 46                                                 |             | Case Material                |                       |                   |  | VTA Low Copper Die-Cast Aluminum      |                                     |             |  |  |
| 47                                                 |             | SIL Rating                   |                       |                   |  | SIL 1                                 |                                     |             |  |  |
| OPTIONS                                            |             | 48                           | Cable Gland           |                   |  |                                       | M20x1.5 , EExd                      |             |  |  |
|                                                    |             | 49                           | Vent/Drain Connection |                   |  |                                       | 3/4" NPT -with 3/4" isolation valve |             |  |  |
|                                                    | 50          | -                            |                       |                   |  | -                                     |                                     |             |  |  |
|                                                    | 51          | Custom Tag                   |                       |                   |  | S.S. permanent attached               |                                     |             |  |  |
| PURCHASE                                           | 52          | Manufacturer                 |                       |                   |  | Will be finalized later               |                                     |             |  |  |
|                                                    | 53          | Model                        |                       |                   |  | Will be finalized later               |                                     |             |  |  |

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**Notes:**  
 VTA: Vendor to advice  
 1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.  
 2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

|                                                                                                  |                                                                                                      |           |            |            |      |          |                                                                                    |      |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|------------|------|----------|------------------------------------------------------------------------------------|------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |            |      |          |  |      |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |            |      |          |                                                                                    |      |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیه کننده | رشته | نوع مدرک | سریال                                                                              | نسخه | شماره صفحه: 21 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120        | IN   | DT       | 0006                                                                               | D03  |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |             |                             |          |                  |   |                                               |                   |                |  |
|----------------------------------------------------|-------------|-----------------------------|----------|------------------|---|-----------------------------------------------|-------------------|----------------|--|
| GENERAL                                            | 1           | Tag Number                  |          |                  |   | LIT-2223                                      |                   |                |  |
|                                                    | 2           | Service                     |          |                  |   | LP Flare K.O. Drum And Closed Drain Drum Sump |                   |                |  |
|                                                    | 3           | Location                    |          |                  |   | SU-2201                                       |                   |                |  |
|                                                    | 4           | Mounting Type               |          |                  |   | External                                      |                   |                |  |
|                                                    | 5           | Application                 |          |                  |   | Level Control                                 |                   |                |  |
|                                                    | 6           | P&ID No.                    |          |                  |   | BK-GCS-PEDCO-120-PR-PI-0017-D07 (2 of 2)      |                   |                |  |
|                                                    | 7           | RFI Protection              |          | Tropicalisation  |   | NEEDED                                        |                   | NEEDED         |  |
| PROCESS CONDITIONS                                 | 8           | Upper Liquid                |          |                  |   | Air                                           |                   |                |  |
|                                                    | 9           | Lower Liquid                |          |                  |   | H <sub>2</sub> O                              |                   |                |  |
|                                                    | 10          | Density Lower               |          | Density Upper    |   | 997 Kg/m <sup>3</sup>                         |                   | 1.225          |  |
|                                                    | 11          | Design Pressure             |          | Normal Pressure  |   | 3.5                                           |                   | ATM            |  |
|                                                    | 12          | Design Temp.                |          | Normal Temp.     |   | 85                                            |                   | AMB            |  |
|                                                    | 13          | Viscosity Low.              |          | Viscosity Up     |   | 0.89                                          |                   | 0.01           |  |
| BODY / GAGE                                        | 14          | Body/Cage Material          |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 15          | Body/Cage Rating            |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 16          | Connection Size & Location  |          |                  |   | TOP /PLATE MOUNTED                            |                   |                |  |
|                                                    | 17          | -                           |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 18          | Flange Material             |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 19          | Length of Center To Center  |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 20          | Case Mounting               |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 21          | Rotatable Head              |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 22          | Orientation                 |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 23          | Torque Tube Type            |          |                  |   | N/A                                           |                   |                |  |
| DISPLACER                                          | 24          | Sensor Type                 |          |                  |   | Float Type                                    |                   |                |  |
|                                                    | 25          | Sensor Quantity             |          |                  |   | 1                                             |                   |                |  |
|                                                    | 26          | Sensor Dimention            |          |                  |   | VTA                                           |                   |                |  |
|                                                    | 27          | Selected Standard Span      |          |                  |   | VTA                                           |                   |                |  |
|                                                    | 28          | Insertion Depth             |          |                  |   | 2000 m                                        |                   |                |  |
|                                                    | 29          | Float Extension Material    |          |                  |   | N/A                                           |                   |                |  |
|                                                    | 30          | Displacer or Float Material |          |                  |   | S.S. 316L                                     |                   |                |  |
|                                                    | 31          | Spring Material             |          | Torque           |   |                                               |                   | S.S. 316L(VTC) |  |
|                                                    | 32          | Trim Material               |          |                  |   | S.S. 316L(VTC)                                |                   |                |  |
|                                                    | TRANSMITTER | 33                          | Function |                  |   |                                               | Level Transmitter |                |  |
| 34                                                 |             | Output                      |          |                  |   | 4~20 mA, SMART, HART                          |                   |                |  |
| 35                                                 |             | Set Range                   | Min.     | Max.             | 0 |                                               | 100%              |                |  |
| 36                                                 |             | Calibration Range           |          |                  |   | 0-700 mm                                      |                   |                |  |
| 37                                                 |             | Ingress Protection          |          |                  |   | IP65                                          |                   |                |  |
| 38                                                 |             | Mounting Location           |          |                  |   | Side Mounted                                  |                   |                |  |
| 39                                                 |             | Connection Size & Location  |          |                  |   | VTA                                           |                   |                |  |
| 40                                                 |             | Ex Protection               |          |                  |   | Zone 2, EEx ia IIB T4                         |                   |                |  |
| 41                                                 |             | Power Supply                |          | Cable Entry      |   | 24 VDC, loop powered                          |                   | M20x1.5        |  |
| 42                                                 |             | Accuracy                    |          |                  |   | ±0.1% of calibrated span                      |                   |                |  |
| 43                                                 |             | Integral Indicator          |          | Write Protection |   | Digital LCD                                   |                   | No             |  |
| 44                                                 |             | Zero/Span Adjustment        |          |                  |   | Required                                      |                   |                |  |
| 45                                                 |             | Termination Type            |          |                  |   | Screw terminal                                |                   |                |  |
| 46                                                 |             | Case Material               |          |                  |   | VTA Low Copper Die-Cast Aluminum              |                   |                |  |
| 47                                                 |             | SIL Rating                  |          |                  |   | N/A                                           |                   |                |  |
| OPTIONS                                            | 48          | Cable Gland                 |          |                  |   | M20x1.5 , EExd                                |                   |                |  |
|                                                    | 49          | Vent/Drain Connection       |          |                  |   | 3/4" NPT -with 3/4" isolation valve           |                   |                |  |
|                                                    | 50          | -                           |          |                  |   | -                                             |                   |                |  |
|                                                    | 51          | Custom Tag                  |          |                  |   | S.S. permanent attached                       |                   |                |  |
| PURCHASE                                           | 52          | Manufacturer                |          |                  |   | Will be finalized later                       |                   |                |  |
|                                                    | 53          | Model                       |          |                  |   | Will be finalized later                       |                   |                |  |

#### Notes:

VTA: Vendor to advice

1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.

2- Mounted on a plate as per Project Hook- up diagram (Required plate and accessories for connect to concrete wall of sump to be supplied by Civil department.)

3- Insertion depth is the length related to the hanger extension.

مشخص کردند  
H.R. will be specified after placing order.

|                                                                                                  |                                                                                                      |           |            |        |      |          |                                                                                    |      |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|------------------------------------------------------------------------------------|------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |  |      |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |                                                                                    |      |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال                                                                              | نسخه | شماره صفحه: 28 از 22 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006                                                                               | D03  |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |      |                                                                                           |                   |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |      | LIT-2252A                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |      | LP Flare K.O. Drum                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |      | V-2201                                                                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0020-D07 (2 of 3)                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED     |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |      | 844.4 Kg/m3                                                                               |                   | 1.46 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |      | F.V/7.5 barg                                                                              |                   | 0.5 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |      | 85 °C                                                                                     |                   | 32 °C      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.46 cp                                                                                   |                   | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |      | 356 mm (14")                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |            |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |      | 4~20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |            |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%       |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |      | 0-250 mm                                                                                  |                   |            |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |            |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |            |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |            |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |            |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5    |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |            |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes        |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |            |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |            |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |            |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |      | SIL 1 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |      |                                                                                           |                   |            |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 23 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                              |          |                   |      |                                                                                           |                   |            |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1           | Tag Number                   |          |                   |      | LIT-2252B                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2           | Service                      |          |                   |      | LP Flare K.O. Drum                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3           | Location                     |          |                   |      | V-2201                                                                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0020-D07 (2 of 3)                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED     |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10          | Density Lower                |          | Density Upper     |      | 844.4 Kg/m3                                                                               |                   | 1.46 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 11          | Design Pressure              |          | Normal Pressure   |      | F.V/7.5 barg                                                                              |                   | 0.5 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 12          | Design Temp.                 |          | Normal Temp.      |      | 85 °C                                                                                     |                   | 32 °C      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.46 cp                                                                                   |                   | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 17          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 19          | Length of Center To Center   |          |                   |      | 356 mm (14")                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |            |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Output                       |          |                   |      | 4~20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |            |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%       |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Calibration Range            |          |                   |      | 0-250 mm                                                                                  |                   |            |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |            |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |            |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |            |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |            |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5    |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |            |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes        |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |            |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |            |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |            |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | SIL Rating                   |          |                   |      | SIL 1 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="float: right;"><span style="border: 1px solid black; padding: 2px;">D03</span></span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="float: right;"><span style="border: 1px solid black; padding: 2px;">D03</span></span> |             |                              |          |                   |      |                                                                                           |                   |            |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 24 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |      |                                                                                           |                   |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|------|-------------------------------------------------------------------------------------------|-------------------|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |      | LIT-2252C                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |      | LP Flare K.O. Drum                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |      | V-2201                                                                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |      | External                                                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |      | Level Control                                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |      | BK-GCS-PEDCO-120-PR-PI-0020-D07 (2 of 3)                                                  |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |      | NEEDED                                                                                    |                   | NEEDED     |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |      | Process Gas                                                                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |      | Hydrocarbon Drain                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |      | 844.4 Kg/m3                                                                               |                   | 1.46 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |      | F.V/7.5 barg                                                                              |                   | 0.5 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |      | 85 °C                                                                                     |                   | 32 °C      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |      | 0.46 cp                                                                                   |                   | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |      | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |      | 300#                                                                                      |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |      | 2" , ANSI Flange, 300#RF side                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |      | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span> |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |      | 356 mm (14")                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |      | Yes                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |      | Side, Side with vent/drain connection                                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |      | Yes                                                                                       |                   |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |      | Displacer                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |      | 1                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |      | VTA                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |      | N/A                                                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |      | VTA                                                                                       |                   | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |      | S.S. 316L                                                                                 |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |      |                                                                                           | Level Transmitter |            |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |      | 4-20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>     |                   |            |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              | Max. | 0                                                                                         |                   | 100%       |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |      | 0-250 mm                                                                                  |                   |            |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |      | IP65                                                                                      |                   |            |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |      | Side Mounted                                                                              |                   |            |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |      | VTA                                                                                       |                   |            |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |      | Zone 2, EEx ia IIB T4                                                                     |                   |            |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |      | 24 VDC, loop powered                                                                      |                   | M20x1.5    |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |      | ±0.1% of calibrated span                                                                  |                   |            |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Write Protection  |      | Digital LCD                                                                               |                   | Yes        |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |      | Required                                                                                  |                   |            |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |      | Screw terminal                                                                            |                   |            |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |      | VTA Low Copper Die-Cast Aluminum                                                          |                   |            |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |      | SIL 1 <span style="border: 1px solid black; padding: 2px;">D03</span>                     |                   |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |      | M20x1.5 , EExd                                                                            |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |      | 3/4" NPT -with 3/4" isolation valve                                                       |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |      | -                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |      | S.S. permanent attached                                                                   |                   |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |      | Will be finalized later                                                                   |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |      | Will be finalized later                                                                   |                   |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |      |                                                                                           |                   |            |  |

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 25 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)                                                                                                                                                                                                                                                                                                                                                                                                        |             |                              |          |                   |  |                                                                                                  |                   |            |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|----------|-------------------|--|--------------------------------------------------------------------------------------------------|-------------------|------------|--|
| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1           | Tag Number                   |          |                   |  | LIT-2253                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2           | Service                      |          |                   |  | LP Flare K.O. Drum                                                                               |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3           | Location                     |          |                   |  | V-2201                                                                                           |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4           | Mounting Type                |          |                   |  | External                                                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5           | Application                  |          |                   |  | Level Control                                                                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6           | P&ID No.                     |          |                   |  | BK-GCS-PEDCO-120-PR-PI-0020-D07 (2 of 3)                                                         |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7           | RFI Protection               |          | Tropicalisation   |  | NEEDED                                                                                           |                   | NEEDED     |  |
| PROCESS CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8           | Upper Liquid                 |          |                   |  | Process Gas                                                                                      |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9           | Lower Liquid                 |          |                   |  | Hydrocarbon Drain                                                                                |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10          | Density Lower                |          | Density Upper     |  | 844.4 Kg/m3                                                                                      |                   | 1.46 Kg/m3 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11          | Design Pressure              |          | Normal Pressure   |  | F.V/7.5 barg                                                                                     |                   | 0.5 barg   |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 12          | Design Temp.                 |          | Normal Temp.      |  | 85 °C                                                                                            |                   | 32 °C      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 13          | Viscosity Low.               |          | Viscosity Up      |  | 0.73 cp                                                                                          |                   | 0.01 cp    |  |
| BODY / GAGE                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14          | Body/Cage Material           |          |                   |  | C.S. (Note 2) <span style="border: 1px solid black; padding: 2px;">D03</span>                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 15          | Body/Cage Rating             |          |                   |  | 300#                                                                                             |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16          | Connection Size & Location   |          |                   |  | 2" , ANSI Flange, 300#RF side                                                                    |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17          | -                            |          |                   |  | -                                                                                                |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18          | Flange Material              |          |                   |  | C.S. <span style="border: 1px solid red; padding: 2px;">A105 NACE<br/>H.R.modified</span>        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19          | Length of Center To Center   |          |                   |  | 356 mm (14")                                                                                     |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20          | Case Mounting                |          |                   |  | VTA                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 21          | Rotatable Head               |          |                   |  | Yes                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 22          | Orientation                  |          |                   |  | Side, Side with vent/drain connection                                                            |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 23          | Torque Tube Type             |          |                   |  | Yes                                                                                              |                   |            |  |
| DISPLACER                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24          | Sensor Type                  |          |                   |  | Displacer                                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 25          | Sensor Quantity              |          |                   |  | 1                                                                                                |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 26          | Sensor Dimention             |          |                   |  | VTA                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 27          | Selected Standard Span       |          |                   |  | VTA                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 28          | Insertion Depth              |          |                   |  | N/A                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 29          | Displacer Extension Material |          |                   |  | N/A                                                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30          | Displacer or Float Material  |          |                   |  | S.S. 316L                                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 31          | Spring Material              |          | Torque Tube Mtrl. |  | VTA                                                                                              |                   | Inconel    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 32          | Trim Material                |          |                   |  | S.S. 316L                                                                                        |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TRANSMITTER | 33                           | Function |                   |  |                                                                                                  | Level Transmitter |            |  |
| 34                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Output                       |          |                   |  | 4-20 mA, SMART , HART <span style="border: 1px solid black; padding: 2px;">D03</span>            |                   |            |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Set Range                    |          | Min.              |  | Max.                                                                                             |                   | 0 100%     |  |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Calibration Range            |          |                   |  | 0-250 mm                                                                                         |                   |            |  |
| 37                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ingress Protection           |          |                   |  | IP65                                                                                             |                   |            |  |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Mounting Location            |          |                   |  | Side Mounted                                                                                     |                   |            |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Connection Size & Location   |          |                   |  | VTA                                                                                              |                   |            |  |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Ex Protection                |          |                   |  | Zone 2, EEx ia IIB T4                                                                            |                   |            |  |
| 41                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Power Supply                 |          | Cable Entry       |  | 24 VDC, loop powered                                                                             |                   | M20x1.5    |  |
| 42                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Accuracy                     |          |                   |  | ±0.1% of calibrated span                                                                         |                   |            |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Integral Indicator           |          | Digital LCD       |  | Yes                                                                                              |                   |            |  |
| 44                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Zero/Span Adjustment         |          |                   |  | Required                                                                                         |                   |            |  |
| 45                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Termination Type             |          |                   |  | Screw terminal                                                                                   |                   |            |  |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | Case Material                |          |                   |  | VTA Low Copper Die-Cast Aluminum <span style="border: 1px solid black; padding: 2px;">D03</span> |                   |            |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SIL Rating                   |          |                   |  | SIL a                                                                                            |                   |            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 48          | Cable Gland                  |          |                   |  | M20x1.5 , EExd                                                                                   |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 49          | Vent/Drain Connection        |          |                   |  | 3/4" NPT -with 3/4" isolation valve                                                              |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50          | -                            |          |                   |  | -                                                                                                |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51          | Custom Tag                   |          |                   |  | S.S. permanent attached                                                                          |                   |            |  |
| PURCHASE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 52          | Manufacturer                 |          |                   |  | Will be finalized later                                                                          |                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 53          | Model                        |          |                   |  | Will be finalized later                                                                          |                   |            |  |
| <b>Notes:</b><br>VTA: Vendor to advice<br>1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer. <span style="border: 1px solid black; padding: 2px;">D03</span><br>2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data. <span style="border: 1px solid black; padding: 2px;">D03</span> |             |                              |          |                   |  |                                                                                                  |                   |            |  |



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

## احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

شماره پیمان:

053 - 073 - 9184

شماره صفحه: 26 از 28

نسخته

نسخته

نسخته

نسخته

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نسخته

### DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)

|                    |             |                              |                   |                                                                                                                        |                                                                                                         |      |
|--------------------|-------------|------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------|
| GENERAL            | 1           | Tag Number                   |                   | LIT-2271                                                                                                               |                                                                                                         |      |
|                    | 2           | Service                      |                   | Fuel Gas K.O. Drum                                                                                                     |                                                                                                         |      |
|                    | 3           | Location                     |                   | V-2205                                                                                                                 |                                                                                                         |      |
|                    | 4           | Mounting Type                |                   | External                                                                                                               |                                                                                                         |      |
|                    | 5           | Application                  |                   | Level Control                                                                                                          |                                                                                                         |      |
|                    | 6           | P&ID No.                     |                   | BK-GCS-PEDCO-120-PR-PI-0022-D07                                                                                        |                                                                                                         |      |
|                    | 7           | RFI Protection               | Tropicalisation   | NEEDED                                                                                                                 | NEEDED                                                                                                  |      |
| PROCESS CONDITIONS | 8           | Upper Liquid                 |                   | Process Gas                                                                                                            |                                                                                                         |      |
|                    | 9           | Lower Liquid                 |                   | Hydrocarbon Drain                                                                                                      |                                                                                                         |      |
|                    | 10          | Density Lower                | Density Upper     | 842.7 Kg/m3                                                                                                            | 505.8 Kg/m3                                                                                             |      |
|                    | 11          | Design Pressure              | Normal Pressure   | F.V/9 barg                                                                                                             | 4.9 barg                                                                                                |      |
|                    | 12          | Design Temp.                 | Normal Temp.      | 85 °C                                                                                                                  | 36.8 °C                                                                                                 |      |
|                    | 13          | Viscosity Low.               | Viscosity Up      | 0.69 cp                                                                                                                | 0.01 cp                                                                                                 |      |
| BODY / GAGE        | 14          | Body/Cage Material           |                   | C.S. (Note 2)                       |                                                                                                         |      |
|                    | 15          | Body/Cage Rating             |                   | 300#                                                                                                                   |                                                                                                         |      |
|                    | 16          | Connection Size & Location   |                   | 2" , ANSI Flange, 300#RF side                                                                                          |                                                                                                         |      |
|                    | 17          | -                            |                   | -                                                                                                                      |                                                                                                         |      |
|                    | 18          | Flange Material              |                   | C.S.                                |                                                                                                         |      |
|                    | 19          | Length of Center To Center   |                   | 813 mm (32")                                                                                                           |                                                                                                         |      |
|                    | 20          | Case Mounting                |                   | VTA                                                                                                                    |                                                                                                         |      |
|                    | 21          | Rotatable Head               |                   | Yes                                                                                                                    |                                                                                                         |      |
|                    | 22          | Orientation                  |                   | Side, Side with vent/drain connection                                                                                  |                                                                                                         |      |
|                    | 23          | Torque Tube Type             |                   | Yes                                                                                                                    |                                                                                                         |      |
| DISPLACER          | 24          | Sensor Type                  |                   | Displacer                                                                                                              |                                                                                                         |      |
|                    | 25          | Sensor Quantity              |                   | 1                                                                                                                      |                                                                                                         |      |
|                    | 26          | Sensor Dimention             |                   | VTA                                                                                                                    |                                                                                                         |      |
|                    | 27          | Selected Standard Span       |                   | VTA                                                                                                                    |                                                                                                         |      |
|                    | 28          | Insertion Depth              |                   | N/A                                                                                                                    |                                                                                                         |      |
|                    | 29          | Displacer Extension Material |                   | N/A                                                                                                                    |                                                                                                         |      |
|                    | 30          | Displacer or Float Material  |                   | S.S. 316L                                                                                                              |                                                                                                         |      |
|                    | 31          | Spring Material              | Torque Tube Mtrl. | VTA                                                                                                                    | Inconel                                                                                                 |      |
|                    | 32          | Trim Material                |                   | S.S. 316L                                                                                                              |                                                                                                         |      |
|                    | TRANSMITTER | 33                           | Function          |                                                                                                                        | Level Transmitter  |      |
| 34                 |             | Output                       |                   | 4~20 mA, SMART, HART                                                                                                   |                                                                                                         |      |
| 35                 |             | Set Range                    | Min.              | Max.                                                                                                                   | 0                                                                                                       | 100% |
| 36                 |             | Calibration Range            |                   | 0-700 mm                                                                                                               |                                                                                                         |      |
| 37                 |             | Ingress Protection           |                   | IP65                                                                                                                   |                                                                                                         |      |
| 38                 |             | Mounting Location            |                   | Side Mounted                                                                                                           |                                                                                                         |      |
| 39                 |             | Connection Size & Location   |                   | VTA                                                                                                                    |                                                                                                         |      |
| 40                 |             | Ex Protection                |                   | Zone 2, EEx ia IIB T4                                                                                                  |                                                                                                         |      |
| 41                 |             | Power Supply                 | Cable Entry       | 24 VDC, loop powered                                                                                                   | M20x1.5                                                                                                 |      |
| 42                 |             | Accuracy                     |                   | ±0.1% of calibrated span                                                                                               |                                                                                                         |      |
| 43                 |             | Integral Indicator           | Write Protection  | Digital LCD                                                                                                            | No                                                                                                      |      |
| 44                 |             | Zero/Span Adjustment         |                   | Required                                                                                                               |                                                                                                         |      |
| 45                 |             | Termination Type             |                   | Screw terminal                                                                                                         |                                                                                                         |      |
| 46                 |             | Case Material                |                   | VTA Low Copper Die-Cast Aluminum  |                                                                                                         |      |
| 47                 |             | SIL Rating                   |                   | N/A                                                                                                                    |                                                                                                         |      |
| OPTIONS            | 48          | Cable Gland                  |                   | M20x1.5 , EExd                                                                                                         |                                                                                                         |      |
|                    | 49          | Vent/Drain Connection        |                   | 3/4" NPT -with 3/4" isolation valve                                                                                    |                                                                                                         |      |
|                    | 50          | -                            |                   | -                                                                                                                      |                                                                                                         |      |
|                    | 51          | Custom Tag                   |                   | S.S. permanent attached                                                                                                |                                                                                                         |      |
| PURCHASE           | 52          | Manufacturer                 |                   | Will be finalized later                                                                                                |                                                                                                         |      |
|                    | 53          | Model                        |                   | Will be finalized later                                                                                                |                                                                                                         |      |

**Notes:**

VTA: Vendor to advice

1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.

2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

D03

D03



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

## احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



## DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER

شماره پیمان:

053 - 073 - 9184

شماره صفحه: 27 از 28

## DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE)

|                    |                  |                              |                   |                                                                                                                        |             |      |
|--------------------|------------------|------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------|-------------|------|
| GENERAL            | 1                | Tag Number                   |                   | LIT-2272                                                                                                               |             |      |
|                    | 2                | Service                      |                   | Fuel Gas K.O. Drum                                                                                                     |             |      |
|                    | 3                | Location                     |                   | V-2205                                                                                                                 |             |      |
|                    | 4                | Mounting Type                |                   | External                                                                                                               |             |      |
|                    | 5                | Application                  |                   | Level Control                                                                                                          |             |      |
|                    | 6                | P&ID No.                     |                   | BK-GCS-PEDCO-120-PR-PI-0022-D07                                                                                        |             |      |
|                    | 7                | RFI Protection               | Tropicalisation   | NEEDED                                                                                                                 | NEEDED      |      |
| PROCESS CONDITIONS | 8                | Upper Liquid                 |                   | Fuel Gas                                                                                                               |             |      |
|                    | 9                | Lower Liquid                 |                   | Hydrocarbon Drain                                                                                                      |             |      |
|                    | 10               | Density Lower                | Density Upper     | 842.7 Kg/m3                                                                                                            | 505.8 Kg/m3 |      |
|                    | 11               | Design Pressure              | Normal Pressure   | F.V/9 barg                                                                                                             | 4.9 barg    |      |
|                    | 12               | Design Temp.                 | Normal Temp.      | 85 °C                                                                                                                  | 36.8 °C     |      |
|                    | 13               | Viscosity Low.               | Viscosity Up      | 0.69 cp                                                                                                                | 0.01 cp     |      |
| BODY / GAGE        | 14               | Body/Cage Material           |                   | C.S. (Note 2)                       |             |      |
|                    | 15               | Body/Cage Rating             |                   | 300#                                                                                                                   |             |      |
|                    | 16               | Connection Size & Location   |                   | 2" , ANSI Flange, 300#RF side                                                                                          |             |      |
|                    | 17               | -                            |                   | -                                                                                                                      |             |      |
|                    | 18               | Flange Material              |                   | C.S.                                |             |      |
|                    | 19               | Length of Center To Center   |                   | 1219 mm (48")                                                                                                          |             |      |
|                    | 20               | Case Mounting                |                   | VTA                                                                                                                    |             |      |
|                    | 21               | Rotatable Head               |                   | Yes                                                                                                                    |             |      |
|                    | 22               | Orientation                  |                   | Side, Side with vent/drain connection                                                                                  |             |      |
| 23                 | Torque Tube Type |                              | Yes               |                                                                                                                        |             |      |
| DISPLACER          | 24               | Sensor Type                  |                   | Displacer                                                                                                              |             |      |
|                    | 25               | Sensor Quantity              |                   | 1                                                                                                                      |             |      |
|                    | 26               | Sensor Dimention             |                   | VTA                                                                                                                    |             |      |
|                    | 27               | Selected Standard Span       |                   | VTA                                                                                                                    |             |      |
|                    | 28               | Insertion Depth              |                   | N/A                                                                                                                    |             |      |
|                    | 29               | Displacer Extension Material |                   | N/A                                                                                                                    |             |      |
|                    | 30               | Displacer or Float Material  |                   | S.S. 316L                                                                                                              |             |      |
|                    | 31               | Spring Material              | Torque Tube Mtrl. | VTA                                                                                                                    | Inconel     |      |
| 32                 | Trim Material    |                              | S.S. 316L         |                                                                                                                        |             |      |
| TRANSMITTER        | 33               | Function                     |                   | Level Transmitter                 |             |      |
|                    | 34               | Output                       |                   | 4~20 mA, SMART, HART                                                                                                   |             |      |
|                    | 35               | Set Range                    | Min.              | Max.                                                                                                                   | 0           | 100% |
|                    | 36               | Calibration Range            |                   | 0-1100 mm                                                                                                              |             |      |
|                    | 37               | Ingress Protection           |                   | IP65                                                                                                                   |             |      |
|                    | 38               | Mounting Location            |                   | Side Mounted                                                                                                           |             |      |
|                    | 39               | Connection Size & Location   |                   | VTA                                                                                                                    |             |      |
|                    | 40               | Ex Protection                |                   | Zone 2, EEx ia IIB T4                                                                                                  |             |      |
|                    | 41               | Power Supply                 | Cable Entry       | 24 VDC, loop powered                                                                                                   | M20x1.5     |      |
|                    | 42               | Accuracy                     |                   | ±0.1% of calibrated span                                                                                               |             |      |
|                    | 43               | Integral Indicator           | Write Protection  | Digital LCD                                                                                                            | No          |      |
|                    | 44               | Zero/Span Adjustment         |                   | Required                                                                                                               |             |      |
|                    | 45               | Termination Type             |                   | Screw terminal                                                                                                         |             |      |
|                    | 46               | Case Material                |                   | VTA Low Copper Die-Cast Aluminum  |             |      |
| 47                 | SIL Rating       |                              | SIL a             |                                                                                                                        |             |      |
| OPTIONS            | 48               | Cable Gland                  |                   | M20x1.5 , EExd                                                                                                         |             |      |
|                    | 49               | Vent/Drain Connection        |                   | 3/4" NPT -with 3/4" isolation valve                                                                                    |             |      |
|                    | 50               | -                            |                   | -                                                                                                                      |             |      |
|                    | 51               | Custom Tag                   |                   | S.S. permanent attached                                                                                                |             |      |
| PURCHASE           | 52               | Manufacturer                 |                   | Will be finalized later                                                                                                |             |      |
|                    | 53               | Model                        |                   | Will be finalized later                                                                                                |             |      |

**Notes:**

VTA: Vendor to advice

1- An internal stilling well should be supplied by VENDOR, and have an internal diameter of at least 25 mm larger than the displacer diameter for internal type displacer.

2- Necessity of considering killed carbon steel shall be finalized by Vedor acc. to process data.

D03

D03

|                                                                                                  |                                                                                                      |           |            |        |      |          |       |                                                                                    |                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|----------|-------|------------------------------------------------------------------------------------|----------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |            |        |      |          |       |  |                      |
|                                                                                                  | DATA SHEETS FOR DISPLACER LEVEL TRANSMITTER                                                          |           |            |        |      |          |       |                                                                                    |                      |
| شماره پیمان:                                                                                     | پروژه                                                                                                | بسته کاری | صادر کننده | تهیهات | رشته | نوع مدرک | سریال | نسخه                                                                               | شماره صفحه: 28 از 28 |
| 053 - 073 - 9184                                                                                 | BK                                                                                                   | GCS       | PEDCO      | 120    | IN   | DT       | 0006  | D03                                                                                |                      |

| DATA SHEETS FOR LEVEL TRANSMITTER (DISPLACER TYPE) |             |                             |                       |                   |      |                                 |                                     |                |  | D03 |  |
|----------------------------------------------------|-------------|-----------------------------|-----------------------|-------------------|------|---------------------------------|-------------------------------------|----------------|--|-----|--|
| GENERAL                                            | 1           | Tag Number                  |                       |                   |      | LIT-2273                        |                                     |                |  |     |  |
|                                                    | 2           | Service                     |                       |                   |      | Oily Water Sump                 |                                     |                |  |     |  |
|                                                    | 3           | Location                    |                       |                   |      | SU-2202                         |                                     |                |  |     |  |
|                                                    | 4           | Mounting Type               |                       |                   |      | External                        |                                     |                |  |     |  |
|                                                    | 5           | Application                 |                       |                   |      | Level Control                   |                                     |                |  |     |  |
|                                                    | 6           | P&ID No.                    |                       |                   |      | BK-GCS-PEDCO-120-PR-PI-0021-D05 |                                     |                |  |     |  |
|                                                    | 7           | RFI Protection              |                       | Tropicalisation   |      | NEEDED                          |                                     | NEEDED         |  |     |  |
| PROCESS CONDITIONS                                 | 8           | Upper Liquid                |                       |                   |      | Air                             |                                     |                |  |     |  |
|                                                    | 9           | Lower Liquid                |                       |                   |      | Water/HC/GLYCOL                 |                                     |                |  |     |  |
|                                                    | 10          | Density Lower               |                       | Density Upper     |      | 1115Kg/m3                       |                                     | 850Kg/m3       |  |     |  |
|                                                    | 11          | Design Pressure             |                       | Normal Pressure   |      | ATM                             |                                     | ATM            |  |     |  |
|                                                    | 12          | Design Temp.                |                       | Normal Temp.      |      | 85                              |                                     | AMB            |  |     |  |
|                                                    | 13          | Viscosity Low.              |                       | Viscosity Up      |      | 85.86 cp                        |                                     | 4.8 cp         |  |     |  |
| BODY / GAGE                                        | 14          | Body/Cage Material          |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 15          | Body/Cage Rating            |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 16          | Connection Size & Location  |                       |                   |      | TOP /PLATE MOUNTED              |                                     |                |  |     |  |
|                                                    | 17          | -                           |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 18          | Flange Material             |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 19          | Length of Center To Center  |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 20          | Case Mounting               |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 21          | Rotatable Head              |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 22          | Orientation                 |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 23          | Torque Tube Type            |                       |                   |      | N/A                             |                                     |                |  |     |  |
| DISPLACER                                          | 24          | Sensor Type                 |                       |                   |      | Float Type                      |                                     |                |  |     |  |
|                                                    | 25          | Sensor Quantity             |                       |                   |      | 1                               |                                     |                |  |     |  |
|                                                    | 26          | Sensor Dimention            |                       |                   |      | VTA                             |                                     |                |  |     |  |
|                                                    | 27          | Selected Standard Span      |                       |                   |      | VTA                             |                                     |                |  |     |  |
|                                                    | 28          | Insertion Depth             |                       |                   |      | 0-2700 mm                       |                                     |                |  |     |  |
|                                                    | 29          | Float Extension Material    |                       |                   |      | N/A                             |                                     |                |  |     |  |
|                                                    | 30          | Displacer or Float Material |                       |                   |      | S.S. 316L                       |                                     |                |  |     |  |
|                                                    | 31          | Spring Material             |                       | Torque Tube Mtrl. |      | VTA                             |                                     | S.S. 316L(VTC) |  |     |  |
|                                                    | 32          | Trim Material               |                       |                   |      | S.S. 316L(VTC)                  |                                     |                |  |     |  |
|                                                    | TRANSMITTER | 33                          | Function              |                   |      |                                 | Level Transmitter                   |                |  |     |  |
| 34                                                 |             | Output                      |                       |                   |      | 4~20 mA, SMART , HART           |                                     |                |  |     |  |
| 35                                                 |             | Set Range                   |                       | Min.              | Max. | 0                               |                                     | 100%           |  |     |  |
| 36                                                 |             | Calibration Range           |                       |                   |      | 0 - 2200 mm                     |                                     |                |  |     |  |
| 37                                                 |             | Ingress Protection          |                       |                   |      | IP65                            |                                     |                |  |     |  |
| 38                                                 |             | Mounting Location           |                       |                   |      | Side Mounted                    |                                     |                |  |     |  |
| 39                                                 |             | Connection Size & Location  |                       |                   |      | VTA                             |                                     |                |  |     |  |
| 40                                                 |             | Ex Protection               |                       |                   |      | Zone 2, EEx ia IIB T4           |                                     |                |  |     |  |
| 41                                                 |             | Power Supply                |                       | Cable Entry       |      | 24 VDC, loop powered            |                                     | M20x1.5        |  |     |  |
| 42                                                 |             | Accuracy                    |                       |                   |      | ±0.1% of calibrated span        |                                     |                |  |     |  |
| 43                                                 |             | Integral Indicator          |                       | Write Protection  |      | Digital LCD                     |                                     | No             |  |     |  |
| 44                                                 |             | Zero/Span Adjustment        |                       |                   |      | Required                        |                                     |                |  |     |  |
| 45                                                 |             | Termination Type            |                       |                   |      | Screw terminal                  |                                     |                |  |     |  |
| 46                                                 |             | Case Material               |                       |                   |      | Low Copper Die-Cast Aluminum    |                                     |                |  |     |  |
| 47                                                 |             | SIL Rating                  |                       |                   |      | N/A                             |                                     |                |  |     |  |
| OPTIONS                                            |             | 48                          | Cable Gland           |                   |      |                                 | M20x1.5 , EExd                      |                |  |     |  |
|                                                    |             | 49                          | Vent/Drain Connection |                   |      |                                 | 3/4" NPT -with 3/4" isolation valve |                |  |     |  |
|                                                    | 50          | -                           |                       |                   |      | -                               |                                     |                |  |     |  |
|                                                    | 51          | Custom Tag                  |                       |                   |      | S.S. permanent attached         |                                     |                |  |     |  |
| PURCHASE                                           | 52          | Manufacturer                |                       |                   |      | Will be finalized later         |                                     |                |  |     |  |
|                                                    | 53          | Model                       |                       |                   |      | Will be finalized later         |                                     |                |  |     |  |

مشخص گردند.  
 H.R: will be specified after order

**Notes:**  
 VTA: Vendor to advice  
 1- Mounted on a plate as per Project Hook- up diagram (Required plate and accessories for connect to concrete wall of su supplied by Civil department.)  
 2- Insertion depth is the length related to the hanger extension.