

|                                                                                   |                                                                                                                                                                          |                  |                 |                |            |                |               |                                                                                     |                     |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|----------------|------------|----------------|---------------|-------------------------------------------------------------------------------------|---------------------|
|  | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/> سطح الارض و ابنيه تحت الارض<br/> خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک<br/> (قرارداد ۰۸-۰۱۰-CO-GCS-HD-BK)</p> |                  |                 |                |            |                |               |  |                     |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                                   |                  |                 |                |            |                |               |                                                                                     |                     |
| شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                     | پروژه<br>BK                                                                                                                                                              | بسته کاری<br>GCS | صادرکننده<br>MF | تسهیلات<br>120 | رشته<br>IN | نوع مدرک<br>DS | سریال<br>0011 | نسخه<br>V00                                                                         | شماره صفحه: ۱ از ۱۷ |

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### INSTRUMENT D.S. FOR LEVEL TRANSMITTERS

## نگهداشت و افزایش تولید میدان نفتی بینک

|      |          |                           |              |             |                |                 |
|------|----------|---------------------------|--------------|-------------|----------------|-----------------|
|      |          |                           |              |             |                |                 |
|      |          |                           |              |             |                |                 |
|      |          |                           |              |             |                |                 |
|      |          |                           |              |             |                |                 |
|      |          |                           |              |             |                |                 |
| V00  | Mar.2025 | IFA                       | MFS          | M.Fakharian | S.Faramarzpour |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by: | Checked by: | Approved by:   | CLIENT Approval |
|      |          | CLIENT Doc. Number: -     |              |             |                |                 |

status:

IFA: Issued For Approval

IFI: Issued For Information

AFC: Approved For Construction

|                                                                                   |                                                                                                                                                                             |       |           |            |         |      |          |                                                                                     |      |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|------------|---------|------|----------|-------------------------------------------------------------------------------------|------|
|  | <p>نگهداشت و افزایش تولید میدان نفتی بینک<br/> سطح الارض و ابنیه تحت الارض<br/> خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک<br/> ( قرارداد ۰۸_۰۰۱۰-BK-HD-GCS-CO )</p> |       |           |            |         |      |          |  |      |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                                      |       |           |            |         |      |          |                                                                                     |      |
|                                                                                   | شماره پیمان:                                                                                                                                                                | پروژه | بسته کاری | صادر کننده | تسهیلات | رشته | نوع مدرک | سریال                                                                               | نسخه |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                                          | GCS   | MF        | 120        | IN      | DS   | 0011     | V00                                                                                 |      |

### REVISION RECORD SHEET

| Page | V00 | V01 | V02 | V03 | V04 | Page | V00 | V01 | V02 | V03 | V04 |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1    | X   |     |     |     |     | 61   |     |     |     |     |     |
| 2    | X   |     |     |     |     | 62   |     |     |     |     |     |
| 3    | X   |     |     |     |     | 63   |     |     |     |     |     |
| 4    | X   |     |     |     |     | 64   |     |     |     |     |     |
| 5    | X   |     |     |     |     | 65   |     |     |     |     |     |
| 6    | X   |     |     |     |     | 66   |     |     |     |     |     |
| 7    | X   |     |     |     |     | 67   |     |     |     |     |     |
| 8    | X   |     |     |     |     | 68   |     |     |     |     |     |
| 9    | X   |     |     |     |     | 69   |     |     |     |     |     |
| 10   | X   |     |     |     |     | 70   |     |     |     |     |     |
| 11   | X   |     |     |     |     | 71   |     |     |     |     |     |
| 12   | X   |     |     |     |     | 72   |     |     |     |     |     |
| 13   | X   |     |     |     |     | 73   |     |     |     |     |     |
| 14   | X   |     |     |     |     | 74   |     |     |     |     |     |
| 15   | X   |     |     |     |     | 75   |     |     |     |     |     |
| 16   | X   |     |     |     |     | 76   |     |     |     |     |     |
| 17   | X   |     |     |     |     | 77   |     |     |     |     |     |
| 18   |     |     |     |     |     | 78   |     |     |     |     |     |
| 19   |     |     |     |     |     | 79   |     |     |     |     |     |
| 20   |     |     |     |     |     | 80   |     |     |     |     |     |
| 21   |     |     |     |     |     | 81   |     |     |     |     |     |
| 22   |     |     |     |     |     | 82   |     |     |     |     |     |
| 23   |     |     |     |     |     | 83   |     |     |     |     |     |
| 24   |     |     |     |     |     | 84   |     |     |     |     |     |
| 25   |     |     |     |     |     | 85   |     |     |     |     |     |
| 26   |     |     |     |     |     | 86   |     |     |     |     |     |
| 27   |     |     |     |     |     | 87   |     |     |     |     |     |
| 28   |     |     |     |     |     | 88   |     |     |     |     |     |
| 29   |     |     |     |     |     | 89   |     |     |     |     |     |
| 30   |     |     |     |     |     | 90   |     |     |     |     |     |
| 31   |     |     |     |     |     | 91   |     |     |     |     |     |
| 32   |     |     |     |     |     | 92   |     |     |     |     |     |
| 33   |     |     |     |     |     | 93   |     |     |     |     |     |
| 34   |     |     |     |     |     | 94   |     |     |     |     |     |
| 35   |     |     |     |     |     | 95   |     |     |     |     |     |
| 36   |     |     |     |     |     | 96   |     |     |     |     |     |
| 37   |     |     |     |     |     | 97   |     |     |     |     |     |
| 38   |     |     |     |     |     | 98   |     |     |     |     |     |
| 39   |     |     |     |     |     | 99   |     |     |     |     |     |
| 40   |     |     |     |     |     | 100  |     |     |     |     |     |
| 41   |     |     |     |     |     | 101  |     |     |     |     |     |
| 42   |     |     |     |     |     | 102  |     |     |     |     |     |
| 43   |     |     |     |     |     | 103  |     |     |     |     |     |
| 44   |     |     |     |     |     | 104  |     |     |     |     |     |
| 45   |     |     |     |     |     | 105  |     |     |     |     |     |
| 46   |     |     |     |     |     | 106  |     |     |     |     |     |
| 47   |     |     |     |     |     | 107  |     |     |     |     |     |
| 48   |     |     |     |     |     | 108  |     |     |     |     |     |
| 49   |     |     |     |     |     | 109  |     |     |     |     |     |
| 50   |     |     |     |     |     | 110  |     |     |     |     |     |
| 51   |     |     |     |     |     | 111  |     |     |     |     |     |
| 52   |     |     |     |     |     | 112  |     |     |     |     |     |
| 53   |     |     |     |     |     | 113  |     |     |     |     |     |
| 54   |     |     |     |     |     | 114  |     |     |     |     |     |
| 55   |     |     |     |     |     | 115  |     |     |     |     |     |
| 56   |     |     |     |     |     | 116  |     |     |     |     |     |
| 57   |     |     |     |     |     | 117  |     |     |     |     |     |
| 58   |     |     |     |     |     | 118  |     |     |     |     |     |
| 59   |     |     |     |     |     | 119  |     |     |     |     |     |
| 60   |     |     |     |     |     | 120  |     |     |     |     |     |

|                                                                                   |                                                                                                                                                                                                                                                                                                      |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|------------|--------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|------|----------------------|
|  | <p style="text-align: center;">نگهداشت و افزایش تولید میدان نفتی بینک</p> <p style="text-align: center;">سطح الارض و ابنیه تحت الارض</p> <p style="text-align: center;">خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</p> <p style="text-align: center;">( قرارداد ۰۸-۰۱۰-۰۰۱-BK-HD-GCS-CO )</p> |                                 |                        |            |                          |                                                                                                          |  |        |      |                      |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                                                                                                                                                               |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |
| شماره پیمان:                                                                      |                                                                                                                                                                                                                                                                                                      | پروژه                           | بسته کاری              | صادر کننده | تسهیلات                  | رشته                                                                                                     | نوع مدرک                                                                            | سریال  | نسخه | شماره صفحه: ۱۷ از ۳۱ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |                                                                                                                                                                                                                                                                                                      | BK                              | GCS                    | MF         | 120                      | IN                                                                                                       | DS                                                                                  | 0011   | V00  |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                                                                                                    | Item Number                     | Tag Number             | Quantity   | 1                        |                                                                                                          | D-LIT-2101                                                                          |        | 1    |                      |
|                                                                                   | 2                                                                                                                                                                                                                                                                                                    | Service                         |                        |            |                          | C-100                                                                                                    |                                                                                     |        |      |                      |
|                                                                                   | 3                                                                                                                                                                                                                                                                                                    | P & ID No.                      | Page No.               |            | BK-GCS-MF-120-PR-PI-0003 |                                                                                                          |                                                                                     |        | 1/7  |                      |
|                                                                                   | 4                                                                                                                                                                                                                                                                                                    | Equipment No.                   |                        |            |                          | C-100                                                                                                    |                                                                                     |        |      |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                                                                                                    | Upper Fluid                     | Lower Fluid            |            | TEG                      |                                                                                                          | TEG                                                                                 |        |      |                      |
|                                                                                   | 6                                                                                                                                                                                                                                                                                                    | Upper Phase                     | Lower Phase            |            | L                        |                                                                                                          | L                                                                                   |        |      |                      |
|                                                                                   | 7                                                                                                                                                                                                                                                                                                    | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght |            | Unit                     |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 8                                                                                                                                                                                                                                                                                                    | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower |            | Unit                     | 1069                                                                                                     | 1069                                                                                | kg/m3  |      |                      |
|                                                                                   | 9                                                                                                                                                                                                                                                                                                    | Oper. Press.                    | Design Press.          |            | Unit                     | 53.8/54.9                                                                                                | 62/F.V.                                                                             | barg   |      |                      |
|                                                                                   | 10                                                                                                                                                                                                                                                                                                   | Oper. Temp.                     | Design Temp.           |            | Unit                     | 62.08/63.6                                                                                               | 5/148                                                                               | C      |      |                      |
|                                                                                   | 11                                                                                                                                                                                                                                                                                                   | Comply with NACE 0175           | Cold Service           |            | NO                       |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 12                                                                                                                                                                                                                                                                                                   | Viscosity Upper                 | Viscosity Lower        |            | Unit                     | 7.17                                                                                                     | 7.17                                                                                | cp     |      |                      |
|                                                                                   | 13                                                                                                                                                                                                                                                                                                   | Solid in Suspension             | WET GAS                |            | YES                      |                                                                                                          | YES                                                                                 |        |      |                      |
|                                                                                   | 14                                                                                                                                                                                                                                                                                                   | TOXIC SERVICE                   | SUPER HEAT             |            | YES                      |                                                                                                          | NO                                                                                  |        |      |                      |
|                                                                                   | 15                                                                                                                                                                                                                                                                                                   | CORROSIVE SERVICE               | NACE REQUIRMENT        |            | YES                      |                                                                                                          | YES                                                                                 |        |      |                      |
|                                                                                   | DISPLACER                                                                                                                                                                                                                                                                                            | 16                              | LL                     | HH         |                          | 150mm                                                                                                    |                                                                                     | 1050mm |      |                      |
| 17                                                                                |                                                                                                                                                                                                                                                                                                      | Type                            |                        |            |                          | External Chamber                                                                                         |                                                                                     |        |      |                      |
| 18                                                                                |                                                                                                                                                                                                                                                                                                      | Displacer Length / Hanger       |                        |            |                          | 1219 mm / VTA                                                                                            |                                                                                     |        |      |                      |
| 19                                                                                |                                                                                                                                                                                                                                                                                                      | Displacer Material              |                        |            |                          | 316 SS (NACE)                                                                                            |                                                                                     |        |      |                      |
| 20                                                                                |                                                                                                                                                                                                                                                                                                      | Torque Tube or Spring Material  |                        |            |                          | INCONEL                                                                                                  |                                                                                     |        |      |                      |
| 21                                                                                |                                                                                                                                                                                                                                                                                                      | Linkage Material                |                        |            |                          | Manufacture Standard                                                                                     |                                                                                     |        |      |                      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                                                                                                                                   |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 23                                                                                                                                                                                                                                                                                                   | Mounting Style                  |                        |            |                          | SIDE and SIDE                                                                                            |                                                                                     |        |      |                      |
|                                                                                   | 24                                                                                                                                                                                                                                                                                                   | Vessel Connection               | Upper                  |            | Flange, 2",600# RF       |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 25                                                                                                                                                                                                                                                                                                   | (Size and Rating)               | Lower                  |            | Flange, 2",600# RF       |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 26                                                                                                                                                                                                                                                                                                   | C to C Dimension                |                        |            |                          | 1219 mm                                                                                                  |                                                                                     |        |      |                      |
|                                                                                   | 27                                                                                                                                                                                                                                                                                                   | Head Connection                 |                        |            |                          | FLANGE (Rotatable)                                                                                       |                                                                                     |        |      |                      |
|                                                                                   | 28                                                                                                                                                                                                                                                                                                   | Vent Connection                 |                        |            |                          | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug                                                    |                                                                                     |        |      |                      |
|                                                                                   | 29                                                                                                                                                                                                                                                                                                   | Drain Connection                |                        |            |                          | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS NACE)                                          |                                                                                     |        |      |                      |
|                                                                                   | 30                                                                                                                                                                                                                                                                                                   | Flange Face Finish              |                        |            |                          | 125-250 AARH                                                                                             |                                                                                     |        |      |                      |
|                                                                                   | 31                                                                                                                                                                                                                                                                                                   | Head / Chamber Material         |                        |            |                          | ASTM A105 NACE                                                                                           |                                                                                     |        |      |                      |
|                                                                                   | 32                                                                                                                                                                                                                                                                                                   | Gasket Material                 |                        |            |                          | Spiral Wound,<br>4.45 mm Thick) THK.S.S 316 Winding<br>/Graphite Filler, C.S. Outer& S.S 316L Inner Ring |                                                                                     |        |      |                      |
|                                                                                   | 33                                                                                                                                                                                                                                                                                                   | Bolt and Nut Material           |                        |            |                          | ASTM A 193-B7M/ASTM A 194 -2HM                                                                           |                                                                                     |        |      |                      |
|                                                                                   | 34                                                                                                                                                                                                                                                                                                   | Jacket Type & Fluid             |                        |            |                          | N/A                                                                                                      |                                                                                     |        |      |                      |
|                                                                                   | 35                                                                                                                                                                                                                                                                                                   | Fin Extention                   |                        |            |                          | N/A                                                                                                      |                                                                                     |        |      |                      |
| TRANSMITTER                                                                       | 36                                                                                                                                                                                                                                                                                                   |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 37                                                                                                                                                                                                                                                                                                   | Transmitter Type                |                        |            |                          | Electronic-Smart Type - HART                                                                             |                                                                                     |        |      |                      |
|                                                                                   | 38                                                                                                                                                                                                                                                                                                   | Adjustable Range Min. / Max.    |                        |            |                          | 0 - 1219 mm                                                                                              |                                                                                     |        |      |                      |
|                                                                                   | 39                                                                                                                                                                                                                                                                                                   | Calibration Range Min. / Max.   |                        |            |                          | 0 - 100%                                                                                                 |                                                                                     |        |      |                      |
|                                                                                   | 40                                                                                                                                                                                                                                                                                                   | Output Signal                   | Power Supply           |            | 4-20 mA (SMART)          |                                                                                                          | 24VDC(LOOP POWERED)                                                                 |        |      |                      |
|                                                                                   | 41                                                                                                                                                                                                                                                                                                   | Enclosure Class                 | SIL Requirement/Level  |            | Ex-ia IIB T4             |                                                                                                          | YES/SIL2                                                                            |        |      |                      |
|                                                                                   | 42                                                                                                                                                                                                                                                                                                   | Weather Protection              |                        |            |                          | IP65                                                                                                     |                                                                                     |        |      |                      |
|                                                                                   | 43                                                                                                                                                                                                                                                                                                   | Electrical Connection           |                        |            |                          | M20x1.5                                                                                                  |                                                                                     |        |      |                      |
|                                                                                   | 44                                                                                                                                                                                                                                                                                                   | Accuracy                        |                        |            |                          | ±0.5 %                                                                                                   |                                                                                     |        |      |                      |
|                                                                                   | 45                                                                                                                                                                                                                                                                                                   | Mounting                        |                        |            |                          | Side mounted                                                                                             |                                                                                     |        |      |                      |
| OPTIONS                                                                           | 46                                                                                                                                                                                                                                                                                                   | Housing Material                |                        |            |                          | Die Cast Aluminum                                                                                        |                                                                                     |        |      |                      |
|                                                                                   | 47                                                                                                                                                                                                                                                                                                   | LCD Indicator                   |                        |            |                          | Yes                                                                                                      |                                                                                     |        |      |                      |
|                                                                                   | 48                                                                                                                                                                                                                                                                                                   | Mounting Position               |                        |            |                          | Left or Right hand(VTC)                                                                                  |                                                                                     |        |      |                      |
|                                                                                   | 49                                                                                                                                                                                                                                                                                                   | Damping Adjustment              |                        |            |                          | Yes                                                                                                      |                                                                                     |        |      |                      |
| PURCHASE                                                                          | 50                                                                                                                                                                                                                                                                                                   | write protection                |                        |            |                          | Yes                                                                                                      |                                                                                     |        |      |                      |
|                                                                                   | 51                                                                                                                                                                                                                                                                                                   | Manufacturer                    |                        |            |                          | Will be selected later                                                                                   |                                                                                     |        |      |                      |
|                                                                                   | 52                                                                                                                                                                                                                                                                                                   | Requisition Number              |                        |            |                          | Will be selected later                                                                                   |                                                                                     |        |      |                      |
|                                                                                   | 53                                                                                                                                                                                                                                                                                                   |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |
|                                                                                   | 54                                                                                                                                                                                                                                                                                                   |                                 |                        |            |                          |                                                                                                          |                                                                                     |        |      |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                     |                                 |                                                           |                                |            |                     |            |                                                                                     |      |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|--------------------------------|------------|---------------------|------------|-------------------------------------------------------------------------------------|------|
|  | <p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض و ابنیه تحت الارض</p> <p>خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک</p> <p>(قرارداد ۰۸-۰۰۱-۰۰۰-BK-HD-GCS-CO)</p> |                                 |                                                           |                                |            |                     |            |  |      |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                                              |                                 |                                                           |                                |            |                     |            |                                                                                     |      |
|                                                                                   | شماره پیمان:                                                                                                                                                                        | پروژه                           | بسته کاری                                                 | صادر کننده                     | تجهیزات    | رشته                | نوع مدرک   | سریال                                                                               | نسخه |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                                                  | GCS                             | MF                                                        | 120                            | IN         | DS                  | 0011       | V00                                                                                 |      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                   | Item Number                     | Tag Number                                                | Quantity                       | 2          |                     | D-LIT-2102 |                                                                                     | 1    |
|                                                                                   | 2                                                                                                                                                                                   | Service                         |                                                           |                                |            | C-100               |            |                                                                                     |      |
|                                                                                   | 3                                                                                                                                                                                   | P & ID No.                      | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003       |            |                     | 1/7        |                                                                                     |      |
|                                                                                   | 4                                                                                                                                                                                   | Equipment No.                   |                                                           |                                |            | C-100               |            |                                                                                     |      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                   | Upper Fluid                     | Lower Fluid                                               | HCB (WATER)                    |            | HCB (WATER)         |            |                                                                                     |      |
|                                                                                   | 6                                                                                                                                                                                   | Upper Phase                     | Lower Phase                                               | L                              |            | L                   |            |                                                                                     |      |
|                                                                                   | 7                                                                                                                                                                                   | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    | Unit                           |            |                     |            |                                                                                     |      |
|                                                                                   | 8                                                                                                                                                                                   | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    | Unit                           | 980.74     | 980.74              | kg/m3      |                                                                                     |      |
|                                                                                   | 9                                                                                                                                                                                   | Oper. Press.                    | Design Press.                                             | Unit                           | 53.8/54.9  | 62/F.V.             | barg       |                                                                                     |      |
|                                                                                   | 10                                                                                                                                                                                  | Oper. Temp.                     | Design Temp.                                              | Unit                           | 62.08/63.6 | 5/148               | C          |                                                                                     |      |
|                                                                                   | 11                                                                                                                                                                                  | Comply with NACE 0175           | Cold Service                                              |                                |            | NO                  |            |                                                                                     |      |
|                                                                                   | 12                                                                                                                                                                                  | Viscosity Upper                 | Viscosity Lower                                           | Unit                           | 0.49       | 0.79                | cp         |                                                                                     |      |
|                                                                                   | 13                                                                                                                                                                                  | Solid in Suspension             | WET GAS                                                   | YES                            |            | YES                 |            |                                                                                     |      |
|                                                                                   | 14                                                                                                                                                                                  | TOXIC SERVICE                   | SUPER HEAT                                                | NO                             |            | NO                  |            |                                                                                     |      |
|                                                                                   | 15                                                                                                                                                                                  | CORROSIVE SERVICE               | NACE REQUIRMENT                                           | NO                             |            | YES                 |            |                                                                                     |      |
|                                                                                   | DISPLACER                                                                                                                                                                           | 16                              | LL                                                        | HH                             | 150mm      |                     | 650mm      |                                                                                     |      |
| 17                                                                                |                                                                                                                                                                                     | Type                            | External Chamber                                          |                                |            |                     |            |                                                                                     |      |
| 18                                                                                |                                                                                                                                                                                     | Displacer Length / Hanger       | 813 mm / VTA                                              |                                |            |                     |            |                                                                                     |      |
| 19                                                                                |                                                                                                                                                                                     | Displacer Material              | 316 SS (NACE)                                             |                                |            |                     |            |                                                                                     |      |
| 20                                                                                |                                                                                                                                                                                     | Torque Tube or Spring Material  | INCONEL                                                   |                                |            |                     |            |                                                                                     |      |
| 21                                                                                |                                                                                                                                                                                     | Linkage Material                | Manufacture Standard                                      |                                |            |                     |            |                                                                                     |      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                  |                                 |                                                           |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 23                                                                                                                                                                                  | Mounting Style                  | SIDE and SIDE                                             |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 24                                                                                                                                                                                  | Vessel Connection               | Upper                                                     | Flange, 2",600# RF             |            |                     |            |                                                                                     |      |
|                                                                                   | 25                                                                                                                                                                                  | (Size and Rating)               | Lower                                                     | Flange, 2",600# RF             |            |                     |            |                                                                                     |      |
|                                                                                   | 26                                                                                                                                                                                  | C to C Dimension                | 813 mm                                                    |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 27                                                                                                                                                                                  | Head Connection                 | FLANGE (Rotatable)                                        |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 28                                                                                                                                                                                  | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 29                                                                                                                                                                                  | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 30                                                                                                                                                                                  | Flange Face Finish              | 125-250 AARH                                              |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 31                                                                                                                                                                                  | Head / Chamber Material         | ASTM A105 NACE                                            |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 32                                                                                                                                                                                  | Gasket Material                 | Spiral Wound,                                             |                                |            |                     |            |                                                                                     |      |
|                                                                                   | TRANSMITTER                                                                                                                                                                         | 33                              | Bolt and Nut Material                                     | ASTM A 193-B7M/ASTM A 194 -2HM |            |                     |            |                                                                                     |      |
| 34                                                                                |                                                                                                                                                                                     | Jacket Type & Fluid             | N/A                                                       |                                |            |                     |            |                                                                                     |      |
| 35                                                                                |                                                                                                                                                                                     | Fin Extention                   | N/A                                                       |                                |            |                     |            |                                                                                     |      |
| 36                                                                                |                                                                                                                                                                                     |                                 |                                                           |                                |            |                     |            |                                                                                     |      |
| 37                                                                                |                                                                                                                                                                                     | Transmitter Type                | Electronic-Smart Type - HART                              |                                |            |                     |            |                                                                                     |      |
| 38                                                                                |                                                                                                                                                                                     | Adjustable Range Min. / Max.    | 0 - 813 mm                                                |                                |            |                     |            |                                                                                     |      |
| 39                                                                                |                                                                                                                                                                                     | Calibration Range Min. / Max.   | 0 - 100%                                                  |                                |            |                     |            |                                                                                     |      |
| 40                                                                                |                                                                                                                                                                                     | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)                |            | 24VDC(LOOP POWERED) |            |                                                                                     |      |
| 41                                                                                |                                                                                                                                                                                     | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4                   |            | YES/SIL2            |            |                                                                                     |      |
| 42                                                                                |                                                                                                                                                                                     | Weather Protection              | IP65                                                      |                                |            |                     |            |                                                                                     |      |
| 43                                                                                |                                                                                                                                                                                     | Electrical Connection           | M20x1.5                                                   |                                |            |                     |            |                                                                                     |      |
| OPTIONS                                                                           |                                                                                                                                                                                     | 44                              | Accuracy                                                  | ±0.5 %                         |            |                     |            |                                                                                     |      |
|                                                                                   | 45                                                                                                                                                                                  | Mounting                        | Side mounted                                              |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 46                                                                                                                                                                                  | Housing Material                | Die Cast Aluminum                                         |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 47                                                                                                                                                                                  | LCD Indicator                   | Yes                                                       |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 48                                                                                                                                                                                  | Mounting Position               | Left or Right hand(VTC)                                   |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 49                                                                                                                                                                                  | Damping Adjustment              | Yes                                                       |                                |            |                     |            |                                                                                     |      |
|                                                                                   | 50                                                                                                                                                                                  | write protection                | Yes                                                       |                                |            |                     |            |                                                                                     |      |
|                                                                                   | PURCHASE                                                                                                                                                                            | 51                              | Manufacturer                                              | Will be selected later         |            |                     |            |                                                                                     |      |
| 52                                                                                |                                                                                                                                                                                     | Requisition Number              | Will be selected later                                    |                                |            |                     |            |                                                                                     |      |
| 53                                                                                |                                                                                                                                                                                     |                                 |                                                           |                                |            |                     |            |                                                                                     |      |
| 54                                                                                |                                                                                                                                                                                     |                                 |                                                           |                                |            |                     |            |                                                                                     |      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.



|                                                                                   |                                                                                                                                                                                            |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------|--------------------------|-----------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|-------|------|
|  | <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br><b>سطح الارض و ابنیه تحت الارض</b><br><b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br><b>(قرارداد ۰۸-۰۰۱۰۰۸-BK-HD-GCS-CO)</b> |                                |                        |                          |                                                           |                     |  |       |      |
|                                                                                   | <b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b>                                                                                                                                              |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
| شماره پیمان:                                                                      |                                                                                                                                                                                            | پروژه                          | بسته کاری              | صادر کننده               | تسهیلات                                                   | رشته                | نوع مدرک                                                                            | سریال | نسخه |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |                                                                                                                                                                                            | BK                             | GCS                    | MF                       | 120                                                       | IN                  | DS                                                                                  | 0011  | V00  |
| شماره صفحه: ۱۷ از ۱۶                                                              |                                                                                                                                                                                            |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                          | Item Number                    | Tag Number             | Quantity                 | 4                                                         |                     | D-LIT-2104                                                                          |       | 1    |
|                                                                                   | 2                                                                                                                                                                                          | Service                        |                        |                          | C-100                                                     |                     |                                                                                     |       |      |
|                                                                                   | 3                                                                                                                                                                                          | P & ID No.                     | Page No.               | BK-GCS-MF-120-PR-PI-0003 |                                                           | 1/7                 |                                                                                     |       |      |
|                                                                                   | 4                                                                                                                                                                                          | Equipment No.                  |                        |                          | C-100                                                     |                     |                                                                                     |       |      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                          | Upper Fluid                    | Lower Fluid            | TEG                      |                                                           | TEG                 |                                                                                     |       |      |
|                                                                                   | 6                                                                                                                                                                                          | Upper Phase                    | Lower Phase            | L                        |                                                           | L                   |                                                                                     |       |      |
|                                                                                   | 7                                                                                                                                                                                          | Upper Phase Max Pressure (mba) | Lower Phase Max Hieght | Unit                     |                                                           |                     |                                                                                     |       |      |
|                                                                                   | 8                                                                                                                                                                                          | Density / Sp.Gr. Upper         | Density / Sp.Gr. Lower | Unit                     | 1069                                                      | 1069                | kg/m3                                                                               |       |      |
|                                                                                   | 9                                                                                                                                                                                          | Oper. Press.                   | Design Press.          | Unit                     | 53.8/54.9                                                 | 62/F.V.             | barg                                                                                |       |      |
|                                                                                   | 10                                                                                                                                                                                         | Oper. Temp.                    | Design Temp.           | Unit                     | 62.08/63.6                                                | 5/148               | C                                                                                   |       |      |
|                                                                                   | 11                                                                                                                                                                                         | Comply with NACE 0175          | Cold Service           |                          |                                                           | NO                  |                                                                                     |       |      |
|                                                                                   | 12                                                                                                                                                                                         | Viscosity Upper                | Viscosity Lower        | Unit                     | 7.17                                                      | 7.17                | cp                                                                                  |       |      |
|                                                                                   | 13                                                                                                                                                                                         | Solid in Suspension            | WET GAS                | YES                      |                                                           | YES                 |                                                                                     |       |      |
|                                                                                   | 14                                                                                                                                                                                         | TOXIC SERVICE                  | SUPER HEAT             | YES                      |                                                           | NO                  |                                                                                     |       |      |
|                                                                                   | 15                                                                                                                                                                                         | CORROSIVE SERVICE              | NACE REQUIRMENT        | YES                      |                                                           | YES                 |                                                                                     |       |      |
|                                                                                   | DISPLACER                                                                                                                                                                                  | 16                             | LL                     | L                        | 150mm                                                     |                     | 250mm                                                                               |       |      |
| 17                                                                                |                                                                                                                                                                                            | Type                           |                        |                          | External Chamber                                          |                     |                                                                                     |       |      |
| 18                                                                                |                                                                                                                                                                                            | Displacer Length / Hanger      |                        |                          | 356 mm / VTA                                              |                     |                                                                                     |       |      |
| 19                                                                                |                                                                                                                                                                                            | Displacer Material             |                        |                          | 316 SS (NACE)                                             |                     |                                                                                     |       |      |
| 20                                                                                |                                                                                                                                                                                            | Torque Tube or Spring Material |                        |                          | INCONEL                                                   |                     |                                                                                     |       |      |
| 21                                                                                |                                                                                                                                                                                            | Linkage Material               |                        |                          | Manufacture Standard                                      |                     |                                                                                     |       |      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                         |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
|                                                                                   | 23                                                                                                                                                                                         | Mounting Style                 |                        |                          | SIDE and SIDE                                             |                     |                                                                                     |       |      |
|                                                                                   | 24                                                                                                                                                                                         | Vessel Connection              | Upper                  |                          |                                                           | Flange, 2",600# RF  |                                                                                     |       |      |
|                                                                                   | 25                                                                                                                                                                                         | (Size and Rating)              | Lower                  |                          |                                                           | Flange, 2",600# RF  |                                                                                     |       |      |
|                                                                                   | 26                                                                                                                                                                                         | C to C Dimension               |                        |                          | 356 mm                                                    |                     |                                                                                     |       |      |
|                                                                                   | 27                                                                                                                                                                                         | Head Connection                |                        |                          | FLANGE (Rotatable)                                        |                     |                                                                                     |       |      |
|                                                                                   | 28                                                                                                                                                                                         | Vent Connection                |                        |                          | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                     |                                                                                     |       |      |
|                                                                                   | 29                                                                                                                                                                                         | Drain Connection               |                        |                          | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                     |                                                                                     |       |      |
|                                                                                   | 30                                                                                                                                                                                         | Flange Face Finish             |                        |                          | 125-250 AARH                                              |                     |                                                                                     |       |      |
|                                                                                   | 31                                                                                                                                                                                         | Head / Chamber Material        |                        |                          | ASTM A105 NACE                                            |                     |                                                                                     |       |      |
|                                                                                   | 32                                                                                                                                                                                         | Gasket Material                |                        |                          | Spiral Wound,                                             |                     |                                                                                     |       |      |
|                                                                                   | 33                                                                                                                                                                                         | Bolt and Nut Material          |                        |                          | ASTM A 193-B7M/ASTM A 194 -2HM                            |                     |                                                                                     |       |      |
|                                                                                   | 34                                                                                                                                                                                         | Jacket Type & Fluid            |                        |                          | N/A                                                       |                     |                                                                                     |       |      |
|                                                                                   | 35                                                                                                                                                                                         | Fin Extention                  |                        |                          | N/A                                                       |                     |                                                                                     |       |      |
| TRANSMITTER                                                                       | 36                                                                                                                                                                                         |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
|                                                                                   | 37                                                                                                                                                                                         | Transmitter Type               |                        |                          | Electronic-Smart Type - HART                              |                     |                                                                                     |       |      |
|                                                                                   | 38                                                                                                                                                                                         | Adjustable Range Min. / Max.   |                        |                          | 0 - 356 mm                                                |                     |                                                                                     |       |      |
|                                                                                   | 39                                                                                                                                                                                         | Calibration Range Min. / Max.  |                        |                          | 0 - 100%                                                  |                     |                                                                                     |       |      |
|                                                                                   | 40                                                                                                                                                                                         | Output Signal                  | Power Supply           | 4-20 mA (SMART)          |                                                           | 24VDC(LOOP POWERED) |                                                                                     |       |      |
|                                                                                   | 41                                                                                                                                                                                         | Enclosure Class                | SIL Requirement/Level  | Ex-ia IIB T4             |                                                           | YES/SIL2            |                                                                                     |       |      |
|                                                                                   | 42                                                                                                                                                                                         | Weather Protection             |                        |                          | IP65                                                      |                     |                                                                                     |       |      |
|                                                                                   | 43                                                                                                                                                                                         | Electrical Connection          |                        |                          | M20x1.5                                                   |                     |                                                                                     |       |      |
|                                                                                   | 44                                                                                                                                                                                         | Accuracy                       |                        |                          | ±0.5 %                                                    |                     |                                                                                     |       |      |
|                                                                                   | 45                                                                                                                                                                                         | Mounting                       |                        |                          | Side mounted                                              |                     |                                                                                     |       |      |
| OPTIONS                                                                           | 46                                                                                                                                                                                         | Housing Material               |                        |                          | Die Cast Aluminum                                         |                     |                                                                                     |       |      |
|                                                                                   | 47                                                                                                                                                                                         | LCD Indicator                  |                        |                          | Yes                                                       |                     |                                                                                     |       |      |
|                                                                                   | 48                                                                                                                                                                                         | Mounting Position              |                        |                          | Left or Right hand(VTC)                                   |                     |                                                                                     |       |      |
|                                                                                   | 49                                                                                                                                                                                         | Damping Adjustment             |                        |                          | Yes                                                       |                     |                                                                                     |       |      |
| PURCHASE                                                                          | 50                                                                                                                                                                                         | write protection               |                        |                          | Yes                                                       |                     |                                                                                     |       |      |
|                                                                                   | 51                                                                                                                                                                                         | Manufacturer                   |                        |                          | Will be selected later                                    |                     |                                                                                     |       |      |
|                                                                                   | 52                                                                                                                                                                                         | Requisition Number             |                        |                          | Will be selected later                                    |                     |                                                                                     |       |      |
|                                                                                   | 53                                                                                                                                                                                         |                                |                        |                          |                                                           |                     |                                                                                     |       |      |
|                                                                                   | 54                                                                                                                                                                                         |                                |                        |                          |                                                           |                     |                                                                                     |       |      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                             |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------|------------------------|--------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|----------------------|
|  | <p align="center"> <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>( قرارداد ۰۸-۰۰۱۰۰۰۱-BK-HD-GCS-CO )</b> </p> |                                 |            |                        |                          |                                                           |  |             |                      |
|                                                                                   | <b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b>                                                                                                                                                                               |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |
| شماره پیمان:                                                                      | پروژه                                                                                                                                                                                                                       | بسته کاری                       | صادر کننده | تجهیزات                | رشته                     | نوع مدرک                                                  | سریال                                                                               | نسخه        | شماره صفحه: ۱۷ از ۱۷ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۶                                                                  | BK                                                                                                                                                                                                                          | GCS                             | MF         | 120                    | IN                       | DS                                                        | 0011                                                                                | V00         |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                           | Item Number                     |            | Tag Number             | Quantity                 | 5                                                         |                                                                                     | D-LIT-2105  | 1                    |
|                                                                                   | 2                                                                                                                                                                                                                           | Service                         |            |                        |                          | C-100                                                     |                                                                                     |             |                      |
|                                                                                   | 3                                                                                                                                                                                                                           | P & ID No.                      |            | Page No.               | BK-GCS-MF-120-PR-PI-0003 |                                                           | 1/7                                                                                 |             |                      |
|                                                                                   | 4                                                                                                                                                                                                                           | Equipment No.                   |            |                        |                          | C-100                                                     |                                                                                     |             |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                           | Upper Fluid                     |            | Lower Fluid            |                          | HCB (WATER)                                               |                                                                                     | HCB (WATER) |                      |
|                                                                                   | 6                                                                                                                                                                                                                           | Upper Phase                     |            | Lower Phase            |                          | L                                                         |                                                                                     | L           |                      |
|                                                                                   | 7                                                                                                                                                                                                                           | Upper Phase Max Pressure (mbar) |            | Lower Phase Max Hieght |                          | Unit                                                      |                                                                                     |             |                      |
|                                                                                   | 8                                                                                                                                                                                                                           | Density / Sp.Gr. Upper          |            | Density / Sp.Gr. Lower |                          | Unit                                                      | 980.74                                                                              | 980.74      | kg/m3                |
|                                                                                   | 9                                                                                                                                                                                                                           | Oper. Press.                    |            | Design Press.          |                          | Unit                                                      | 53.8/54.9                                                                           | 62/F.V.     | barg                 |
|                                                                                   | 10                                                                                                                                                                                                                          | Oper. Temp.                     |            | Design Temp.           |                          | Unit                                                      | 62.08/63.6                                                                          | 5/148       | C                    |
|                                                                                   | 11                                                                                                                                                                                                                          | Comply with NACE 0175           |            | Cold Service           |                          |                                                           |                                                                                     | NO          |                      |
|                                                                                   | 12                                                                                                                                                                                                                          | Viscosity Upper                 |            | Viscosity Lower        |                          | Unit                                                      | 0.49                                                                                | 0.79        | cp                   |
|                                                                                   | 13                                                                                                                                                                                                                          | Solid in Suspension             |            | WET GAS                |                          | YES                                                       |                                                                                     | YES         |                      |
|                                                                                   | 14                                                                                                                                                                                                                          | TOXIC SERVICE                   |            | SUPER HEAT             |                          | NO                                                        |                                                                                     | NO          |                      |
|                                                                                   | 15                                                                                                                                                                                                                          | CORROSIVE SERVICE               |            | NACE REQUIRMENT        |                          | NO                                                        |                                                                                     | YES         |                      |
|                                                                                   | 16                                                                                                                                                                                                                          | H                               |            | HH                     |                          | 550mm                                                     |                                                                                     | 650mm       |                      |
| DISPLACER                                                                         | 17                                                                                                                                                                                                                          | Type                            |            |                        |                          | External Chamber                                          |                                                                                     |             |                      |
|                                                                                   | 18                                                                                                                                                                                                                          | Displacer Length / Hanger       |            |                        |                          | 356 mm / VTA                                              |                                                                                     |             |                      |
|                                                                                   | 19                                                                                                                                                                                                                          | Displacer Material              |            |                        |                          | 316 SS (NACE)                                             |                                                                                     |             |                      |
|                                                                                   | 20                                                                                                                                                                                                                          | Torque Tube or Spring Material  |            |                        |                          | INCONEL                                                   |                                                                                     |             |                      |
|                                                                                   | 21                                                                                                                                                                                                                          | Linkage Material                |            |                        |                          | Manufacture Standard                                      |                                                                                     |             |                      |
|                                                                                   | 22                                                                                                                                                                                                                          |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |
| HEAD / CHAMBER (CAGE)                                                             | 23                                                                                                                                                                                                                          | Mounting Style                  |            |                        |                          | SIDE and SIDE                                             |                                                                                     |             |                      |
|                                                                                   | 24                                                                                                                                                                                                                          | Vessel Connection               |            | Upper                  | Flange, 2",600# RF       |                                                           |                                                                                     |             |                      |
|                                                                                   | 25                                                                                                                                                                                                                          | (Size and Rating)               |            | Lower                  | Flange, 2",600# RF       |                                                           |                                                                                     |             |                      |
|                                                                                   | 26                                                                                                                                                                                                                          | C to C Dimension                |            |                        |                          | 356 mm                                                    |                                                                                     |             |                      |
|                                                                                   | 27                                                                                                                                                                                                                          | Head Connection                 |            |                        |                          | FLANGE (Rotatable)                                        |                                                                                     |             |                      |
|                                                                                   | 28                                                                                                                                                                                                                          | Vent Connection                 |            |                        |                          | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                                                                                     |             |                      |
|                                                                                   | 29                                                                                                                                                                                                                          | Drain Connection                |            |                        |                          | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                                                                                     |             |                      |
|                                                                                   | 30                                                                                                                                                                                                                          | Flange Face Finish              |            |                        |                          | 125-250 AARH                                              |                                                                                     |             |                      |
|                                                                                   | 31                                                                                                                                                                                                                          | Head / Chamber Material         |            |                        |                          | ASTM A105 NACE                                            |                                                                                     |             |                      |
|                                                                                   | 32                                                                                                                                                                                                                          | Gasket Material                 |            |                        |                          | Spiral Wound,                                             |                                                                                     |             |                      |
|                                                                                   | 33                                                                                                                                                                                                                          | Bolt and Nut Material           |            |                        |                          | ASTM A 193-B7M/ASTM A 194 -2HM                            |                                                                                     |             |                      |
|                                                                                   | 34                                                                                                                                                                                                                          | Jacket Type & Fluid             |            |                        |                          | N/A                                                       |                                                                                     |             |                      |
|                                                                                   | 35                                                                                                                                                                                                                          | Fin Extencion                   |            |                        |                          | N/A                                                       |                                                                                     |             |                      |
|                                                                                   | 36                                                                                                                                                                                                                          |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |
| TRANSMITTER                                                                       | 37                                                                                                                                                                                                                          | Transmitter Type                |            |                        |                          | Electronic-Smart Type - HART                              |                                                                                     |             |                      |
|                                                                                   | 38                                                                                                                                                                                                                          | Adjustable Range Min. / Max.    |            |                        |                          | 0 - 356 mm                                                |                                                                                     |             |                      |
|                                                                                   | 39                                                                                                                                                                                                                          | Calibration Range Min. / Max.   |            |                        |                          | 0 - 100%                                                  |                                                                                     |             |                      |
|                                                                                   | 40                                                                                                                                                                                                                          | Output Signal                   |            | Power Supply           | 4-20 mA (SMART)          | 24VDC(LOOP POWERED)                                       |                                                                                     |             |                      |
|                                                                                   | 41                                                                                                                                                                                                                          | Enclosure Class                 |            | SIL Requirement/Level  | Ex-ia IIB T4             | YES/SIL2                                                  |                                                                                     |             |                      |
|                                                                                   | 42                                                                                                                                                                                                                          | Weather Protection              |            |                        |                          | IP65                                                      |                                                                                     |             |                      |
|                                                                                   | 43                                                                                                                                                                                                                          | Electrical Connection           |            |                        |                          | M20x1.5                                                   |                                                                                     |             |                      |
|                                                                                   | 44                                                                                                                                                                                                                          | Accuracy                        |            |                        |                          | ±0.5 %                                                    |                                                                                     |             |                      |
|                                                                                   | 45                                                                                                                                                                                                                          | Mounting                        |            |                        |                          | Side mounted                                              |                                                                                     |             |                      |
|                                                                                   | 46                                                                                                                                                                                                                          | Housing Material                |            |                        |                          | Die Cast Aluminum                                         |                                                                                     |             |                      |
|                                                                                   | 47                                                                                                                                                                                                                          | LCD Indicator                   |            |                        |                          | Yes                                                       |                                                                                     |             |                      |
|                                                                                   | 48                                                                                                                                                                                                                          | Mounting Position               |            |                        |                          | Left or Right hand(VTC)                                   |                                                                                     |             |                      |
| OPTIONS                                                                           | 49                                                                                                                                                                                                                          | Damping Adjustment              |            |                        |                          | Yes                                                       |                                                                                     |             |                      |
|                                                                                   | 50                                                                                                                                                                                                                          | write protection                |            |                        |                          | Yes                                                       |                                                                                     |             |                      |
| PURCHASE                                                                          | 51                                                                                                                                                                                                                          | Manufacturer                    |            |                        |                          | Will be selected later                                    |                                                                                     |             |                      |
|                                                                                   | 52                                                                                                                                                                                                                          | Requisition Number              |            |                        |                          | Will be selected later                                    |                                                                                     |             |                      |
|                                                                                   | 53                                                                                                                                                                                                                          |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |
|                                                                                   | 54                                                                                                                                                                                                                          |                                 |            |                        |                          |                                                           |                                                                                     |             |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                  |                                 |                                                           |                          |                     |             |                                                                                     |       |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|--------------------------|---------------------|-------------|-------------------------------------------------------------------------------------|-------|
|  | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض و ابنيه تحت الارض<br>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک<br>(قرارداد ۰۸_۰۰۱۰_۰۰۱ BK-HD-GCS-CO) |                                 |                                                           |                          |                     |             |  |       |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                           |                                 |                                                           |                          |                     |             |                                                                                     |       |
|                                                                                   | شماره پیمان:                                                                                                                                                     | پروژه                           | بسته کاری                                                 | صادر کننده               | تجهیزات             | رشته        | نوع مدرک                                                                            | سریال |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                               | GCS                             | MF                                                        | 120                      | IN                  | DS          | 0011                                                                                | V00   |
| شماره صفحه: ۱۷ از ۸                                                               |                                                                                                                                                                  |                                 |                                                           |                          |                     |             |                                                                                     |       |
| GENERAL DATA                                                                      | 1                                                                                                                                                                | Item Number                     | Tag Number                                                | Quantity                 | 6                   |             | D-LIT-2106                                                                          | 1     |
|                                                                                   | 2                                                                                                                                                                | Service C-100                   |                                                           |                          |                     |             |                                                                                     |       |
|                                                                                   | 3                                                                                                                                                                | P & ID No.                      | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003 |                     | 1/7         |                                                                                     |       |
|                                                                                   | 4                                                                                                                                                                | Equipment No. C-100             |                                                           |                          |                     |             |                                                                                     |       |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                | Upper Fluid                     | Lower Fluid                                               | HCB (WATER)              |                     | HCB (WATER) |                                                                                     |       |
|                                                                                   | 6                                                                                                                                                                | Upper Phase                     | Lower Phase                                               | L                        |                     | L           |                                                                                     |       |
|                                                                                   | 7                                                                                                                                                                | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    | Unit                     |                     |             |                                                                                     |       |
|                                                                                   | 8                                                                                                                                                                | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    | Unit                     | 980.74              | 980.74      | kg/m3                                                                               |       |
|                                                                                   | 9                                                                                                                                                                | Oper. Press.                    | Design Press.                                             | Unit                     | 53.8/54.9           | 62/F.V.     | barg                                                                                |       |
|                                                                                   | 10                                                                                                                                                               | Oper. Temp.                     | Design Temp.                                              | Unit                     | 62.08/63.6          | 5/148       | C                                                                                   |       |
|                                                                                   | 11                                                                                                                                                               | Comply with NACE 0175           | Cold Service                                              |                          |                     | NO          |                                                                                     |       |
|                                                                                   | 12                                                                                                                                                               | Viscosity Upper                 | Viscosity Lower                                           | Unit                     | 0.49                | 0.79        | cp                                                                                  |       |
|                                                                                   | 13                                                                                                                                                               | Solid in Suspension             | WET GAS                                                   | YES                      |                     | YES         |                                                                                     |       |
|                                                                                   | 14                                                                                                                                                               | TOXIC SERVICE                   | SUPER HEAT                                                | NO                       |                     | NO          |                                                                                     |       |
|                                                                                   | 15                                                                                                                                                               | CORROSIVE SERVICE               | NACE REQUIRMENT                                           | NO                       |                     | YES         |                                                                                     |       |
|                                                                                   | 16                                                                                                                                                               | LL                              | L                                                         | 150mm                    |                     | 250mm       |                                                                                     |       |
| DISPLACER                                                                         | 17                                                                                                                                                               | Type                            | External Chamber                                          |                          |                     |             |                                                                                     |       |
|                                                                                   | 18                                                                                                                                                               | Displacer Length / Hanger       | 356 mm / VTA                                              |                          |                     |             |                                                                                     |       |
|                                                                                   | 19                                                                                                                                                               | Displacer Material              | 316 SS (NACE)                                             |                          |                     |             |                                                                                     |       |
|                                                                                   | 20                                                                                                                                                               | Torque Tube or Spring Material  | INCONEL                                                   |                          |                     |             |                                                                                     |       |
|                                                                                   | 21                                                                                                                                                               | Linkage Material                | Manufacture Standard                                      |                          |                     |             |                                                                                     |       |
|                                                                                   | 22                                                                                                                                                               |                                 |                                                           |                          |                     |             |                                                                                     |       |
| HEAD / CHAMBER (CAGE)                                                             | 23                                                                                                                                                               | Mounting Style                  | SIDE and SIDE                                             |                          |                     |             |                                                                                     |       |
|                                                                                   | 24                                                                                                                                                               | Vessel Connection               | Upper                                                     | Flange, 2",600# RF       |                     |             |                                                                                     |       |
|                                                                                   | 25                                                                                                                                                               | (Size and Rating)               | Lower                                                     | Flange, 2",600# RF       |                     |             |                                                                                     |       |
|                                                                                   | 26                                                                                                                                                               | C to C Dimension                | 356 mm                                                    |                          |                     |             |                                                                                     |       |
|                                                                                   | 27                                                                                                                                                               | Head Connection                 | FLANGE (Rotatable)                                        |                          |                     |             |                                                                                     |       |
|                                                                                   | 28                                                                                                                                                               | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |                     |             |                                                                                     |       |
|                                                                                   | 29                                                                                                                                                               | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |                     |             |                                                                                     |       |
|                                                                                   | 30                                                                                                                                                               | Flange Face Finish              | 125-250 AARH                                              |                          |                     |             |                                                                                     |       |
|                                                                                   | 31                                                                                                                                                               | Head / Chamber Material         | ASTM A105 NACE                                            |                          |                     |             |                                                                                     |       |
|                                                                                   | 32                                                                                                                                                               | Gasket Material                 | Spiral Wound,                                             |                          |                     |             |                                                                                     |       |
|                                                                                   | 33                                                                                                                                                               | Bolt and Nut Material           | ASTM A 193-B7M/ASTM A 194 -2HM                            |                          |                     |             |                                                                                     |       |
|                                                                                   | 34                                                                                                                                                               | Jacket Type & Fluid             | N/A                                                       |                          |                     |             |                                                                                     |       |
|                                                                                   | 35                                                                                                                                                               | Fin Extention                   | N/A                                                       |                          |                     |             |                                                                                     |       |
|                                                                                   | 36                                                                                                                                                               |                                 |                                                           |                          |                     |             |                                                                                     |       |
| TRANSMITTER                                                                       | 37                                                                                                                                                               | Transmitter Type                | Electronic-Smart Type - HART                              |                          |                     |             |                                                                                     |       |
|                                                                                   | 38                                                                                                                                                               | Adjustable Range Min. / Max.    | 0 - 356 mm                                                |                          |                     |             |                                                                                     |       |
|                                                                                   | 39                                                                                                                                                               | Calibration Range Min. / Max.   | 0 - 100%                                                  |                          |                     |             |                                                                                     |       |
|                                                                                   | 40                                                                                                                                                               | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)          | 24VDC(LOOP POWERED) |             |                                                                                     |       |
|                                                                                   | 41                                                                                                                                                               | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4             | YES/SIL2            |             |                                                                                     |       |
|                                                                                   | 42                                                                                                                                                               | Weather Protection              | IP65                                                      |                          |                     |             |                                                                                     |       |
|                                                                                   | 43                                                                                                                                                               | Electrical Connection           | M20x1.5                                                   |                          |                     |             |                                                                                     |       |
|                                                                                   | 44                                                                                                                                                               | Accuracy                        | ±0.5 %                                                    |                          |                     |             |                                                                                     |       |
|                                                                                   | 45                                                                                                                                                               | Mounting                        | Side mounted                                              |                          |                     |             |                                                                                     |       |
|                                                                                   | 46                                                                                                                                                               | Housing Material                | Die Cast Aluminum                                         |                          |                     |             |                                                                                     |       |
|                                                                                   | 47                                                                                                                                                               | LCD Indicator                   | Yes                                                       |                          |                     |             |                                                                                     |       |
|                                                                                   | 48                                                                                                                                                               | Mounting Position               | Left or Right hand(VTC)                                   |                          |                     |             |                                                                                     |       |
| OPTIONS                                                                           | 49                                                                                                                                                               | Damping Adjustment              | Yes                                                       |                          |                     |             |                                                                                     |       |
|                                                                                   | 50                                                                                                                                                               | write protection                | Yes                                                       |                          |                     |             |                                                                                     |       |
| PURCHASE                                                                          | 51                                                                                                                                                               | Manufacturer                    | Will be selected later                                    |                          |                     |             |                                                                                     |       |
|                                                                                   | 52                                                                                                                                                               | Requisition Number              | Will be selected later                                    |                          |                     |             |                                                                                     |       |
|                                                                                   | 53                                                                                                                                                               |                                 |                                                           |                          |                     |             |                                                                                     |       |
|                                                                                   | 54                                                                                                                                                               |                                 |                                                           |                          |                     |             |                                                                                     |       |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |           |                                                                                                                                                                                               |                                                           |                          |                     |          |            |                                                                                     |                     |     |
|-----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------|---------------------|----------|------------|-------------------------------------------------------------------------------------|---------------------|-----|
|  |           | <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br><b>سطح الارض و ایبنه تحت الارض</b><br><b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br><b>(قرارداد ۰۸-۰۰۱۰-۰۰۱۰-BK-HD-GCS-CO)</b> |                                                           |                          |                     |          |            |  |                     |     |
|                                                                                   |           | <b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b>                                                                                                                                                 |                                                           |                          |                     |          |            |                                                                                     |                     |     |
| شماره پیمان:                                                                      |           | پروژه                                                                                                                                                                                         | صادر کننده                                                | تسهیلات                  | رشته                | نوع مدرک | سریال      | نسخه                                                                                | شماره صفحه: ۱۷ از ۹ |     |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |           | BK                                                                                                                                                                                            | GCS                                                       | MF                       | 120                 | IN       | DS         | 0011                                                                                | V00                 |     |
| GENERAL DATA                                                                      | 1         | Item Number                                                                                                                                                                                   | Tag Number                                                | Quantity                 | 7                   |          | D-LIT-2107 |                                                                                     | 1                   |     |
|                                                                                   | 2         | Service                                                                                                                                                                                       | V-120                                                     |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 3         | P & ID No.                                                                                                                                                                                    | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003 |                     |          |            |                                                                                     |                     | 2/7 |
|                                                                                   | 4         | Equipment No.                                                                                                                                                                                 | V-120                                                     |                          |                     |          |            |                                                                                     |                     |     |
| PROCESS CONDITIONS                                                                | 5         | Upper Fluid                                                                                                                                                                                   | Lower Fluid                                               | HCB                      |                     | HCB      |            |                                                                                     |                     |     |
|                                                                                   | 6         | Upper Phase                                                                                                                                                                                   | Lower Phase                                               | L                        |                     | L        |            |                                                                                     |                     |     |
|                                                                                   | 7         | Upper Phase Max Pressure (mba)                                                                                                                                                                | Lower Phase Max Hieght                                    | Unit                     |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 8         | Density / Sp.Gr. Upper                                                                                                                                                                        | Density / Sp.Gr. Lower                                    | Unit                     | 671.1               | 671.1    | kg/m3      |                                                                                     |                     |     |
|                                                                                   | 9         | Oper. Press.                                                                                                                                                                                  | Design Press.                                             | Unit                     | 4.5                 | 8        | barg       |                                                                                     |                     |     |
|                                                                                   | 10        | Oper. Temp.                                                                                                                                                                                   | Design Temp.                                              | Unit                     | 73.5                | 120      | C          |                                                                                     |                     |     |
|                                                                                   | 11        | Comply with NACE 0175                                                                                                                                                                         | Cold Service                                              | NO                       |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 12        | Viscosity Upper                                                                                                                                                                               | Viscosity Lower                                           | Unit                     | 0.3438              | 0.3438   | cp         |                                                                                     |                     |     |
|                                                                                   | 13        | Solid in Suspension                                                                                                                                                                           | WET GAS                                                   | YES                      |                     | NO       |            |                                                                                     |                     |     |
|                                                                                   | 14        | TOXIC SERVICE                                                                                                                                                                                 | SUPER HEAT                                                | NO                       |                     | NO       |            |                                                                                     |                     |     |
|                                                                                   | 15        | CORROSIVE SERVICE                                                                                                                                                                             | NACE REQUIRMENT                                           | YES                      |                     | YES      |            |                                                                                     |                     |     |
|                                                                                   | DISPLACER | 16                                                                                                                                                                                            | LL                                                        | H                        | 200mm               |          | 400mm      |                                                                                     |                     |     |
| 17                                                                                |           | Type                                                                                                                                                                                          | External Chamber                                          |                          |                     |          |            |                                                                                     |                     |     |
| 18                                                                                |           | Displacer Length / Hanger                                                                                                                                                                     | 356 mm / VTA                                              |                          |                     |          |            |                                                                                     |                     |     |
| 19                                                                                |           | Displacer Material                                                                                                                                                                            | 316 SS (NACE)                                             |                          |                     |          |            |                                                                                     |                     |     |
| 20                                                                                |           | Torque Tube or Spring Material                                                                                                                                                                | INCONEL                                                   |                          |                     |          |            |                                                                                     |                     |     |
| 21                                                                                |           | Linkage Material                                                                                                                                                                              | Manufacture Standard                                      |                          |                     |          |            |                                                                                     |                     |     |
| HEAD / CHAMBER (CAGE)                                                             | 22        |                                                                                                                                                                                               |                                                           |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 23        | Mounting Style                                                                                                                                                                                | SIDE and SIDE                                             |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 24        | Vessel Connection                                                                                                                                                                             | Upper                                                     | Flange, 2",300# RF       |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 25        | (Size and Rating)                                                                                                                                                                             | Lower                                                     | Flange, 2",300# RF       |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 26        | C to C Dimension                                                                                                                                                                              | 356 mm                                                    |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 27        | Head Connection                                                                                                                                                                               | FLANGE (Rotatable)                                        |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 28        | Vent Connection                                                                                                                                                                               | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 29        | Drain Connection                                                                                                                                                                              | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 30        | Flange Face Finish                                                                                                                                                                            | 125-250 AARH                                              |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 31        | Head / Chamber Material                                                                                                                                                                       | ASTM A105 NACE                                            |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 32        | Gasket Material                                                                                                                                                                               | Spiral Wound,                                             |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 33        | Bolt and Nut Material                                                                                                                                                                         | ASTMA 193-B7M/ASTM A 194 -2HM                             |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 34        | Jacket Type & Fluid                                                                                                                                                                           | N/A                                                       |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 35        | Fin Extention                                                                                                                                                                                 | N/A                                                       |                          |                     |          |            |                                                                                     |                     |     |
| TRANSMITTER                                                                       | 36        |                                                                                                                                                                                               |                                                           |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 37        | Transmitter Type                                                                                                                                                                              | Electronic-Smart Type - HART                              |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 38        | Adjustable Range Min. / Max.                                                                                                                                                                  | 0 - 356 mm                                                |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 39        | Calibration Range Min. / Max.                                                                                                                                                                 | 0 - 100%                                                  |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 40        | Output Signal                                                                                                                                                                                 | Power Supply                                              | 4-20 mA (SMART)          | 24VDC(LOOP POWERED) |          |            |                                                                                     |                     |     |
|                                                                                   | 41        | Enclosure Class                                                                                                                                                                               | SIL Requirement/Level                                     | Ex-ia IIB T4             |                     | YES/SIL2 |            |                                                                                     |                     |     |
|                                                                                   | 42        | Weather Protection                                                                                                                                                                            | IP65                                                      |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 43        | Electrical Connection                                                                                                                                                                         | M20x1.5                                                   |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 44        | Accuracy                                                                                                                                                                                      | ±0.5 %                                                    |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 45        | Mounting                                                                                                                                                                                      | Side mounted                                              |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 46        | Housing Material                                                                                                                                                                              | Die Cast Aluminum                                         |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | OPTIONS   | 47                                                                                                                                                                                            | LCD Indicator                                             | Yes                      |                     |          |            |                                                                                     |                     |     |
| 48                                                                                |           | Mounting Position                                                                                                                                                                             | Left or Right hand(VTC)                                   |                          |                     |          |            |                                                                                     |                     |     |
| 49                                                                                |           | Damping Adjustment                                                                                                                                                                            | Yes                                                       |                          |                     |          |            |                                                                                     |                     |     |
| PURCHASE                                                                          | 50        | write protection                                                                                                                                                                              | Yes                                                       |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 51        | Manufacturer                                                                                                                                                                                  | Will be selected later                                    |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 52        | Requisition Number                                                                                                                                                                            | Will be selected later                                    |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 53        |                                                                                                                                                                                               |                                                           |                          |                     |          |            |                                                                                     |                     |     |
|                                                                                   | 54        |                                                                                                                                                                                               |                                                           |                          |                     |          |            |                                                                                     |                     |     |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                              |                                |                                                           |                          |                     |          |                                                                                     |      |                      |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------|--------------------------|---------------------|----------|-------------------------------------------------------------------------------------|------|----------------------|
|  | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض و ابنیه تحت الارض<br>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک<br>(قرارداد ۰۸-۰۰۱۰-BK-HD-GCS-CO) |                                |                                                           |                          |                     |          |  |      |                      |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                       |                                |                                                           |                          |                     |          |                                                                                     |      |                      |
| شماره پیمان:                                                                      | پروژه                                                                                                                                                        | بسته کاری                      | صادر کننده                                                | تسهیلات                  | رشته                | نوع مدرک | سریال                                                                               | نسخه | شماره صفحه: ۱۷ از ۱۰ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                           | GCS                            | MF                                                        | 120                      | IN                  | DS       | 0011                                                                                | V00  |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                            | Item Number                    | Tag Number                                                | Quantity                 | 8                   |          | D-LIT-2108                                                                          |      | 1                    |
|                                                                                   | 2                                                                                                                                                            | Service                        | V-120                                                     |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 3                                                                                                                                                            | P & ID No.                     | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003 |                     |          |                                                                                     |      |                      |
|                                                                                   | 4                                                                                                                                                            | Equipment No.                  | V-120                                                     |                          |                     |          |                                                                                     |      |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                            | Upper Fluid                    | Lower Fluid                                               | TEG                      |                     | TEG      |                                                                                     |      |                      |
|                                                                                   | 6                                                                                                                                                            | Upper Phase                    | Lower Phase                                               | L                        |                     | L        |                                                                                     |      |                      |
|                                                                                   | 7                                                                                                                                                            | Upper Phase Max Pressure (mba) | Lower Phase Max Hieght                                    | Unit                     |                     |          |                                                                                     |      |                      |
|                                                                                   | 8                                                                                                                                                            | Density / Sp.Gr. Upper         | Density / Sp.Gr. Lower                                    | Unit                     | 1017.63             | 1017.63  | kg/m3                                                                               |      |                      |
|                                                                                   | 9                                                                                                                                                            | Oper. Press.                   | Design Press.                                             | Unit                     | 4.5                 | 8/F.V.   | barg                                                                                |      |                      |
|                                                                                   | 10                                                                                                                                                           | Oper. Temp.                    | Design Temp.                                              | Unit                     | 73.63/74.53         | 5/120    | C                                                                                   |      |                      |
|                                                                                   | 11                                                                                                                                                           | Comply with NACE 0175          | Cold Service                                              | NO                       |                     |          |                                                                                     |      |                      |
|                                                                                   | 12                                                                                                                                                           | Viscosity Upper                | Viscosity Lower                                           | Unit                     | 5.33                | 5.33     | cp                                                                                  |      |                      |
|                                                                                   | 13                                                                                                                                                           | Solid in Suspension            | WET GAS                                                   | YES                      |                     | NO       |                                                                                     |      |                      |
|                                                                                   | 14                                                                                                                                                           | TOXIC SERVICE                  | SUPER HEAT                                                | YES                      |                     | NO       |                                                                                     |      |                      |
|                                                                                   | 15                                                                                                                                                           | CORROSIVE SERVICE              | NACE REQUIRMENT                                           | YES                      |                     | YES      |                                                                                     |      |                      |
|                                                                                   | DISPLACER                                                                                                                                                    | 16                             | H                                                         | HH                       | 465mm               |          | 550mm                                                                               |      |                      |
| 17                                                                                |                                                                                                                                                              | Type                           | External Chamber                                          |                          |                     |          |                                                                                     |      |                      |
| 18                                                                                |                                                                                                                                                              | Displacer Length / Hanger      | 356 mm / VTA                                              |                          |                     |          |                                                                                     |      |                      |
| 19                                                                                |                                                                                                                                                              | Displacer Material             | 316 SS (NACE)                                             |                          |                     |          |                                                                                     |      |                      |
| 20                                                                                |                                                                                                                                                              | Torque Tube or Spring Material | INCONEL                                                   |                          |                     |          |                                                                                     |      |                      |
| 21                                                                                |                                                                                                                                                              | Linkage Material               | Manufacture Standard                                      |                          |                     |          |                                                                                     |      |                      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                           |                                |                                                           |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 23                                                                                                                                                           | Mounting Style                 | SIDE and SIDE                                             |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 24                                                                                                                                                           | Vessel Connection              | Upper                                                     | Flange, 2",300# RF       |                     |          |                                                                                     |      |                      |
|                                                                                   | 25                                                                                                                                                           | (Size and Rating)              | Lower                                                     | Flange, 2",300# RF       |                     |          |                                                                                     |      |                      |
|                                                                                   | 26                                                                                                                                                           | C to C Dimension               | 356 mm                                                    |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 27                                                                                                                                                           | Head Connection                | FLANGE (Rotatable)                                        |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 28                                                                                                                                                           | Vent Connection                | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 29                                                                                                                                                           | Drain Connection               | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 30                                                                                                                                                           | Flange Face Finish             | 125-250 AARH                                              |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 31                                                                                                                                                           | Head / Chamber Material        | ASTM A105 NACE                                            |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 32                                                                                                                                                           | Gasket Material                | Spiral Wound,                                             |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 33                                                                                                                                                           | Bolt and Nut Material          | ASTMA 193-B7M/ASTMA 194 -2HM                              |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 34                                                                                                                                                           | Jacket Type & Fluid            | N/A                                                       |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 35                                                                                                                                                           | Fin Extention                  | N/A                                                       |                          |                     |          |                                                                                     |      |                      |
| TRANSMITTER                                                                       | 36                                                                                                                                                           |                                |                                                           |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 37                                                                                                                                                           | Transmitter Type               | Electronic-Smart Type - HART                              |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 38                                                                                                                                                           | Adjustable Range Min. / Max.   | 0 - 356 mm                                                |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 39                                                                                                                                                           | Calibration Range Min. / Max.  | 0 - 100%                                                  |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 40                                                                                                                                                           | Output Signal                  | Power Supply                                              | 4-20 mA (SMART)          | 24VDC(LOOP POWERED) |          |                                                                                     |      |                      |
|                                                                                   | 41                                                                                                                                                           | Enclosure Class                | SIL Requirement/Level                                     | Ex-ia IIB T4             | YES/SIL2            |          |                                                                                     |      |                      |
|                                                                                   | 42                                                                                                                                                           | Weather Protection             | IP65                                                      |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 43                                                                                                                                                           | Electrical Connection          | M20x1.5                                                   |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 44                                                                                                                                                           | Accuracy                       | ±0.5 %                                                    |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 45                                                                                                                                                           | Mounting                       | Side mounted                                              |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 46                                                                                                                                                           | Housing Material               | Die Cast Aluminum                                         |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | OPTIONS                                                                                                                                                      | 47                             | LCD Indicator                                             | Yes                      |                     |          |                                                                                     |      |                      |
| 48                                                                                |                                                                                                                                                              | Mounting Position              | Left or Right hand(VTC)                                   |                          |                     |          |                                                                                     |      |                      |
| PURCHASE                                                                          | 49                                                                                                                                                           | Damping Adjustment             | Yes                                                       |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 50                                                                                                                                                           | write protection               | Yes                                                       |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 51                                                                                                                                                           | Manufacturer                   | Will be selected later                                    |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 52                                                                                                                                                           | Requisition Number             | Will be selected later                                    |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 53                                                                                                                                                           |                                |                                                           |                          |                     |          |                                                                                     |      |                      |
|                                                                                   | 54                                                                                                                                                           |                                |                                                           |                          |                     |          |                                                                                     |      |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                        |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|--------------------------|---------------------|----------|-------------------------------------------------------------------------------------|------|----------------------|--|
|  | <p align="center"> <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نیم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>( قرارداد ۰۸-۰۰۱۰-CO-GCS-BK )</b> </p> |                                 |                                                           |                          |                     |          |  |      |                      |  |
|                                                                                   | <p align="center"><b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b></p>                                                                                                                                                    |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |
| شماره پیمان:                                                                      | پروژه                                                                                                                                                                                                                  | بسته کاری                       | صادر کننده                                                | تجهیزات                  | رشته                | نوع مدرک | سریال                                                                               | نسخه | شماره صفحه: ۱۱ از ۱۷ |  |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                                                                                     | GCS                             | MF                                                        | 120                      | IN                  | DS       | 0011                                                                                | V00  |                      |  |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                      | Item Number                     | Tag Number                                                | Quantity                 | 9                   |          | D-LIT-2109                                                                          |      | 1                    |  |
|                                                                                   | 2                                                                                                                                                                                                                      | Service                         | V-120                                                     |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 3                                                                                                                                                                                                                      | P & ID No.                      | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003 |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 4                                                                                                                                                                                                                      | Equipment No.                   | V-120                                                     |                          |                     |          |                                                                                     |      |                      |  |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                      | Upper Fluid                     | Lower Fluid                                               | TEG                      |                     | TEG      |                                                                                     |      |                      |  |
|                                                                                   | 6                                                                                                                                                                                                                      | Upper Phase                     | Lower Phase                                               | L                        |                     | L        |                                                                                     |      |                      |  |
|                                                                                   | 7                                                                                                                                                                                                                      | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    | Unit                     |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 8                                                                                                                                                                                                                      | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    | Unit                     | 1017.63             | 1017.63  | kg/m3                                                                               |      |                      |  |
|                                                                                   | 9                                                                                                                                                                                                                      | Oper. Press.                    | Design Press.                                             | Unit                     | 4.5                 | 8/F.V.   | barg                                                                                |      |                      |  |
|                                                                                   | 10                                                                                                                                                                                                                     | Oper. Temp.                     | Design Temp.                                              | Unit                     | 73.63/74.53         | 5/120    | C                                                                                   |      |                      |  |
|                                                                                   | 11                                                                                                                                                                                                                     | Comply with NACE 0175           | Cold Service                                              |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 12                                                                                                                                                                                                                     | Viscosity Upper                 | Viscosity Lower                                           | Unit                     | 5.33                | 5.33     | cp                                                                                  |      |                      |  |
|                                                                                   | 13                                                                                                                                                                                                                     | Solid in Suspension             | WET GAS                                                   | YES                      |                     | NO       |                                                                                     |      |                      |  |
|                                                                                   | 14                                                                                                                                                                                                                     | TOXIC SERVICE                   | SUPER HEAT                                                | YES                      |                     | NO       |                                                                                     |      |                      |  |
|                                                                                   | 15                                                                                                                                                                                                                     | CORROSIVE SERVICE               | NACE REQUIRMENT                                           | YES                      |                     | YES      |                                                                                     |      |                      |  |
|                                                                                   | DISPLACER                                                                                                                                                                                                              | 16                              | LL                                                        | L                        | 220mm               |          | 340mm                                                                               |      |                      |  |
| 17                                                                                |                                                                                                                                                                                                                        | Type                            | External Chamber                                          |                          |                     |          |                                                                                     |      |                      |  |
| 18                                                                                |                                                                                                                                                                                                                        | Displacer Length / Hanger       | 356 mm / VTA                                              |                          |                     |          |                                                                                     |      |                      |  |
| 19                                                                                |                                                                                                                                                                                                                        | Displacer Material              | 316 SS (NACE)                                             |                          |                     |          |                                                                                     |      |                      |  |
| 20                                                                                |                                                                                                                                                                                                                        | Torque Tube or Spring Material  | INCONEL                                                   |                          |                     |          |                                                                                     |      |                      |  |
| 21                                                                                |                                                                                                                                                                                                                        | Linkage Material                | Manufacture Standard                                      |                          |                     |          |                                                                                     |      |                      |  |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                                                     |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 23                                                                                                                                                                                                                     | Mounting Style                  | SIDE and SIDE                                             |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 24                                                                                                                                                                                                                     | Vessel Connection               | Upper                                                     | Flange, 2",300# RF       |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 25                                                                                                                                                                                                                     | (Size and Rating)               | Lower                                                     | Flange, 2",300# RF       |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 26                                                                                                                                                                                                                     | C to C Dimension                | 356 mm                                                    |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 27                                                                                                                                                                                                                     | Head Connection                 | FLANGE (Rotatable)                                        |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 28                                                                                                                                                                                                                     | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 29                                                                                                                                                                                                                     | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 30                                                                                                                                                                                                                     | Flange Face Finish              | 125-250 AARH                                              |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 31                                                                                                                                                                                                                     | Head / Chamber Material         | ASTM A105 NACE                                            |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 32                                                                                                                                                                                                                     | Gasket Material                 | Spiral Wound,                                             |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 33                                                                                                                                                                                                                     | Bolt and Nut Material           | ASTM A 193-B7M/ASTM A 194 -2HM                            |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 34                                                                                                                                                                                                                     | Jacket Type & Fluid             | N/A                                                       |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 35                                                                                                                                                                                                                     | Fin Extention                   | N/A                                                       |                          |                     |          |                                                                                     |      |                      |  |
| TRANSMITTER                                                                       | 36                                                                                                                                                                                                                     |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 37                                                                                                                                                                                                                     | Transmitter Type                | Electronic-Smart Type - HART                              |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 38                                                                                                                                                                                                                     | Adjustable Range Min. / Max.    | 0 - 356 mm                                                |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 39                                                                                                                                                                                                                     | Calibration Range Min. / Max.   | 0 - 100%                                                  |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 40                                                                                                                                                                                                                     | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)          | 24VDC(LOOP POWERED) |          |                                                                                     |      |                      |  |
|                                                                                   | 41                                                                                                                                                                                                                     | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4             | YES/SIL2            |          |                                                                                     |      |                      |  |
|                                                                                   | 42                                                                                                                                                                                                                     | Weather Protection              | IP65                                                      |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 43                                                                                                                                                                                                                     | Electrical Connection           | M20x1.5                                                   |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 44                                                                                                                                                                                                                     | Accuracy                        | ±0.5 %                                                    |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 45                                                                                                                                                                                                                     | Mounting                        | Side mounted                                              |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 46                                                                                                                                                                                                                     | Housing Material                | Die Cast Aluminum                                         |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | OPTIONS                                                                                                                                                                                                                | 47                              | LCD Indicator                                             | Yes                      |                     |          |                                                                                     |      |                      |  |
| 48                                                                                |                                                                                                                                                                                                                        | Mounting Position               | Left or Right hand(VTC)                                   |                          |                     |          |                                                                                     |      |                      |  |
| 49                                                                                |                                                                                                                                                                                                                        | Damping Adjustment              | Yes                                                       |                          |                     |          |                                                                                     |      |                      |  |
| PURCHASE                                                                          | 50                                                                                                                                                                                                                     | write protection                | Yes                                                       |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 51                                                                                                                                                                                                                     | Manufacturer                    | Will be selected later                                    |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 52                                                                                                                                                                                                                     | Requisition Number              | Will be selected later                                    |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 53                                                                                                                                                                                                                     |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |
|                                                                                   | 54                                                                                                                                                                                                                     |                                 |                                                           |                          |                     |          |                                                                                     |      |                      |  |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                           |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|--------------------------|-------------|---------------------|-------------------------------------------------------------------------------------|-------|------|----------------------|
|  | <p align="center"> <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>(قرارداد ۰۸-۰۱۰-۰۰۱-BK-HD-GCS-CO)</b> </p> |                                 |                                                           |                          |             |                     |  |       |      |                      |
|                                                                                   | <b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b>                                                                                                                                                                             |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |
| شماره پیمان:                                                                      |                                                                                                                                                                                                                           | پروژه                           | بسته کاری                                                 | صادر کننده               | تسهیلات     | رشته                | نوع مدرک                                                                            | سریال | نسخه | شماره صفحه: ۱۲ از ۱۷ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |                                                                                                                                                                                                                           | BK                              | GCS                                                       | MF                       | 120         | IN                  | DS                                                                                  | 0011  | V00  |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                         | Item Number                     | Tag Number                                                | Quantity                 | 10          |                     | D-LIT-2110                                                                          |       | 1    |                      |
|                                                                                   | 2                                                                                                                                                                                                                         | Service                         | V-120                                                     |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 3                                                                                                                                                                                                                         | P & ID No.                      | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003 |             |                     |                                                                                     |       |      | 2/7                  |
|                                                                                   | 4                                                                                                                                                                                                                         | Equipment No.                   | V-120                                                     |                          |             |                     |                                                                                     |       |      |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                         | Upper Fluid                     | Lower Fluid                                               | TEG                      |             | TEG                 |                                                                                     |       |      |                      |
|                                                                                   | 6                                                                                                                                                                                                                         | Upper Phase                     | Lower Phase                                               | L                        |             | L                   |                                                                                     |       |      |                      |
|                                                                                   | 7                                                                                                                                                                                                                         | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    | Unit                     |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 8                                                                                                                                                                                                                         | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    | Unit                     | 1017.63     | 1017.63             | kg/m3                                                                               |       |      |                      |
|                                                                                   | 9                                                                                                                                                                                                                         | Oper. Press.                    | Design Press.                                             | Unit                     | 4.5         | 8/F.V.              | barg                                                                                |       |      |                      |
|                                                                                   | 10                                                                                                                                                                                                                        | Oper. Temp.                     | Design Temp.                                              | Unit                     | 73.63/74.53 | 5/120               | C                                                                                   |       |      |                      |
|                                                                                   | 11                                                                                                                                                                                                                        | Comply with NACE 0175           | Cold Service                                              |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 12                                                                                                                                                                                                                        | Viscosity Upper                 | Viscosity Lower                                           | Unit                     | 5.33        | 5.33                | cp                                                                                  |       |      |                      |
|                                                                                   | 13                                                                                                                                                                                                                        | Solid in Suspension             | WET GAS                                                   | YES                      |             | NO                  |                                                                                     |       |      |                      |
|                                                                                   | 14                                                                                                                                                                                                                        | TOXIC SERVICE                   | SUPER HEAT                                                | YES                      |             | NO                  |                                                                                     |       |      |                      |
|                                                                                   | 15                                                                                                                                                                                                                        | CORROSIVE SERVICE               | NACE REQUIRMENT                                           | YES                      |             | YES                 |                                                                                     |       |      |                      |
|                                                                                   | DISPLACER                                                                                                                                                                                                                 | 16                              | LL                                                        | HH                       | 220mm       |                     | 550mm                                                                               |       |      |                      |
| 17                                                                                |                                                                                                                                                                                                                           | Type                            | External Chamber                                          |                          |             |                     |                                                                                     |       |      |                      |
| 18                                                                                |                                                                                                                                                                                                                           | Displacer Length / Hanger       | 356 mm / VTA                                              |                          |             |                     |                                                                                     |       |      |                      |
| 19                                                                                |                                                                                                                                                                                                                           | Displacer Material              | 316 SS (NACE)                                             |                          |             |                     |                                                                                     |       |      |                      |
| 20                                                                                |                                                                                                                                                                                                                           | Torque Tube or Spring Material  | INCONEL                                                   |                          |             |                     |                                                                                     |       |      |                      |
| 21                                                                                |                                                                                                                                                                                                                           | Linkage Material                | Manufacture Standard                                      |                          |             |                     |                                                                                     |       |      |                      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                                                        |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 23                                                                                                                                                                                                                        | Mounting Style                  | SIDE and SIDE                                             |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 24                                                                                                                                                                                                                        | Vessel Connection               | Upper                                                     | Flange, 2",300# RF       |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 25                                                                                                                                                                                                                        | (Size and Rating)               | Lower                                                     | Flange, 2",300# RF       |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 26                                                                                                                                                                                                                        | C to C Dimension                | 356 mm                                                    |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 27                                                                                                                                                                                                                        | Head Connection                 | FLANGE (Rotatable)                                        |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 28                                                                                                                                                                                                                        | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 29                                                                                                                                                                                                                        | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 30                                                                                                                                                                                                                        | Flange Face Finish              | 125-250 AARH                                              |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 31                                                                                                                                                                                                                        | Head / Chamber Material         | ASTM A105 NACE                                            |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 32                                                                                                                                                                                                                        | Gasket Material                 | Spiral Wound,                                             |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 33                                                                                                                                                                                                                        | Bolt and Nut Material           | ASTM A 193-B7M/ASTM A 194 -2HM                            |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 34                                                                                                                                                                                                                        | Jacket Type & Fluid             | N/A                                                       |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 35                                                                                                                                                                                                                        | Fin Extencion                   | N/A                                                       |                          |             |                     |                                                                                     |       |      |                      |
| TRANSMITTER                                                                       | 36                                                                                                                                                                                                                        |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 37                                                                                                                                                                                                                        | Transmitter Type                | Electronic-Smart Type - HART                              |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 38                                                                                                                                                                                                                        | Adjustable Range Min. / Max.    | 0 - 356 mm                                                |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 39                                                                                                                                                                                                                        | Calibration Range Min. / Max.   | 0 - 100%                                                  |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 40                                                                                                                                                                                                                        | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)          |             | 24VDC(LOOP POWERED) |                                                                                     |       |      |                      |
|                                                                                   | 41                                                                                                                                                                                                                        | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4             |             | YES/SIL2            |                                                                                     |       |      |                      |
|                                                                                   | 42                                                                                                                                                                                                                        | Weather Protection              | IP65                                                      |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 43                                                                                                                                                                                                                        | Electrical Connection           | M20x1.5                                                   |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 44                                                                                                                                                                                                                        | Accuracy                        | ±0.5 %                                                    |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 45                                                                                                                                                                                                                        | Mounting                        | Side mounted                                              |                          |             |                     |                                                                                     |       |      |                      |
| OPTIONS                                                                           | 46                                                                                                                                                                                                                        | Housing Material                | Die Cast Aluminum                                         |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 47                                                                                                                                                                                                                        | LCD Indicator                   | Yes                                                       |                          |             |                     |                                                                                     |       |      |                      |
| PURCHASE                                                                          | 48                                                                                                                                                                                                                        | Mounting Position               | Left or Right hand(VTC)                                   |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 49                                                                                                                                                                                                                        | Damping Adjustment              | Yes                                                       |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 50                                                                                                                                                                                                                        | write protection                | Yes                                                       |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 51                                                                                                                                                                                                                        | Manufacturer                    | Will be selected later                                    |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 52                                                                                                                                                                                                                        | Requisition Number              | Will be selected later                                    |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 53                                                                                                                                                                                                                        |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |
|                                                                                   | 54                                                                                                                                                                                                                        |                                 |                                                           |                          |             |                     |                                                                                     |       |      |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                   |                                 |                                                           |                              |                     |          |                                                                                     |       |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|------------------------------|---------------------|----------|-------------------------------------------------------------------------------------|-------|
|  | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض و ابنیه تحت الارض<br>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک<br>(قرارداد ۰۸-۰۰۱۰-۰۰۰۱-BK-HD-GCS-CO) |                                 |                                                           |                              |                     |          |  |       |
|                                                                                   | INSTRUMENT D.S. FOR LEVEL TRANSMITTERS                                                                                                                            |                                 |                                                           |                              |                     |          |                                                                                     |       |
|                                                                                   | شماره پیمان:                                                                                                                                                      | پروژه                           | بسته کاری                                                 | صادر کننده                   | تهیهات              | رشته     | نوع مدرک                                                                            | سریال |
| ۰۵۳ - ۰۷۳ - ۹۱۸۶                                                                  | BK                                                                                                                                                                | GCS                             | MF                                                        | 120                          | IN                  | DS       | 0011                                                                                | V00   |
| شماره صفحه: ۱۳ از ۱۷                                                              |                                                                                                                                                                   |                                 |                                                           |                              |                     |          |                                                                                     |       |
| GENERAL DATA                                                                      | 1                                                                                                                                                                 | Item Number                     | Tag Number                                                | Quantity                     | 11                  |          | D-LIT-2111                                                                          | 1     |
|                                                                                   | 2                                                                                                                                                                 | Service                         | R-100                                                     |                              |                     |          |                                                                                     |       |
|                                                                                   | 3                                                                                                                                                                 | P & ID No.                      | Page No.                                                  | BK-GCS-MF-120-PR-PI-0003     |                     | 4/7      |                                                                                     |       |
|                                                                                   | 4                                                                                                                                                                 | Equipment No.                   | R-100                                                     |                              |                     |          |                                                                                     |       |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                 | Upper Fluid                     | Lower Fluid                                               | TEG                          |                     | TEG      |                                                                                     |       |
|                                                                                   | 6                                                                                                                                                                 | Upper Phase                     | Lower Phase                                               | L                            |                     | L        |                                                                                     |       |
|                                                                                   | 7                                                                                                                                                                 | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    | Unit                         |                     |          |                                                                                     |       |
|                                                                                   | 8                                                                                                                                                                 | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    | Unit                         | 981.71              | 981.71   | kg/m3                                                                               |       |
|                                                                                   | 9                                                                                                                                                                 | Oper. Press.                    | Design Press.                                             | Unit                         | 0.3/0.6             | 4.1/F.V. | barg                                                                                |       |
|                                                                                   | 10                                                                                                                                                                | Oper. Temp.                     | Design Temp.                                              | Unit                         | 140/204             | 5/234    | C                                                                                   |       |
|                                                                                   | 11                                                                                                                                                                | Comply with NACE 0175           | Cold Service                                              | NO                           |                     |          |                                                                                     |       |
|                                                                                   | 12                                                                                                                                                                | Viscosity Upper                 | Viscosity Lower                                           | Unit                         | 0.67                | 0.67     | cp                                                                                  |       |
|                                                                                   | 13                                                                                                                                                                | Solid in Suspension             | WET GAS                                                   | YES                          |                     | NO       |                                                                                     |       |
|                                                                                   | 14                                                                                                                                                                | TOXIC SERVICE                   | SUPER HEAT                                                | YES                          |                     | NO       |                                                                                     |       |
|                                                                                   | 15                                                                                                                                                                | CORROSIVE SERVICE               | NACE REQUIRMENT                                           | YES                          |                     | YES      |                                                                                     |       |
|                                                                                   | 16                                                                                                                                                                | LL                              | HH                                                        | 800mm                        |                     | 960mm    |                                                                                     |       |
| DISPLACER                                                                         | 17                                                                                                                                                                | Type                            | External Chamber                                          |                              |                     |          |                                                                                     |       |
|                                                                                   | 18                                                                                                                                                                | Displacer Length / Hanger       | 356 mm / VTA                                              |                              |                     |          |                                                                                     |       |
|                                                                                   | 19                                                                                                                                                                | Displacer Material              | 316 SS (NACE)                                             |                              |                     |          |                                                                                     |       |
|                                                                                   | 20                                                                                                                                                                | Torque Tube or Spring Material  | INCONEL                                                   |                              |                     |          |                                                                                     |       |
|                                                                                   | 21                                                                                                                                                                | Linkage Material                | Manufacture Standard                                      |                              |                     |          |                                                                                     |       |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                | Mounting Style                  | SIDE and SIDE                                             |                              |                     |          |                                                                                     |       |
|                                                                                   | 24                                                                                                                                                                | Vessel Connection               | Upper                                                     | Flange, 2",300# RF           |                     |          |                                                                                     |       |
|                                                                                   | 25                                                                                                                                                                | (Size and Rating)               | Lower                                                     | Flange, 2",300# RF           |                     |          |                                                                                     |       |
|                                                                                   | 26                                                                                                                                                                | C to C Dimension                | 356 mm                                                    |                              |                     |          |                                                                                     |       |
|                                                                                   | 27                                                                                                                                                                | Head Connection                 | FLANGE (Rotatable)                                        |                              |                     |          |                                                                                     |       |
|                                                                                   | 28                                                                                                                                                                | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                              |                     |          |                                                                                     |       |
|                                                                                   | 29                                                                                                                                                                | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                              |                     |          |                                                                                     |       |
|                                                                                   | 30                                                                                                                                                                | Flange Face Finish              | 125-250 AARH                                              |                              |                     |          |                                                                                     |       |
|                                                                                   | 31                                                                                                                                                                | Head / Chamber Material         | ASTM A105 NACE                                            |                              |                     |          |                                                                                     |       |
|                                                                                   | 32                                                                                                                                                                | Gasket Material                 | Spiral Wound,                                             |                              |                     |          |                                                                                     |       |
|                                                                                   | 33                                                                                                                                                                | Bolt and Nut Material           | ASTM A 193-B7M/ASTM A 194 -2HM                            |                              |                     |          |                                                                                     |       |
|                                                                                   | 34                                                                                                                                                                | Jacket Type & Fluid             | N/A                                                       |                              |                     |          |                                                                                     |       |
|                                                                                   | 35                                                                                                                                                                | Fin Extention                   | N/A                                                       |                              |                     |          |                                                                                     |       |
|                                                                                   | 36                                                                                                                                                                |                                 |                                                           |                              |                     |          |                                                                                     |       |
|                                                                                   | TRANSMITTER                                                                                                                                                       | 37                              | Transmitter Type                                          | Electronic-Smart Type - HART |                     |          |                                                                                     |       |
| 38                                                                                |                                                                                                                                                                   | Adjustable Range Min. / Max.    | 0 - 356 mm                                                |                              |                     |          |                                                                                     |       |
| 39                                                                                |                                                                                                                                                                   | Calibration Range Min. / Max.   | 0 - 100%                                                  |                              |                     |          |                                                                                     |       |
| 40                                                                                |                                                                                                                                                                   | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)              | 24VDC(LOOP POWERED) |          |                                                                                     |       |
| 41                                                                                |                                                                                                                                                                   | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4                 | YES/SIL2            |          |                                                                                     |       |
| 42                                                                                |                                                                                                                                                                   | Weather Protection              | IP65                                                      |                              |                     |          |                                                                                     |       |
| 43                                                                                |                                                                                                                                                                   | Electrical Connection           | M20x1.5                                                   |                              |                     |          |                                                                                     |       |
| 44                                                                                |                                                                                                                                                                   | Accuracy                        | ±0.5 %                                                    |                              |                     |          |                                                                                     |       |
| 45                                                                                |                                                                                                                                                                   | Mounting                        | Side mounted                                              |                              |                     |          |                                                                                     |       |
| 46                                                                                |                                                                                                                                                                   | Housing Material                | Die Cast Aluminum                                         |                              |                     |          |                                                                                     |       |
| 47                                                                                |                                                                                                                                                                   | LCD Indicator                   | Yes                                                       |                              |                     |          |                                                                                     |       |
| 48                                                                                |                                                                                                                                                                   | Mounting Position               | Left or Right hand(VTC)                                   |                              |                     |          |                                                                                     |       |
| OPTIONS                                                                           | 49                                                                                                                                                                | Damping Adjustment              | Yes                                                       |                              |                     |          |                                                                                     |       |
|                                                                                   | 50                                                                                                                                                                | write protection                | Yes                                                       |                              |                     |          |                                                                                     |       |
| PURCHASE                                                                          | 51                                                                                                                                                                | Manufacturer                    | Will be selected later                                    |                              |                     |          |                                                                                     |       |
|                                                                                   | 52                                                                                                                                                                | Requisition Number              | Will be selected later                                    |                              |                     |          |                                                                                     |       |
|                                                                                   | 53                                                                                                                                                                |                                 |                                                           |                              |                     |          |                                                                                     |       |
|                                                                                   | 54                                                                                                                                                                |                                 |                                                           |                              |                     |          |                                                                                     |       |

NOTE:  
 1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.  
 2-Transmitter shall be provided with ground lug  
 3-Vendor to provide higher grade and proper material for fluid service if reqired,defined material is minimum requirement.  
 4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                        |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------|--------------------|--------------------------|---------------------|----------|-------------------------------------------------------------------------------------|----------------------|--|
|  | <p align="center"> <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>(قرارداد ۰۸-۰۰۱۰-CO-GCS-HD-BK)</b> </p> |                                 |                                                           |                    |                          |                     |          |  |                      |  |
|                                                                                   | <p align="center"><b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b></p>                                                                                                                                                    |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |
| شماره پیمان:                                                                      | پروژه                                                                                                                                                                                                                  | بسته کاری                       | صادر کننده                                                | تسهیلات            | رشته                     | نوع مدرک            | سریال    | نسخه                                                                                | شماره صفحه: ۱۴ از ۱۷ |  |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | BK                                                                                                                                                                                                                     | GCS                             | MF                                                        | 120                | IN                       | DS                  | 0011     | V00                                                                                 |                      |  |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                      | Item Number                     | Tag Number                                                |                    | Quantity                 | 12                  |          | D-LIT-2112                                                                          | 1                    |  |
|                                                                                   | 2                                                                                                                                                                                                                      | Service                         | R-100                                                     |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 3                                                                                                                                                                                                                      | P & ID No.                      | Page No.                                                  |                    | BK-GCS-MF-120-PR-PI-0003 |                     |          |                                                                                     | 4/7                  |  |
|                                                                                   | 4                                                                                                                                                                                                                      | Equipment No.                   | R-100                                                     |                    |                          |                     |          |                                                                                     |                      |  |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                      | Upper Fluid                     | Lower Fluid                                               |                    | TEG                      |                     | TEG      |                                                                                     |                      |  |
|                                                                                   | 6                                                                                                                                                                                                                      | Upper Phase                     | Lower Phase                                               |                    | L                        |                     | L        |                                                                                     |                      |  |
|                                                                                   | 7                                                                                                                                                                                                                      | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght                                    |                    | Unit                     |                     |          |                                                                                     |                      |  |
|                                                                                   | 8                                                                                                                                                                                                                      | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower                                    |                    | Unit                     | 981.71              | 981.71   | kg/m3                                                                               |                      |  |
|                                                                                   | 9                                                                                                                                                                                                                      | Oper. Press.                    | Design Press.                                             |                    | Unit                     | 0.3/0.6             | 4.1/F.V. | barg                                                                                |                      |  |
|                                                                                   | 10                                                                                                                                                                                                                     | Oper. Temp.                     | Design Temp.                                              |                    | Unit                     | 140/204             | 5/234    | C                                                                                   |                      |  |
|                                                                                   | 11                                                                                                                                                                                                                     | Comply with NACE 0175           | Cold Service                                              |                    | NO                       |                     |          |                                                                                     |                      |  |
|                                                                                   | 12                                                                                                                                                                                                                     | Viscosity Upper                 | Viscosity Lower                                           |                    | Unit                     | 0.67                | 0.67     | cp                                                                                  |                      |  |
|                                                                                   | 13                                                                                                                                                                                                                     | Solid in Suspension             | WET GAS                                                   |                    | YES                      |                     | NO       |                                                                                     |                      |  |
|                                                                                   | 14                                                                                                                                                                                                                     | TOXIC SERVICE                   | SUPER HEAT                                                |                    | YES                      |                     | NO       |                                                                                     |                      |  |
|                                                                                   | 15                                                                                                                                                                                                                     | CORROSIVE SERVICE               | NACE REQUIRMENT                                           |                    | YES                      |                     | YES      |                                                                                     |                      |  |
|                                                                                   | 16                                                                                                                                                                                                                     | LL                              | L                                                         |                    | 800mm                    |                     | 900mm    |                                                                                     |                      |  |
| DISPLACER                                                                         | 17                                                                                                                                                                                                                     | Type                            | External Chamber                                          |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 18                                                                                                                                                                                                                     | Displacer Length / Hanger       | 356 mm / VTA                                              |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 19                                                                                                                                                                                                                     | Displacer Material              | 316 SS (NACE)                                             |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 20                                                                                                                                                                                                                     | Torque Tube or Spring Material  | INCONEL                                                   |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 21                                                                                                                                                                                                                     | Linkage Material                | Manufacture Standard                                      |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 22                                                                                                                                                                                                                     |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |
| HEAD / CHAMBER (CAGE)                                                             | 23                                                                                                                                                                                                                     | Mounting Style                  | SIDE and SIDE                                             |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 24                                                                                                                                                                                                                     | Vessel Connection               | Upper                                                     | Flange, 2",300# RF |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 25                                                                                                                                                                                                                     | (Size and Rating)               | Lower                                                     | Flange, 2",300# RF |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 26                                                                                                                                                                                                                     | C to C Dimension                | 356 mm                                                    |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 27                                                                                                                                                                                                                     | Head Connection                 | FLANGE (Rotatable)                                        |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 28                                                                                                                                                                                                                     | Vent Connection                 | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 29                                                                                                                                                                                                                     | Drain Connection                | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 30                                                                                                                                                                                                                     | Flange Face Finish              | 125-250 AARH                                              |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 31                                                                                                                                                                                                                     | Head / Chamber Material         | ASTM A105 NACE                                            |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 32                                                                                                                                                                                                                     | Gasket Material                 | Spiral Wound,                                             |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 33                                                                                                                                                                                                                     | Bolt and Nur Material           | ASTM A 193-B7M/ASTM A 194 -2HM                            |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 34                                                                                                                                                                                                                     | Jacket Type & Fluid             | N/A                                                       |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 35                                                                                                                                                                                                                     | Fin Extention                   | N/A                                                       |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 36                                                                                                                                                                                                                     |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |
| TRANSMITTER                                                                       | 37                                                                                                                                                                                                                     | Transmitter Type                | Electronic-Smart Type - HART                              |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 38                                                                                                                                                                                                                     | Adjustable Range Min. / Max.    | 0 - 356 mm                                                |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 39                                                                                                                                                                                                                     | Calibration Range Min. / Max.   | 0 - 100%                                                  |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 40                                                                                                                                                                                                                     | Output Signal                   | Power Supply                                              | 4-20 mA (SMART)    |                          | 24VDC(LOOP POWERED) |          |                                                                                     |                      |  |
|                                                                                   | 41                                                                                                                                                                                                                     | Enclosure Class                 | SIL Requirement/Level                                     | Ex-ia IIB T4       |                          | YES/SIL2            |          |                                                                                     |                      |  |
|                                                                                   | 42                                                                                                                                                                                                                     | Weather Protection              | IP65                                                      |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 43                                                                                                                                                                                                                     | Electrical Connection           | M20x1.5                                                   |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 44                                                                                                                                                                                                                     | Accuracy                        | ±0.5 %                                                    |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 45                                                                                                                                                                                                                     | Mounting                        | Side mounted                                              |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 46                                                                                                                                                                                                                     | Housing Material                | Die Cast Aluminum                                         |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 47                                                                                                                                                                                                                     | LCD Indicator                   | Yes                                                       |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 48                                                                                                                                                                                                                     | Mounting Position               | Left or Right hand(VTC)                                   |                    |                          |                     |          |                                                                                     |                      |  |
| OPTIONS                                                                           | 49                                                                                                                                                                                                                     | Damping Adjustment              | Yes                                                       |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 50                                                                                                                                                                                                                     | write protection                | Yes                                                       |                    |                          |                     |          |                                                                                     |                      |  |
| PURCHASE                                                                          | 51                                                                                                                                                                                                                     | Manufacturer                    | Will be selected later                                    |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 52                                                                                                                                                                                                                     | Requisition Number              | Will be selected later                                    |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 53                                                                                                                                                                                                                     |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |
|                                                                                   | 54                                                                                                                                                                                                                     |                                 |                                                           |                    |                          |                     |          |                                                                                     |                      |  |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.



نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض و ابنیه تحت الارض  
خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک  
(قرارداد ۰۸-۰۱۰۱-BK-HD-GCS-CO)

**INSTRUMENT D.S. FOR LEVEL TRANSMITTERS**

| شماره پیمان:          |               | پروژه                           | بسته کاری | صادر کننده | تسهیلات                | رشته | نوع مدرک                                                  | سریال                    | نسخه                | شماره صفحه: ۱۵ از ۱۷ |            |       |
|-----------------------|---------------|---------------------------------|-----------|------------|------------------------|------|-----------------------------------------------------------|--------------------------|---------------------|----------------------|------------|-------|
| ۰۵۳ - ۰۷۳ - ۹۱۸۴      |               | BK                              | GCS       | MF         | 120                    | IN   | DS                                                        | 0011                     | V00                 |                      |            |       |
| GENERAL DATA          | 1             | Item Number                     |           |            | Tag Number             |      | Quantity                                                  |                          | 14                  |                      | D-LIT-2114 | 1     |
|                       | 2             | Service                         |           |            |                        |      |                                                           |                          |                     |                      |            | V-130 |
|                       | 3             | P & ID No.                      |           |            | Page No.               |      |                                                           | BK-GCS-MF-120-PR-PI-0003 |                     |                      |            | 4/7   |
|                       | 4             | Equipment No.                   |           |            |                        |      |                                                           |                          |                     |                      |            | V-130 |
| PROCESS CONDITIONS    | 5             | Upper Fluid                     |           |            | Lower Fluid            |      |                                                           | TEG                      |                     | TEG                  |            |       |
|                       | 6             | Upper Phase                     |           |            | Lower Phase            |      |                                                           | L                        |                     | L                    |            |       |
|                       | 7             | Upper Phase Max Pressure (mbar) |           |            | Lower Phase Max Hieght |      |                                                           | Unit                     |                     |                      |            |       |
|                       | 8             | Density / Sp.Gr. Upper          |           |            | Density / Sp.Gr. Lower |      |                                                           | Unit                     | 981.71              |                      | 981.71     | kg/m3 |
|                       | 9             | Oper. Press.                    |           |            | Design Press.          |      |                                                           | Unit                     | 0.3/0.6             |                      | 4.1/F.V.   | barg  |
|                       | 10            | Oper. Temp.                     |           |            | Design Temp.           |      |                                                           | Unit                     | 140/204             |                      | 5/234      | C     |
|                       | 11            | Comply with NACE 0175           |           |            | Cold Service           |      |                                                           |                          |                     |                      |            | NO    |
|                       | 12            | Viscosity Upper                 |           |            | Viscosity Lower        |      |                                                           | Unit                     | 0.67                |                      | 0.67       | cp    |
|                       | 13            | Solid in Suspension             |           |            | WET GAS                |      |                                                           | YES                      |                     |                      |            | NO    |
|                       | 14            | TOXIC SERVICE                   |           |            | SUPER HEAT             |      |                                                           | YES                      |                     |                      |            | NO    |
|                       | 15            | CORROSIVE SERVICE               |           |            | NACE REQUIRMENT        |      |                                                           | YES                      |                     |                      |            | YES   |
|                       | 16            | LL                              |           |            | HH                     |      |                                                           | 250mm                    |                     |                      |            | 980mm |
| DISPLACER             | 17            | Type                            |           |            |                        |      | External Chamber                                          |                          |                     |                      |            |       |
|                       | 18            | Displacer Length / Hanger       |           |            |                        |      | 813 mm / VTA                                              |                          |                     |                      |            |       |
|                       | 19            | Displacer Material              |           |            |                        |      | 316 SS (NACE)                                             |                          |                     |                      |            |       |
|                       | 20            | Torque Tube or Spring Material  |           |            |                        |      | INCONEL                                                   |                          |                     |                      |            |       |
|                       | 21            | Linkage Material                |           |            |                        |      | Manufacture Standard                                      |                          |                     |                      |            |       |
|                       | 22            |                                 |           |            |                        |      |                                                           |                          |                     |                      |            |       |
| HEAD / CHAMBER (CAGE) | 23            | Mounting Style                  |           |            |                        |      | SIDE and SIDE                                             |                          |                     |                      |            |       |
|                       | 24            | Vessel Connection               |           |            | Upper                  |      | Flange, 2",300# RF                                        |                          |                     |                      |            |       |
|                       | 25            | (Size and Rating)               |           |            | Lower                  |      | Flange, 2",300# RF                                        |                          |                     |                      |            |       |
|                       | 26            | C to C Dimension                |           |            |                        |      | 813 mm                                                    |                          |                     |                      |            |       |
|                       | 27            | Head Connection                 |           |            |                        |      | FLANGE (Rotatable)                                        |                          |                     |                      |            |       |
|                       | 28            | Vent Connection                 |           |            |                        |      | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                          |                     |                      |            |       |
|                       | 29            | Drain Connection                |           |            |                        |      | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                          |                     |                      |            |       |
|                       | 30            | Flange Face Finish              |           |            |                        |      | 125-250 AARH                                              |                          |                     |                      |            |       |
|                       | 31            | Head / Chamber Material         |           |            |                        |      | ASTM A105 NACE                                            |                          |                     |                      |            |       |
|                       | 32            | Gasket Material                 |           |            |                        |      | Spiral Wound,                                             |                          |                     |                      |            |       |
|                       | 33            | Bolt and Nut Material           |           |            |                        |      | ASTM A 193-B7M/ASTM A 194 -2HM                            |                          |                     |                      |            |       |
|                       | 34            | Jacket Type & Fluid             |           |            |                        |      | N/A                                                       |                          |                     |                      |            |       |
| 35                    | Fin Extention |                                 |           |            |                        | N/A  |                                                           |                          |                     |                      |            |       |
| 36                    |               |                                 |           |            |                        |      |                                                           |                          |                     |                      |            |       |
| TRANSMITTER           | 37            | Transmitter Type                |           |            |                        |      | Electronic-Smart Type - HART                              |                          |                     |                      |            |       |
|                       | 38            | Adjustable Range Min. / Max.    |           |            |                        |      | 0 - 813 mm                                                |                          |                     |                      |            |       |
|                       | 39            | Calibration Range Min. / Max.   |           |            |                        |      | 0 - 100%                                                  |                          |                     |                      |            |       |
|                       | 40            | Output Signal                   |           |            | Power Supply           |      | 4-20 mA (SMART)                                           |                          | 24VDC(LOOP POWERED) |                      |            |       |
|                       | 41            | Enclosure Class                 |           |            | SIL Requirement/Level  |      | Ex-ia IIB T4                                              |                          | YES/SIL2            |                      |            |       |
|                       | 42            | Weather Protection              |           |            |                        |      | IP65                                                      |                          |                     |                      |            |       |
|                       | 43            | Electrical Connection           |           |            |                        |      | M20x1.5                                                   |                          |                     |                      |            |       |
|                       | 44            | Accuracy                        |           |            |                        |      | ±0.5 %                                                    |                          |                     |                      |            |       |
|                       | 45            | Mounting                        |           |            |                        |      | Side mounted                                              |                          |                     |                      |            |       |
|                       | 46            | Housing Material                |           |            |                        |      | Die Cast Aluminum                                         |                          |                     |                      |            |       |
|                       | 47            | LCD Indicator                   |           |            |                        |      | Yes                                                       |                          |                     |                      |            |       |
|                       | 48            | Mounting Position               |           |            |                        |      | Left or Right hand(VTC)                                   |                          |                     |                      |            |       |
| OPTIONS               | 49            | Damping Adjustment              |           |            |                        |      | Yes                                                       |                          |                     |                      |            |       |
|                       | 50            | write protection                |           |            |                        |      | Yes                                                       |                          |                     |                      |            |       |
| PURCHASE              | 51            | Manufacturer                    |           |            |                        |      | Will be selected later                                    |                          |                     |                      |            |       |
|                       | 52            | Requisition Number              |           |            |                        |      | Will be selected later                                    |                          |                     |                      |            |       |
|                       | 53            |                                 |           |            |                        |      |                                                           |                          |                     |                      |            |       |
|                       | 54            |                                 |           |            |                        |      |                                                           |                          |                     |                      |            |       |

**NOTE:**

- 1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.
- 2-Transmitter shall be provided with ground lug
- 3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.
- 4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                          |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|------------------------|--------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|------------|------|----------------------|
|  | <p align="center"><b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>(قرارداد ۰۸-۰۰۱۰-۰۰۱-BK-HD-GCS-CO)</b></p> |                                 |           |                        |                          |                                                           |  |            |      |                      |
|                                                                                   | <p align="center"><b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b></p>                                                                                                                                                      |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |
| شماره پیمان:                                                                      |                                                                                                                                                                                                                          | پروژه                           | بسته کاری | صادر کننده             | تهیلات                   | رشته                                                      | نوع مدرک                                                                            | سریال      | نسخه | شماره صفحه: ۱۶ از ۱۷ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |                                                                                                                                                                                                                          | BK                              | GCS       | MF                     | 120                      | IN                                                        | DS                                                                                  | 0011       | V00  |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                        | Item Number                     |           | Tag Number             | Quantity                 | 15                                                        |                                                                                     | D-LIT-2115 |      | 1                    |
|                                                                                   | 2                                                                                                                                                                                                                        | Service                         |           |                        |                          | V-130                                                     |                                                                                     |            |      |                      |
|                                                                                   | 3                                                                                                                                                                                                                        | P & ID No.                      |           | Page No.               | BK-GCS-MF-120-PR-PI-0003 |                                                           | 4/7                                                                                 |            |      |                      |
|                                                                                   | 4                                                                                                                                                                                                                        | Equipment No.                   |           |                        |                          | V-130                                                     |                                                                                     |            |      |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                        | Upper Fluid                     |           | Lower Fluid            | TEG                      |                                                           | TEG                                                                                 |            |      |                      |
|                                                                                   | 6                                                                                                                                                                                                                        | Upper Phase                     |           | Lower Phase            | L                        |                                                           | L                                                                                   |            |      |                      |
|                                                                                   | 7                                                                                                                                                                                                                        | Upper Phase Max Pressure (mbar) |           | Lower Phase Max Hieght | Unit                     |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 8                                                                                                                                                                                                                        | Density / Sp.Gr. Upper          |           | Density / Sp.Gr. Lower | Unit                     | 981.71                                                    | 981.71                                                                              | kg/m3      |      |                      |
|                                                                                   | 9                                                                                                                                                                                                                        | Oper. Press.                    |           | Design Press.          | Unit                     | 0.3/0.6                                                   | 4.1/F.V.                                                                            | barg       |      |                      |
|                                                                                   | 10                                                                                                                                                                                                                       | Oper. Temp.                     |           | Design Temp.           | Unit                     | 140/204                                                   | 5/234                                                                               | C          |      |                      |
|                                                                                   | 11                                                                                                                                                                                                                       | Comply with NACE 0175           |           | Cold Service           |                          |                                                           | NO                                                                                  |            |      |                      |
|                                                                                   | 12                                                                                                                                                                                                                       | Viscosity Upper                 |           | Viscosity Lower        | Unit                     | 0.67                                                      | 0.67                                                                                | cp         |      |                      |
|                                                                                   | 13                                                                                                                                                                                                                       | Solid in Suspension             |           | WET GAS                | YES                      |                                                           | NO                                                                                  |            |      |                      |
|                                                                                   | 14                                                                                                                                                                                                                       | TOXIC SERVICE                   |           | SUPER HEAT             | YES                      |                                                           | NO                                                                                  |            |      |                      |
| DISPLACER                                                                         | 15                                                                                                                                                                                                                       | CORROSIVE SERVICE               |           | NACE REQUIRMENT        | YES                      |                                                           | YES                                                                                 |            |      |                      |
|                                                                                   | 16                                                                                                                                                                                                                       | H                               |           | HH                     | 850mm                    |                                                           | 980mm                                                                               |            |      |                      |
|                                                                                   | 17                                                                                                                                                                                                                       | Type                            |           |                        |                          | External Chamber                                          |                                                                                     |            |      |                      |
|                                                                                   | 18                                                                                                                                                                                                                       | Displacer Length / Hanger       |           |                        |                          | 356 mm / VTA                                              |                                                                                     |            |      |                      |
|                                                                                   | 19                                                                                                                                                                                                                       | Displacer Material              |           |                        |                          | 316 SS (NACE)                                             |                                                                                     |            |      |                      |
|                                                                                   | 20                                                                                                                                                                                                                       | Torque Tube or Spring Material  |           |                        |                          | INCONEL                                                   |                                                                                     |            |      |                      |
| HEAD / CHAMBER (CAGE)                                                             | 21                                                                                                                                                                                                                       | Linkage Material                |           |                        |                          | Manufacture Standard                                      |                                                                                     |            |      |                      |
|                                                                                   | 22                                                                                                                                                                                                                       |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 23                                                                                                                                                                                                                       | Mounting Style                  |           |                        |                          | SIDE and SIDE                                             |                                                                                     |            |      |                      |
|                                                                                   | 24                                                                                                                                                                                                                       | Vessel Connection               |           | Upper                  | Flange, 2",300# RF       |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 25                                                                                                                                                                                                                       | (Size and Rating)               |           | Lower                  | Flange, 2",300# RF       |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 26                                                                                                                                                                                                                       | C to C Dimension                |           |                        |                          | 356 mm                                                    |                                                                                     |            |      |                      |
|                                                                                   | 27                                                                                                                                                                                                                       | Head Connection                 |           |                        |                          | FLANGE (Rotatable)                                        |                                                                                     |            |      |                      |
|                                                                                   | 28                                                                                                                                                                                                                       | Vent Connection                 |           |                        |                          | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug     |                                                                                     |            |      |                      |
|                                                                                   | 29                                                                                                                                                                                                                       | Drain Connection                |           |                        |                          | 3/4" NPT(F)F Ball Valve (Body:ASTM A105 NACE/Trim:316L SS |                                                                                     |            |      |                      |
|                                                                                   | 30                                                                                                                                                                                                                       | Flange Face Finish              |           |                        |                          | 125-250 AARH                                              |                                                                                     |            |      |                      |
|                                                                                   | 31                                                                                                                                                                                                                       | Head / Chamber Material         |           |                        |                          | ASTM A105 NACE                                            |                                                                                     |            |      |                      |
|                                                                                   | 32                                                                                                                                                                                                                       | Gasket Material                 |           |                        |                          | Spiral Wound,                                             |                                                                                     |            |      |                      |
|                                                                                   | 33                                                                                                                                                                                                                       | Bolt and Nut Material           |           |                        |                          | ASTM A 193-B7M/ASTM A 194 -2HM                            |                                                                                     |            |      |                      |
|                                                                                   | 34                                                                                                                                                                                                                       | Jacket Type & Fluid             |           |                        |                          | N/A                                                       |                                                                                     |            |      |                      |
| TRANSMITTER                                                                       | 35                                                                                                                                                                                                                       | Fin Extention                   |           |                        |                          | N/A                                                       |                                                                                     |            |      |                      |
|                                                                                   | 36                                                                                                                                                                                                                       |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 37                                                                                                                                                                                                                       | Transmitter Type                |           |                        |                          | Electronic-Smart Type - HART                              |                                                                                     |            |      |                      |
|                                                                                   | 38                                                                                                                                                                                                                       | Adjustable Range Min. / Max.    |           |                        |                          | 0 - 356 mm                                                |                                                                                     |            |      |                      |
|                                                                                   | 39                                                                                                                                                                                                                       | Calibration Range Min. / Max.   |           |                        |                          | 0 - 100%                                                  |                                                                                     |            |      |                      |
|                                                                                   | 40                                                                                                                                                                                                                       | Output Signal                   |           | Power Supply           | 4-20 mA (SMART)          | 24VDC(LOOP POWERED)                                       |                                                                                     |            |      |                      |
|                                                                                   | 41                                                                                                                                                                                                                       | Enclosure Class                 |           | SIL Requirement/Level  | Ex-ia IIB T4             | YES/SIL2                                                  |                                                                                     |            |      |                      |
|                                                                                   | 42                                                                                                                                                                                                                       | Weather Protection              |           |                        |                          | IP65                                                      |                                                                                     |            |      |                      |
|                                                                                   | 43                                                                                                                                                                                                                       | Electrical Connection           |           |                        |                          | M20x1.5                                                   |                                                                                     |            |      |                      |
|                                                                                   | 44                                                                                                                                                                                                                       | Accuracy                        |           |                        |                          | ±0.5 %                                                    |                                                                                     |            |      |                      |
| OPTIONS                                                                           | 45                                                                                                                                                                                                                       | Mounting                        |           |                        |                          | Side mounted                                              |                                                                                     |            |      |                      |
|                                                                                   | 46                                                                                                                                                                                                                       | Housing Material                |           |                        |                          | Die Cast Aluminum                                         |                                                                                     |            |      |                      |
| PURCHASE                                                                          | 47                                                                                                                                                                                                                       | LCD Indicator                   |           |                        |                          | Yes                                                       |                                                                                     |            |      |                      |
|                                                                                   | 48                                                                                                                                                                                                                       | Mounting Position               |           |                        |                          | Left or Right hand(VTC)                                   |                                                                                     |            |      |                      |
|                                                                                   | 49                                                                                                                                                                                                                       | Damping Adjustment              |           |                        |                          | Yes                                                       |                                                                                     |            |      |                      |
|                                                                                   | 50                                                                                                                                                                                                                       | write protection                |           |                        |                          | Yes                                                       |                                                                                     |            |      |                      |
|                                                                                   | 51                                                                                                                                                                                                                       | Manufacturer                    |           |                        |                          | Will be selected later                                    |                                                                                     |            |      |                      |
|                                                                                   | 52                                                                                                                                                                                                                       | Requisition Number              |           |                        |                          | Will be selected later                                    |                                                                                     |            |      |                      |
|                                                                                   | 53                                                                                                                                                                                                                       |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |
|                                                                                   | 54                                                                                                                                                                                                                       |                                 |           |                        |                          |                                                           |                                                                                     |            |      |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

|                                                                                   |                                                                                                                                                                                                                         |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|--------------------------|-------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-------|------|----------------------|
|  | <p align="center"> <b>نگهداشت و افزایش تولید میدان نفتی بینک</b><br/> <b>سطح الارض و ابنیه تحت الارض</b><br/> <b>خرید بسته نم زدای گاز ایستگاه تقویت فشار گاز بینک</b><br/> <b>(قرارداد ۸۰۸-۰۰۱۰-CO-GCS-HD-BK)</b> </p> |                                 |                        |                          |                                                       |          |  |       |      |                      |
|                                                                                   | <b>INSTRUMENT D.S. FOR LEVEL TRANSMITTERS</b>                                                                                                                                                                           |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |
| شماره پیمان:                                                                      |                                                                                                                                                                                                                         | پروژه                           | بسته کاری              | صادر کننده               | تسهیلات                                               | رشته     | نوع مدرک                                                                            | سریال | نسخه | شماره صفحه: ۱۷ از ۱۷ |
| ۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  |                                                                                                                                                                                                                         | BK                              | GCS                    | MF                       | 120                                                   | IN       | DS                                                                                  | 0011  | V00  |                      |
| GENERAL DATA                                                                      | 1                                                                                                                                                                                                                       | Item Number                     | Tag Number             | Quantity                 | 16                                                    |          | D-LIT-2116                                                                          |       | 1    |                      |
|                                                                                   | 2                                                                                                                                                                                                                       | Service                         |                        |                          | V-130                                                 |          |                                                                                     |       |      |                      |
|                                                                                   | 3                                                                                                                                                                                                                       | P & ID No.                      | Page No.               | BK-GCS-MF-120-PR-PI-0003 |                                                       | 4/7      |                                                                                     |       |      |                      |
|                                                                                   | 4                                                                                                                                                                                                                       | Equipment No.                   |                        |                          | V-130                                                 |          |                                                                                     |       |      |                      |
| PROCESS CONDITIONS                                                                | 5                                                                                                                                                                                                                       | Upper Fluid                     | Lower Fluid            | TEG                      |                                                       | TEG      |                                                                                     |       |      |                      |
|                                                                                   | 6                                                                                                                                                                                                                       | Upper Phase                     | Lower Phase            | L                        |                                                       | L        |                                                                                     |       |      |                      |
|                                                                                   | 7                                                                                                                                                                                                                       | Upper Phase Max Pressure (mbar) | Lower Phase Max Hieght | Unit                     |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 8                                                                                                                                                                                                                       | Density / Sp.Gr. Upper          | Density / Sp.Gr. Lower | Unit                     | 981.71                                                | 981.71   | kg/m3                                                                               |       |      |                      |
|                                                                                   | 9                                                                                                                                                                                                                       | Oper. Press.                    | Design Press.          | Unit                     | 0.3/0.6                                               | 4.1/F.V. | barg                                                                                |       |      |                      |
|                                                                                   | 10                                                                                                                                                                                                                      | Oper. Temp.                     | Design Temp.           | Unit                     | 140/204                                               | 5/234    | C                                                                                   |       |      |                      |
|                                                                                   | 11                                                                                                                                                                                                                      | Comply with NACE 0175           | Cold Service           |                          |                                                       | NO       |                                                                                     |       |      |                      |
|                                                                                   | 12                                                                                                                                                                                                                      | Viscosity Upper                 | Viscosity Lower        | Unit                     | 0.67                                                  | 0.67     | cp                                                                                  |       |      |                      |
|                                                                                   | 13                                                                                                                                                                                                                      | Solid in Suspension             | WET GAS                | YES                      |                                                       | NO       |                                                                                     |       |      |                      |
|                                                                                   | 14                                                                                                                                                                                                                      | TOXIC SERVICE                   | SUPER HEAT             | YES                      |                                                       | NO       |                                                                                     |       |      |                      |
|                                                                                   | 15                                                                                                                                                                                                                      | CORROSIVE SERVICE               | NACE REQUIRMENT        | YES                      |                                                       | YES      |                                                                                     |       |      |                      |
|                                                                                   | DISPLACER                                                                                                                                                                                                               | 16                              | LL                     | L                        | 250mm                                                 |          | 350mm                                                                               |       |      |                      |
| 17                                                                                |                                                                                                                                                                                                                         | Type                            |                        |                          | External Chamber                                      |          |                                                                                     |       |      |                      |
| 18                                                                                |                                                                                                                                                                                                                         | Displacer Length / Hanger       |                        |                          | 356 mm / VTA                                          |          |                                                                                     |       |      |                      |
| 19                                                                                |                                                                                                                                                                                                                         | Displacer Material              |                        |                          | 316 SS (NACE)                                         |          |                                                                                     |       |      |                      |
| 20                                                                                |                                                                                                                                                                                                                         | Torque Tube or Spring Material  |                        |                          | INCONEL (VTC)                                         |          |                                                                                     |       |      |                      |
| 21                                                                                |                                                                                                                                                                                                                         | Linkage Material                |                        |                          | Manufacture Standard (VTA)                            |          |                                                                                     |       |      |                      |
| HEAD / CHAMBER (CAGE)                                                             | 22                                                                                                                                                                                                                      |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 23                                                                                                                                                                                                                      | Mounting Style                  |                        |                          | SIDE and SIDE                                         |          |                                                                                     |       |      |                      |
|                                                                                   | 24                                                                                                                                                                                                                      | Vessel Connection               | Upper                  | Flange, 2",300# RF       |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 25                                                                                                                                                                                                                      | (Size and Rating)               | Lower                  | Flange, 2",300# RF       |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 26                                                                                                                                                                                                                      | C to C Dimension                |                        |                          | 356 mm                                                |          |                                                                                     |       |      |                      |
|                                                                                   | 27                                                                                                                                                                                                                      | Head Connection                 |                        |                          | FLANGE (Rotatable)                                    |          |                                                                                     |       |      |                      |
|                                                                                   | 28                                                                                                                                                                                                                      | Vent Connection                 |                        |                          | Thread 3/4" NPT(F) X 3/4" plain half nipple with plug |          |                                                                                     |       |      |                      |
|                                                                                   | 29                                                                                                                                                                                                                      | Drain Connection                |                        |                          | 3/4" 800# RF Ball Valve (ASTM A105/316L SS)           |          |                                                                                     |       |      |                      |
|                                                                                   | 30                                                                                                                                                                                                                      | Flange Face Finish              |                        |                          | 125-250 AARH                                          |          |                                                                                     |       |      |                      |
|                                                                                   | 31                                                                                                                                                                                                                      | Head / Chamber Material         |                        |                          | C.S (NOTE 5)                                          |          |                                                                                     |       |      |                      |
|                                                                                   | 32                                                                                                                                                                                                                      | Gasket Material                 |                        |                          | SPIRAL WOUND / SS 316L / GRAPHITE; 4.5MM(0.18") THK.  |          |                                                                                     |       |      |                      |
|                                                                                   | 33                                                                                                                                                                                                                      | Bolt and Nut Material           |                        |                          | By Other                                              |          |                                                                                     |       |      |                      |
|                                                                                   | 34                                                                                                                                                                                                                      | Jacket Type & Fluid             |                        |                          | N/A                                                   |          |                                                                                     |       |      |                      |
|                                                                                   | 35                                                                                                                                                                                                                      | Fin Extention                   |                        |                          | N/A                                                   |          |                                                                                     |       |      |                      |
| TRANSMITTER                                                                       | 36                                                                                                                                                                                                                      |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 37                                                                                                                                                                                                                      | Transmitter Type                |                        |                          | Electronic-Smart Type - HART                          |          |                                                                                     |       |      |                      |
|                                                                                   | 38                                                                                                                                                                                                                      | Adjustable Range Min. / Max.    |                        |                          | 0 - 356 mm                                            |          |                                                                                     |       |      |                      |
|                                                                                   | 39                                                                                                                                                                                                                      | Calibration Range Min. / Max.   |                        |                          | 0 - 100%                                              |          |                                                                                     |       |      |                      |
|                                                                                   | 40                                                                                                                                                                                                                      | Output Signal                   | Power Supply           | 4-20 mA (SMART)          | 24VDC(LOOP POWERED)                                   |          |                                                                                     |       |      |                      |
|                                                                                   | 41                                                                                                                                                                                                                      | Enclosure Class                 | SIL Requirement/Level  | Ex-ia IIC T4             | YES/SIL2                                              |          |                                                                                     |       |      |                      |
|                                                                                   | 42                                                                                                                                                                                                                      | Weather Protection              |                        |                          | IP65                                                  |          |                                                                                     |       |      |                      |
|                                                                                   | 43                                                                                                                                                                                                                      | Electrical Connection           |                        |                          | M20x1.5                                               |          |                                                                                     |       |      |                      |
|                                                                                   | 44                                                                                                                                                                                                                      | Accuracy                        |                        |                          | ±0.5 %                                                |          |                                                                                     |       |      |                      |
|                                                                                   | 45                                                                                                                                                                                                                      | Mounting                        |                        |                          | Top mounted                                           |          |                                                                                     |       |      |                      |
|                                                                                   | 46                                                                                                                                                                                                                      | Housing Material                |                        |                          | Painted copper free Die Cast Aluminum                 |          |                                                                                     |       |      |                      |
|                                                                                   | 47                                                                                                                                                                                                                      | LCD Indicator                   |                        |                          | Yes                                                   |          |                                                                                     |       |      |                      |
| OPTIONS                                                                           | 48                                                                                                                                                                                                                      | Mounting Position               |                        |                          | Left hand                                             |          |                                                                                     |       |      |                      |
|                                                                                   | 49                                                                                                                                                                                                                      | Damping Adjustment              |                        |                          | Yes                                                   |          |                                                                                     |       |      |                      |
| PURCHASE                                                                          | 50                                                                                                                                                                                                                      | write protection                |                        |                          | Yes                                                   |          |                                                                                     |       |      |                      |
|                                                                                   | 51                                                                                                                                                                                                                      | Manufacturer                    |                        |                          | Will be selected later                                |          |                                                                                     |       |      |                      |
|                                                                                   | 52                                                                                                                                                                                                                      | Requisition Number              |                        |                          | Will be selected later                                |          |                                                                                     |       |      |                      |
|                                                                                   | 53                                                                                                                                                                                                                      |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |
|                                                                                   | 54                                                                                                                                                                                                                      |                                 |                        |                          |                                                       |          |                                                                                     |       |      |                      |

NOTE:

1- Engraved stainless steel corrosion resistant tag nameplate is required for transmitter.

2-Transmitter shall be provided with ground lug

3-Vendor to provide higher grade and proper material for fluid service if required,defined material is minimum requirement.

4-VTA: Vendor to advice. VTC: Vendor to confirm NA:Not Applicable NR: Not Required.

5-limitation for lower nozzle Connection impose to select higher C/C length.