

|                                                                                                  |                                                                                                      |           |           |         |      |          |       |                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------|-----------|---------|------|----------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |           |           |         |      |          |       | <br> |
|                                                                                                  | PROCESS DATA SHEETS FOR GLYCOL TRANSFER PUMPS                                                        |           |           |         |      |          |       |                                                                                                                                                                            |
| شماره پیمان:<br>053 - 073 - 9184                                                                 | پروژه                                                                                                | بسته کاری | صادرکننده | تسهیلات | رشته | نوع مدرک | سریال | نسخه                                                                                                                                                                       |
|                                                                                                  | BK                                                                                                   | GCS       | PEDCO     | 120     | PR   | DT       | 0021  | D03                                                                                                                                                                        |
| شماره صفحه: 1 از 3                                                                               |                                                                                                      |           |           |         |      |          |       |                                                                                                                                                                            |

## طرح نگهداشت و افزایش تولید 27 مخزن

### PROCESS DATA SHEETS FOR GLYCOL TRANSFER PUMPS

#### نگهداشت و افزایش تولید میدان نفتی بینک

|      |          |                           |              |             |              |                 |
|------|----------|---------------------------|--------------|-------------|--------------|-----------------|
|      |          |                           |              |             |              |                 |
|      |          |                           |              |             |              |                 |
| D03  | OCT.2022 | AFC                       | M.Aryafar    | M.Fakharian | M.Mehrshad   |                 |
| D02  | AUG.2022 | IFA                       | M.Aryafar    | M.Fakharian | M.Mehrshad   |                 |
| D01  | FEB.2022 | IFC                       | M.Aryafar    | M.Fakharian | M.Mehrshad   |                 |
| D00  | NOV.2021 | IFC                       | M.Aryafar    | M.Fakharian | M.Mehrshad   |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by: | Checked by: | Approved by: | CLIENT Approval |

Class: 2

CLIENT Doc. Number:

F0Z-708765

status:

**IDC:** Inter-Discipline Check

**IFC:** Issued For Comment

**IFA:** Issued For Approval

**AFD:** Approved For Design

**AFC:** Approved For Construction

**AFP:** Approved For Purchase

**AFQ:** Approved For Quotation

**IFI:** Issued For Information

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

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



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



PROCESS DATA SHEETS FOR GLYCOL TRANSFER PUMPS

شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تسهیلات

120

رشته

PR

نوع مدرک

DT

سریال

0021

نسخه

D03

شماره صفحه: 2 از 3

## REVISION RECORD SHEET

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



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک

سطح الارض

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## PROCESS DATA SHEETS FOR GLYCOL TRANSFER PUMPS

شماره پیمان:

053 - 073 - 9184

پروژه

بسته کاری

صادرکننده

تهیهات

رشته

نوع مدرک

سریال

نسخه

BK

GCS

PEDCO

120

PR

DT

0021

D03

شماره صفحه: 3 از 3

|    |                                                                                                                                                                                  |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------|-------|-----|--|--|--|--|--|-----|
| 1  | Note                                                                                                                                                                             |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  | Rev |
| 2  | <b>GENERAL DATA</b>                                                                                                                                                              |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 3  | Type                                                                                                                                                                             |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 4  | <input checked="" type="checkbox"/> Centrifugal <input type="checkbox"/> Positive displacement                                                                                   |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 5  | Centrifugal <input checked="" type="radio"/> Horizontal <input type="radio"/> Vertical                                                                                           |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 6  | Positive displacement <input type="radio"/> Reciprocating <input type="radio"/> Rotary <input type="radio"/> Metering                                                            |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 7  | Item P-2103 A/B                                                                                                                                                                  | No. of Main/Stand By Units 1 / 1                                                                                                                             |                        |       |       |     |  |  |  |  |  |     |
| 8  | Service Glycol Transfer Pump                                                                                                                                                     | Installation (Indoor-Outdoor-Other) Outdoor                                                                                                                  |                        |       |       |     |  |  |  |  |  |     |
| 9  | Operation <input type="radio"/> Continuous <input checked="" type="radio"/> Discontinuous <input type="radio"/> Parallel <input checked="" type="radio"/> Single                 |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 10 | Type of Driver                                                                                                                                                                   | Electrical Motor                                                                                                                                             |                        |       |       |     |  |  |  |  |  |     |
| 11 | <b>CHARACTERISTICS OF HANDLED LIQUID</b>                                                                                                                                         |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 12 | Type of Handled Liquid                                                                                                                                                           | TEG                                                                                                                                                          |                        |       |       |     |  |  |  |  |  |     |
| 13 | Pumping Temp.e (Min./Max.)                                                                                                                                                       | °C                                                                                                                                                           | 5 / 50                 |       |       |     |  |  |  |  |  |     |
| 14 | Density at Min. / Norm / Max. Temp.                                                                                                                                              | kg/m³                                                                                                                                                        | / 1115 /               |       |       |     |  |  |  |  |  |     |
| 15 | Viscosity At Min. Temp.                                                                                                                                                          | cP                                                                                                                                                           | 85.86                  |       |       |     |  |  |  |  |  |     |
| 16 | Vapour Pressure at Max. Pumping Temp.                                                                                                                                            | bara                                                                                                                                                         | 0                      |       |       |     |  |  |  |  |  |     |
| 17 | Freezing Point / Pour Point                                                                                                                                                      | °C                                                                                                                                                           | -4.3                   |       |       |     |  |  |  |  |  |     |
| 18 | Dissolved Gas                                                                                                                                                                    | Yes-No                                                                                                                                                       | No                     |       |       |     |  |  |  |  |  |     |
| 19 | Corrosive / Erosive / Hazardous Agents / Flammable                                                                                                                               | Yes-No                                                                                                                                                       | No /                   | No /  | Yes / | No  |  |  |  |  |  |     |
| 20 | Suspended solids (Type / Dimen. / Vol.%)                                                                                                                                         | mm                                                                                                                                                           | N/A /                  | N/A / | /     | N/A |  |  |  |  |  |     |
| 21 | <b>OPERATING CONDITIONS</b>                                                                                                                                                      |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 22 | Suction Pressure (Min/ Max.)                                                                                                                                                     | barg                                                                                                                                                         | 0.07 / 0.49            |       |       |     |  |  |  |  |  |     |
| 23 | Discharge Pressure at Rated Capacity                                                                                                                                             | barg                                                                                                                                                         | 2.07                   |       |       |     |  |  |  |  |  |     |
| 24 | Differential Pressure at Rated Capacity                                                                                                                                          | bar                                                                                                                                                          | 2.00                   |       |       |     |  |  |  |  |  |     |
| 25 | Capacity (Min. / Normal / Rated)                                                                                                                                                 | m³/hr                                                                                                                                                        | /                      | 5     | /     | 5.5 |  |  |  |  |  |     |
| 26 | Head at Rated Capacity                                                                                                                                                           | m                                                                                                                                                            | 18.3                   |       |       |     |  |  |  |  |  |     |
| 27 | NPSH Available                                                                                                                                                                   | m                                                                                                                                                            | 9.9                    |       |       |     |  |  |  |  |  |     |
| 28 | Max Allowable Pressure at Shut-Off                                                                                                                                               | barg                                                                                                                                                         | 3.10                   |       |       |     |  |  |  |  |  |     |
| 29 | Hydraulic Power                                                                                                                                                                  | kW                                                                                                                                                           | 0.3                    |       |       |     |  |  |  |  |  |     |
| 30 | Reacceleration                                                                                                                                                                   | Yes-No                                                                                                                                                       | No                     |       |       |     |  |  |  |  |  |     |
| 31 | Automatic Start-Up                                                                                                                                                               | Yes-No                                                                                                                                                       | No                     |       |       |     |  |  |  |  |  |     |
| 32 | Start-Up with Delivery Valve <input checked="" type="radio"/> Open <input type="radio"/> Close                                                                                   |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 33 | Flow Controlled By <input type="radio"/> Pressure Controller <input type="radio"/> Level Controller <input type="radio"/> Flow Controller <input checked="" type="radio"/> Other |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 34 | <b>DESIGN CONDITIONS</b>                                                                                                                                                         |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 35 | Design Temperature: Min / Max                                                                                                                                                    | °C                                                                                                                                                           | 5 / 85                 |       |       |     |  |  |  |  |  |     |
| 36 | Design Pressure                                                                                                                                                                  | barg                                                                                                                                                         | 3.10                   |       |       |     |  |  |  |  |  |     |
| 37 | <b>MECHANICAL DATA</b>                                                                                                                                                           |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 38 | Contamination of Liquid Handled Allowed                                                                                                                                          | Yes-No                                                                                                                                                       | Yes                    |       |       |     |  |  |  |  |  |     |
| 39 | Air Entrainment Allowed                                                                                                                                                          | Yes-No                                                                                                                                                       | Yes                    |       |       |     |  |  |  |  |  |     |
| 40 | Leaks Allowed                                                                                                                                                                    | Yes-No                                                                                                                                                       | Yes                    |       |       |     |  |  |  |  |  |     |
| 41 | Antifreezing Protection                                                                                                                                                          | Yes-No                                                                                                                                                       | No                     |       |       |     |  |  |  |  |  |     |
| 42 | Suction Line: Diameter                                                                                                                                                           | in                                                                                                                                                           | 2"                     |       |       |     |  |  |  |  |  |     |
| 43 | Discharge Line: Diameter                                                                                                                                                         | in                                                                                                                                                           | 2"                     |       |       |     |  |  |  |  |  |     |
| 44 | Mat. in Contact with Liq. Handled (Min.)                                                                                                                                         |                                                                                                                                                              | API 610, Cl. S-8 Note2 |       |       |     |  |  |  |  |  |     |
| 45 | <b>Note</b>                                                                                                                                                                      |                                                                                                                                                              |                        |       |       |     |  |  |  |  |  |     |
| 46 | 1                                                                                                                                                                                | Deleted                                                                                                                                                      |                        |       |       |     |  |  |  |  |  |     |
| 47 | 2                                                                                                                                                                                | (Vendor to confirm)                                                                                                                                          |                        |       |       |     |  |  |  |  |  |     |
| 48 | 3                                                                                                                                                                                | Deleted                                                                                                                                                      |                        |       |       |     |  |  |  |  |  |     |
| 49 | 4                                                                                                                                                                                | API Plan 11 shall be considered. (Vendor to confirm)                                                                                                         |                        |       |       |     |  |  |  |  |  |     |
| 50 | 5                                                                                                                                                                                | Margin between NPSHA and NPSHR shall not be less than 1 m.                                                                                                   |                        |       |       |     |  |  |  |  |  |     |
| 51 | 6                                                                                                                                                                                | Refer to hazardous area classification layout, all instrumentation and electrical devices shall be suitable for: ZONE 2 & Gas groupIIA, Temperature class T4 |                        |       |       |     |  |  |  |  |  |     |
| 52 | 7                                                                                                                                                                                | For P&ID refer to BK-GCS-PEDCO-120-PR-PI-0014                                                                                                                |                        |       |       |     |  |  |  |  |  |     |
| 53 | 8                                                                                                                                                                                | Minimum Design Metal Tem (MDMT)= 5                                                                                                                           |                        |       |       |     |  |  |  |  |  |     |
| 54 | 9                                                                                                                                                                                | Applicable standard: ISO 5199 and IPS-M-PM-115                                                                                                               |                        |       |       |     |  |  |  |  |  |     |

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