

## نگهداشت و افزایش تولید میدان نفتی بینک سطحالارض

# شرکت توسد سروابرا<sup>ن</sup>





## احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

| شماره پیمان:     | پروژه | بسته کاری | صادر كننده | تسهيلات | رشته | نوع مدرك | سريال | نسخه |
|------------------|-------|-----------|------------|---------|------|----------|-------|------|
| •۵۳ - •۷۳ - ٩١٨۴ | BK    | GCS       | PEDCO      | 120     | EL   | DT       | 0004  | D03  |

شماره صفحه: ۱ از ۱۰

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

 D
 R
 M
 M
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B
 B

| D02 | Apr.2023 | AFC                                     | H.Shakiba   | M.Fakharian | A.M.Mohseni |  |
|-----|----------|---|-------------|-------------|-------------|--|
| D02 | Jul.2022 | IFA                                     | H.Shakiba   | M.Fakharian | M.Mehrshad  |  |
| D01 | Mar.2022 | IFA                                     | H.Shakiba   | M.Fakharian | M.Mehrshad  |  |
| D00 | Dec.2021 | IFC                                     | H.Shakiba   | M.Fakharian | M.Mehrshad  |  |
| R   | D        | or-000000000000000000000000000000000000 | oroorod moo |             |             |  |
|     |          |   | □□1         |             |             |  |

 $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$ 

□□□□As-Built –Approved





#### **NISOC**

### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

| NISOC           |              | Dacomacacama Rimacacam a maiMama maaaaaR |           |            |         |      |          |       |      |  |
|-----------------|--------------|--|-----------|------------|---------|------|----------|-------|------|--|
|                 | شماره پیمان: | پروژه                                    | بسته کاری | صادر کننده | تسهيلات | رشته | نوع مدرك | سريال | نسخه |  |
| ۱۸۶ – ۲۷۰ – ۲۵۰ |              | BK                                       | GCS       | PEDCO      | 120     | EL   | DT       | 0004  | D03  |  |

شماره صفحه: ۲ از ۱۰

| F |  |  |  | $\square$ $\square$ RD |  |
|---|--|--|--|------------------------|--|
|---|--|--|--|------------------------|--|

| Roommore |          |     |     |     |     |  |  |  |  |  |
|----------|----------|-----|-----|-----|-----|--|--|--|--|--|
| Page     | D00      | D01 | D02 | D03 | D04 |  |  |  |  |  |
| 1        | Х        | Х   | Х   | Х   |     |  |  |  |  |  |
| 2        | Х        | Х   | Х   | Х   |     |  |  |  |  |  |
| 3        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 4        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 5        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 6        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 7        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 8        | Х        | Х   | Х   |     |     |  |  |  |  |  |
| 9        |          | Х   | Х   |     |     |  |  |  |  |  |
| 10       |          | Х   | Х   |     |     |  |  |  |  |  |
| 11       |          |     |     |     |     |  |  |  |  |  |
| 12       |          |     |     |     |     |  |  |  |  |  |
| 13       |          |     |     |     |     |  |  |  |  |  |
| 14       |          |     |     |     |     |  |  |  |  |  |
| 15       |          |     |     |     |     |  |  |  |  |  |
| 16       |          |     |     |     |     |  |  |  |  |  |
| 17       |          |     |     |     |     |  |  |  |  |  |
| 18       |          |     |     |     |     |  |  |  |  |  |
| 19       |          |     |     |     |     |  |  |  |  |  |
| 20       |          |     |     |     |     |  |  |  |  |  |
| 21       |          |     |     |     |     |  |  |  |  |  |
| 22       |          |     |     |     |     |  |  |  |  |  |
| 23       |          |     |     |     |     |  |  |  |  |  |
| 24       |          |     |     |     |     |  |  |  |  |  |
| 25       |          |     |     |     |     |  |  |  |  |  |
| 26       |          |     |     |     |     |  |  |  |  |  |
| 27       |          |     |     |     |     |  |  |  |  |  |
| 28       |          |     |     |     |     |  |  |  |  |  |
| 29       |          |     |     |     |     |  |  |  |  |  |
| 30       |          |     |     |     |     |  |  |  |  |  |
| 31       |          |     |     |     |     |  |  |  |  |  |
| 32       |          |     |     |     |     |  |  |  |  |  |
| 33       |          |     |     |     |     |  |  |  |  |  |
| 34       |          |     |     |     |     |  |  |  |  |  |
| 35       |          |     |     |     |     |  |  |  |  |  |
| 36       |          |     |     |     |     |  |  |  |  |  |
| 37       |          |     |     |     |     |  |  |  |  |  |
| 38       |          |     |     |     |     |  |  |  |  |  |
| 39       |          |     |     |     |     |  |  |  |  |  |
| 40       |          |     |     |     |     |  |  |  |  |  |
| 41       |          |     |     |     |     |  |  |  |  |  |
| 42       |          |     |     |     |     |  |  |  |  |  |
| 43       |          |     |     |     |     |  |  |  |  |  |
| 44       |          |     |     |     |     |  |  |  |  |  |
| 45       |          |     |     |     |     |  |  |  |  |  |
| 45       |          |     |     |     |     |  |  |  |  |  |
| 47       |          |     |     |     |     |  |  |  |  |  |
| 47       |          |     |     |     |     |  |  |  |  |  |
| 48       |          |     |     |     |     |  |  |  |  |  |
| 50       |          |     |     |     |     |  |  |  |  |  |
| DU       | <u> </u> |     | l   |     |     |  |  |  |  |  |

| RD   |     | 1   |     | 1   | 1   |
|------|-----|-----|-----|-----|-----|
| Page | D00 | D01 | D02 | D03 | D04 |
| 51   |     |     |     |     |     |
| 52   |     |     |     |     |     |
| 53   |     |     |     |     |     |
| 54   |     |     |     |     |     |
| 55   |     |     |     |     |     |
| 56   |     |     |     |     |     |
| 57   |     |     |     |     |     |
| 58   |     |     |     |     |     |
| 59   |     |     |     |     |     |
| 60   |     |     |     |     |     |
| 61   |     |     |     |     |     |
| 62   |     |     |     |     |     |
| 63   |     |     |     |     |     |
| 64   |     |     |     |     |     |
| 65   |     |     |     |     |     |
| 66   |     |     |     |     |     |
| 67   |     |     |     |     |     |
| 68   |     |     |     |     |     |
| 69   |     |     |     |     |     |
| 70   |     |     |     |     |     |
| 71   |     |     |     |     |     |
| 72   |     |     |     |     |     |
| 73   |     |     |     |     |     |
| 74   |     |     |     |     |     |
| 75   |     |     |     |     |     |
| 76   |     |     |     |     |     |
| 77   |     |     |     |     |     |
| 78   |     |     |     |     |     |
| 79   |     |     |     |     |     |
| 80   |     |     |     |     |     |
| 81   |     |     |     |     |     |
| 82   |     |     |     |     |     |
| 83   |     |     |     |     |     |
| 84   |     |     |     |     |     |
| 85   |     |     |     |     |     |
| 86   |     |     |     |     |     |
| 87   |     |     |     |     |     |
| 88   |     |     |     |     |     |
| 89   |     |     |     |     |     |
| 90   |     |     |     |     |     |
| 91   |     |     |     |     |     |
| 92   |     |     |     |     |     |
| 93   |     |     |     |     |     |
| 94   |     |     |     |     |     |
| 95   |     |     |     |     |     |
| 96   |     |     |     |     |     |
| 97   |     |     |     |     |     |
| 98   |     |     |     |     |     |
| 99   |     |     |     |     |     |
| 100  |     |     |     |     |     |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





| NISOC        |       |           |            |         |      |          |       |  |
|--------------|-------|-----------|------------|---------|------|----------|-------|--|
| شماره پیمان: | پروژه | بسته کاری | صادر كننده | تسهيلات | رشته | نوع مدرک | سريال |  |
| سهاره پیمان. | BK    | GCS       | PEDCO      | 120     | EL   | DT       | 0004  |  |
|              |       |           |            |         |      |          |       |  |

|        |        | شه کاری پروژه<br>BK GCS   | سريال نوع مدر ك رشته تسهيلات صادر كننده به PEDCO 120 EL DT 0004   | سماره صفحه: ۱۳ز ۱۰<br>شماره صفحه: ۱۰ز |  |  |  |
|--------|--------|---|---|---------------------------------------|--|--|--|
|        |        |   |   | 565                                   |  |  |  |
|        |        |   | Technical Data For Expansion of 11 KV MV Switchgear   |                                       |  |  |  |
| Rev    | Item   | Description   | Required  | Vendor Data                           |  |  |  |
|        |        | tal Data  |   |                                       |  |  |  |
| D00    |        | Name of Project / Plant   | Binak Oilfield in Bushehr Province  | Confirmed                             |  |  |  |
| D02    |        | Ambient Temperature (Min/Max)   | Min ~ Max: +5 ~ +52°C   | Confirmed                             |  |  |  |
| D00    |        | Max.Design Temperature:  Max. Sun Temperature:  | 50 °c<br>+ 85 °c  | Confirmed<br>Confirmed                |  |  |  |
| D00    |        | Max.Relative Humidity:  | 100%  | Confirmed                             |  |  |  |
| D00    |        | Mean Sea Level:   | 12.5 m Above Sea Level  | Confirmed                             |  |  |  |
| D00    | _      | Seismic Factor:   | 0.3g  | Confirmed                             |  |  |  |
| D00    | 1.8    | Max. Wind Velocity(Max)   | 120 km/hr   | Confirmed                             |  |  |  |
| 2-Swit | chgear | •   |   |                                       |  |  |  |
| D00    | 2.1    | Manufacturer  | By Vendor   | Partableau/DNF4                       |  |  |  |
| D00    | 2.2    | Standard(s)   | IPS-M-EL-144(4), IPS-E-EL-100(1),<br>BK-GNRAL-PEDCO-000-EL-SP-0005  | Confirmed                             |  |  |  |
| D00    | 2.3    | Quantity  | 8 Feeders of Ougoing, Type C2 & C3  | Confirmed                             |  |  |  |
| D00    | _      | Service   | Expansion of Exsiting MV Switchgear from Both Side  | Confirmed                             |  |  |  |
| D00    | 2.5    | Tag Number  | GCS-11-SWG-001A/B   | Confirmed                             |  |  |  |
| D00    | 2.6    | Applicable SLD  | BK-GCS-PEDCO-120-EL-SL-0001<br>BK-GCS-PEDCO-120-EL-SL-0003<br>BK-GCS-PEDCO-120-EL-DG-0001                                       | Confirmed                             |  |  |  |
| D00    | _      | Location  | Indoor  | Confirmed                             |  |  |  |
| D00    | _      | Type and Construction   | Metal Clad, Withdrawable  | Confirmed                             |  |  |  |
| D01    |        | Rated Voltage & Variation   | 11 kV ± 10 %  | Confirmed                             |  |  |  |
| D00    | _      | Rated Frequency & Variation   | 50 Hz ± 5 %   | Confirmed                             |  |  |  |
| D00    |        | No. of Phases   | 3 PH  | Confirmed                             |  |  |  |
| D02    | 2.12   | Rated Insulation Levels between earth and phase  One Minute Power Frequency  Withstand Voltage (RMS)  One Minute Power Frequency  Withstand Voltage of Aux. Circuit (RMS)  Impulse Withstand Voltage (Peak) | 28 KV<br>75 KV<br>2 KV  | Confirmed                             |  |  |  |
| D00    | 2.13   | Rated Normal Current of Busbars   | 1600 A  | Confirmed                             |  |  |  |
| D01    | 2.14   | Rated Short Time Current of Busbar  | 25 kA; 1 sec (Note 9.2)   | Confirmed                             |  |  |  |
| D00    |        | Rated Peak Withstand Current  | 63 kA   | Confirmed                             |  |  |  |
| D01    | 2.16   | Busbars:  • Material  • Main Horizontal Bus Cross Section Area  • Main Vertical Bus Cross Sectional Area  • Earth Bus Cross Sectional Area  • Busbars Color & Joints  | Copper (Flame Retardant Non-Hygroscopic)<br>Vendor to Advise<br>Vendor to Advise<br>Vendor to Advise<br>Silver Plated           | Confirmed                             |  |  |  |
| D00    | 2.17   | Maximum Tolerable Temperature Rise  | Acc. to IEC62271  | Confirmed                             |  |  |  |
| D00    | 2.18   | Rated Voltage for Control And Protection Circuits   | IPS-M-EL-144(4)<br>110 V DC   | Confirmed                             |  |  |  |
| D00    |        | Rated Voltage for Space Heaters and Panel Lighting  | 400 / 230 VAC   | Confirmed                             |  |  |  |
| D00    | 2.20   | Enclosure   | Withdrawable Metal Clad, Compartmented  | Confirmed                             |  |  |  |
| D01    | 2.21   | Degree of Protection by Enclosure   | External: IP 42, Internal: IP 20, Internal partitions between functional units and shutters for bus bar & cable side: IP 4X     | Confirmed                             |  |  |  |
| D00    | 2.22   | Installation  | Floor Self-Standing, Side by Side   | Confirmed                             |  |  |  |
| D00    |        | Rear / Front Access   | Rear and Front Access   | Confirmed                             |  |  |  |
| D00    |        | Top / Bottom Cable Entry  | Cables: Bottom Entry  | Confirmed                             |  |  |  |
| D00    |        | Sheet Steel Thickness, Fram & Walls   | Minimum 2.5 mm  | Minimum 2mm                           |  |  |  |
| D00    |        | Paint Color finish  | Electrostatic Powder  RAL 7032  | Confirmed<br>Confirmed                |  |  |  |
| D00    |        | Routine Tests   | RAL 7032  Required (Withstand tests and reports as per IEC 62271-200 or IEC 298, IEC 60694, IPS-M-EL-144 (4) and Specification) | Confirmed                             |  |  |  |
| D00    |        | Type Tests  | Test certificates of the SWGR type as per IEC62271-200 or IEC 298, IEC60694, and IPS-M-EL-144 (4)                               | Confirmed                             |  |  |  |
| D00    | _      | Overall Dimensions (HxWxD) [mm]   | Vendor to Advise  | Acc To Tech Offer                     |  |  |  |
| D00    | _      | Total Weight [kg]   | Vendor to Advise  | Acc To Tech Offer                     |  |  |  |
| D00    | _      | Overall Dimensions of 1 Cubicle (HxWxD)   | Vendor to Advise  | Acc To Tech Offer                     |  |  |  |
| D00    | _      | Dynamic Load of One Cubicle [kg]  Breaker   | Vendor to Advise  | Acc To Tech Offer                     |  |  |  |
| D00    |        | Manufacturer  | Vendor to Advise  | Hwundai/South Korea                   |  |  |  |
| D00    | _      | Standard  | IEC62271-100  | Hyundai/South Korea  Confirmed        |  |  |  |
| D00    |        | Туре  | Vacuum  | Confirmed                             |  |  |  |
| D00    | _      | Fixed/ Withdrawable   | Withdrawable  | Confirmed                             |  |  |  |
| D02    |        | Rated Voltage   | 12 kV ± 10 %  | Confirmed                             |  |  |  |
| D00    | 3.6    | Rated Frequency   | 50 Hz ± 5 %   | Confirmed                             |  |  |  |
|        |        |   |   |                                       |  |  |  |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





 Document R

 R
 M
 R

 نسخه
 سریال
 نیخ مدر ک
 رشته
 تسهیلات
 صادر کتنده
 بیته کاری
 پروژه

 BK
 GCS
 PEDCO
 120
 EL
 DT
 0004
 D03

شماره صفحه: ٤ از ١٠

|     |      | ВК   | GCS                                | PEDCO            | 120              | EL  | DT          | 0004        | D03       |                           |  |  |
|-----|------|--|------------------------------------|------------------|------------------|---|-------------|-------------|-----------|---------------------------|--|--|
|     |      |  | Т                                  | Fechnical Data I | For Expansion    | of 11 KV !                                    | MV Switchge | ar          |           |                           |  |  |
| Rev | Item | Description  |                                    | Required         |                  |   |             |             |           | Vendor Data               |  |  |
| D00 | 3.7  | No. Of Phases and Poles  |                                    |                  |                  | 3-Phase                                       |             |             |           | Confirmed                 |  |  |
| D00 | 3.8  | Rated Insulation Levels between earth and phase • One Minute Power Frequency Withstand Voltage (RMS) • One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS) • Impulse Withstand Voltage (Peak) |                                    |                  |                  | 28 KV<br>2 KV<br>75 KV                        |             |             |           | Confirmed                 |  |  |
| D00 | 3.9  | Rated Normal Current   |                                    | 630 A            |                  |   |             | Confirmed   |           |                           |  |  |
| D00 |      | Rated Short Time Current   |                                    |                  |                  | 25 kA   |             |             |           | Confirmed                 |  |  |
| D00 | 3.11 | Rated Peak Withstand Current   |                                    |                  |                  | 62.5 kA                                       |             |             |           | Confirmed                 |  |  |
| D00 | 3.12 | Rated Short Circuit Breaking Current   |                                    |                  | Vend             | dor to Adv                                    | ise         |             |           | Acc To Catalog            |  |  |
| D00 | 3.13 | Rated Short Circuit Making Current   |                                    |                  | Vend             | dor to Adv                                    | ise         |             |           | Acc To Catalog            |  |  |
| D00 |      | Maximum Tolerable Temperature Rise   |                                    |                  |                  | IEC62271                                      |             |             |           | Confirmed                 |  |  |
| D00 |      | Design Temperature Rise  |                                    |                  |                  | IEC62271                                      |             |             |           | Confirmed                 |  |  |
| D00 |      | Operating Mechanism<br>Release type  |                                    | Motor & Hand     | l operated Sprin |   | Stored Ener | gy Mechanis | m         | Confirmed Confirmed       |  |  |
| D00 |      | Rated Operating Sequence   |                                    |                  |                  | hunt Trip<br>S-CO-3MIN                        | I-CO        |             |           | Confirmed                 |  |  |
| D00 |      | Rated Voltage of Auxiliary Equipment   |                                    |                  |                  | 110V DC                                       |             |             |           | Confirmed                 |  |  |
| D00 |      | Rated Operating Voltage of Releases  |                                    |                  |                  | 110V DC                                       |             |             |           | Confirmed                 |  |  |
| D00 |      | Rated Operating Voltage of Charging Motors   |                                    |                  |                  | 110V DC                                       |             |             |           | Confirmed                 |  |  |
| D00 | 3.22 | Voltage Tolerances for Auxiliary Apparatus:  • Trip Circuit  • Close Circuit  • Motor Running  • Motor at the Instant of Start   |                                    |                  | 8!<br>8!         | 0%-110%<br>5%-110%<br>5%-110%<br>0%-110%      |             |             |           | Confirmed                 |  |  |
| D00 | 3.23 | Power consumption of Auxiliary Apparatus:[W] • Trip Circuit • Closed Circuit • Charging motor • Under voltage release • Multifunction relay • Transducers  |                                    |                  |                  | 110V DC<br>dor to Adv                         | ise         |             |           | Confirmed                 |  |  |
| D00 | 3.24 | 1 C.B. Open/Close Auxiliary Contacts:  • No. Of Make Contacts  • No. Of Break Contacts  • Rated Voltage  • Rated Current at 110V DC  • Breaking Current at 110V DC   | cts 6 6 110V DC VTA at 110V DC VTA |                  |                  |   |             |             | Confirmed |                           |  |  |
| D00 | 3.25 | Truck Position Auxiliary Contacts:  No of Make Contacts  No of Break Contacts  Rated Voltage  Rated Current at 110V DC  Breaking Current at 110V DC  |                                    |                  | 1                | NO + 1NC<br>NO + 1NC<br>110V DC<br>VTA<br>VTA |             |             |           | Confirmed                 |  |  |
| D00 | 3.26 | Routine Tests  |                                    |                  | IEC              | 62271-10                                      | 0           |             |           | Confirmed                 |  |  |
| D00 |      | Type Tests   |                                    |                  | IEC              | 62271-10                                      | 0           |             |           | Confirmed                 |  |  |
|     |      | Transformers   |                                    |                  |                  | ,   |             |             |           | D 01 11                   |  |  |
| D00 |      | Manufacturers Name   |                                    |                  |                  | dor to Adv                                    |             |             |           | Pars Shar/Iran            |  |  |
| D00 | 4.2  | Standard<br>Type   |                                    |                  |                  | C60044-2<br>xy Cast Res                       |             |             | -         | Confirmed Confirmed       |  |  |
| D00 |      | Fixed Withdrawable   |                                    |                  |                  | thdrawabl                                     |             |             |           | Tilting                   |  |  |
| D00 |      | Highest System Voltage   |                                    |                  |                  | 12 kV   |             |             |           | Confirmed                 |  |  |
| D00 |      | Rated Frequency  |                                    |                  |                  | 50 Hz   |             |             |           | Confirmed                 |  |  |
| D00 | 4.7  | No. of Phase   |                                    |                  | Sin              | ngle Phase                                    |             |             |           | Confirmed                 |  |  |
| D00 |      | Rated Primary Voltage [kV]   |                                    |                  |                  | 11/√3 kV                                      |             |             |           | Confirmed                 |  |  |
| D00 | 4.9  | Rated Secondary Voltage [V]  |                                    |                  |                  | 110/√3 V                                      |             |             |           | Confirmed                 |  |  |
| D00 | 4.10 | Rated Insulation Levels between earth and phase  One Minute Power Frequency Withstand Voltage (RMS) One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)                                       |                                    |                  | 2                | 8 kV / √3<br>2 kV / √3<br>5 kV / √3           |             |             |           | Confirmed                 |  |  |
|     |      | Impulse Withstand Voltage (Peak)   |                                    |                  |                  |   |             |             |           |                           |  |  |
| D00 |      | System Earthing  |                                    |                  |                  | TNS   |             |             |           | Confirmed                 |  |  |
| D00 |      | Rated Voltage Factor   |                                    |                  |                  | dor to Adv                                    |             |             | _         | Acc To Catalog            |  |  |
| D00 |      | Rated Burden  Accuracy Class: • for Protection (with separate Winding) • for Measuring (with separate Winding)   |                                    |                  | Venc             | CL. 3P<br>1.0                                 | ise         |             |           | Acc To Catalog  Confirmed |  |  |
| D00 | 4.15 | Insulation Class & Temperature Rise  |                                    |                  | Class E, T       | emp. Rise                                     | Class Y     |             |           | Confirmed                 |  |  |
|     |      |  |                                    |                  |                  |   |             |             |           |                           |  |  |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





NISOC

 D
 R

 سریال
 نوع مدر ک
 رشته
 نسهیلات
 صادر کننده
 بسته کاری
 پروژه
 شماره پیمان:

 BK
 GCS
 PEDCO
 120
 EL
 DT
 0004
 D03

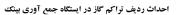
شماره صفحه: ٥ از ١٠

|   |  | معدره پیسی.  | BK             | GCS  | PEDCO   | 120 EL  | DT                                    | 0004          | D03                 | سماره صفحه: ۱۰ ۱۰  |  |  |  |
|---|--|--|----------------|--|---|---|---------------------------------------|---------------|---------------------|--|--|--|--|
|   |  |  |                | Т  | echnical Data For I   | xpansion of 11 KV   | MV Switchgea                          | ar            |                     |  |  |  |  |
| Rev                                     | Item   | Description  |                |  |   | Required  | <u> </u>                              |               |                     | Vendor Data  |  |  |  |
|   |  | t Transformers   |                |  |   |   |                                       |               |                     |  |  |  |  |
| D00                                     |  | Manufacturer's Name  |                |  |   | Vendor to Ad  | vise                                  |               |                     | Pars Shar/Iran   |  |  |  |
| D00                                     | 5.2  | Standard   |                |  |   | IEC60044-   | 1                                     |               | Confirmed           |  |  |  |  |
| D00                                     | 5.3  | Туре   |                |  |   | Dry Туре  |                                       |               | Confirmed           |  |  |  |  |
| D00                                     | 5.4  | Highest System Voltage   |                |  |   | 11 kV   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 5.5  | Rated Frequency  |                |  |   | 50 Hz   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     |  | Rated Secondary Current:   |                |  |   | 1 A / 5 A Accordin  | g to SLD                              |               |                     | Confirmed  |  |  |  |
| D00                                     | 5.7  | Rated Continuous Thermal Current:  |                |  |   | 1.2 x Rated primar  |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     |  | Rated Short Time, Current:   |                |  |   | 25 kA, 1 Se   | C                                     |               |                     | Confirmed  |  |  |  |
| D00                                     | _  | Rated Dynamic Current:   |                |  |   | 63 kA   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     |  | Rated Burden Rated Transformation Ratio and No. of Core  |                |  | Α.  | Vendor to Ad  |                                       |               |                     | Acc To Catalog   |  |  |  |
| DUU                                     | 5.11   |  | es             |  | A   | ccording to Single L  |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 5 1 2  | Accuracy Class:  • Measuring   |                |  |   | Class 1: Class<br>Class X: where r  |                                       |               |                     | Confirmed  |  |  |  |
| DOO                                     | 3.12   | • Protection   |                |  |   | Class 5P20 prot   |                                       |               |                     | Commined   |  |  |  |
| D00                                     | 5.13   | Routine Tests  |                |  |   | IEC60044  | 1                                     |               |                     | Confirmed  |  |  |  |
| D00                                     |  | Type Tests   |                |  |   | IEC60044-   |                                       |               |                     | Confirmed  |  |  |  |
|   |  | Rated Insulation Levels between earth and  | phase          |  |   | 28 kV / √   | 3                                     |               |                     |  |  |  |  |
|   |  | One Minute Power Frequency   |                |  |   | 2111/6  |                                       |               |                     |  |  |  |  |
| D01                                     | 5.15   | Withstand Voltage (RMS)  • One Minute Power Frequency  |                |  |   | 2 kV / √3   |                                       |               |                     | Confirmed  |  |  |  |
|   |  | Withstand Voltage of Aux. Circuit (RMS)  |                |  |   | 75 kV / √   | 3                                     |               |                     |  |  |  |  |
|   |  | Impulse Withstand Voltage (Peak)   |                |  |   |   |                                       |               |                     |  |  |  |  |
| 6.Earth                                 |  |  |                |  |   |   |                                       |               |                     |  |  |  |  |
| D00                                     | _  | Manufacturer's Name  |                | -  |   | Vendor to Ad  |                                       |               |                     | Parstableau/Iran<br>Manual   |  |  |  |
| D00                                     | 6.2  | Manufacturer's Type Designation  |                |  |   | Vendor to Ad<br>IEC62271-1  |                                       |               |                     |  |  |  |  |
| D00                                     | 6.3  |  |                |  |   | Make Prod   |                                       |               | _                   | Confirmed Confirmed  |  |  |  |
| D00                                     | 6.5  |  |                |  | 3   |   |                                       |               |                     |  |  |  |  |
| D00                                     | _  |  |                |  |   | 50 Hz   |                                       |               | Confirmed Confirmed |  |  |  |  |
| D00                                     | 6.7  |  |                |  |   | 11 kV   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | _  |  |                |  |   | 75 kV   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.9  | Rated 1 Minute Power Frequency Voltage   |                |  |   | 28 kV   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.10   | Rated Short Time (1s) Current  |                |  |   | 25 kA   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.11   | Rated Peak Withstand Current   |                |  |   | 62.5 kA   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.12   | Rated Short Circuit Making Current   |                |  |   | 62.5 kA   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.13   | Actuation Mechanism  | nanism         |  |   | Pre-tension S   | oring                                 |               |                     | Confirmed  |  |  |  |
| D00                                     |  | No. of Auxiliary Contacts (Min.)   |                |  | 2NO + 2NC   |   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | _  | Aux. Contacts Rated Voltage  |                |  | 110V DC   |   |                                       |               |                     | Confirmed  |  |  |  |
| D00                                     | 6.16   | Aux. Contacts Rated Current  |                |  | 1A  |   |                                       |               |                     | Confirmed  |  |  |  |
|   |  | 7 Interlocks   |                |  | According (but not limited) to Appendix B of IPS-M-EL-144 (4) specifically:  To prevent closure of Earth Switch when CB is not in Test or withdraw position  To prevent Insertion of CB when Earth Switch is connected.  To prevent connection of Earth Switch when upstream Switch is not open i.e. electromagnetic coil (only for incoming) |   |                                       |               |                     | Confirmed  |  |  |  |
|   |  | Routine Tests  |                |  |   | IEC62271-1  |                                       |               |                     | Confirmed  |  |  |  |
|   |  | Type Tests (Certificates)  |                |  |   | IEC62271-1  | 02                                    |               |                     | Confirmed  |  |  |  |
|   |  | der Protection Relay  Manufacturer's Name  |                | ı  |   | Vandanta A  | vica                                  |               |                     | Schneider/France   |  |  |  |
| D00                                     | 7.1  | Manufacturer's Name Manufacturer's Type Designation  |                |  |   | Vendor to Ad  |                                       |               | -                   | P3M32 & P3U20  |  |  |  |
| D00                                     |  | Type   |                |  | Digital Multi-Eu  | nction Relay + Disp   |                                       | ment Menu     |                     | Confirmed  |  |  |  |
| D00                                     |  | Installation   |                |  | Digital Multi-Fu  |   |                                       | ciic mellu    | -                   | Confirmed  |  |  |  |
| D02                                     |  |  | 50 51 46 51I P | Flush Mounted 50, 51, 46, 51LR, 49, 66, 50G, 51G, 26, 87M, 86 (Separate Relay) |   |   | -                                     |               |                     |  |  |  |  |
| D00                                     | 7.5  | Included Protection (ANSI Codes)   |                | 1  |   |   |                                       | ai ate Keiavi |                     | Confirmed  |  |  |  |
| טטע                                     |  | Included Protection (ANSI Codes) Rated Current [A]   |                |  | 30, 31, 40, 3111,   | 49, 66, 50G, 51G, 2<br>5  | 6, 87M, 86 (Sep                       | arate Kelay)  |                     | Confirmed Confirmed  |  |  |  |
| D00                                     | 7.6  | , ,  |                |  | 30, 31, <del>10</del> , 31EK,   |   | 5, 87M, 86 (Sep                       | arate Kelay)  |                     |  |  |  |  |
|   | 7.6<br>7.7   | Rated Current [A]  |                |  | JU, JI, TU, JILIN,  | 5   |                                       | arate Keray)  |                     | Confirmed  |  |  |  |
| D00                                     | 7.6<br>7.7<br>7.8  | Rated Current [A]<br>Rated Frequency [Hz]  |                |  | 30, 31, 40, 3166,   | 5<br>50 Hz  | vise                                  | arate Keray)  |                     | Confirmed<br>Confirmed   |  |  |  |
| D00                                     | 7.6<br>7.7<br>7.8<br>7.9   | Rated Current [A]<br>Rated Frequency [Hz]<br>Burden [VA]   |                |  | 30, 31, 10, 31ық  | 5<br>50 Hz<br>Vendor to Ad  | vise                                  | ar ate Keray) |                     | Confirmed<br>Confirmed<br>Acc To Catalog   |  |  |  |
| D00<br>D00<br>D00                       | 7.6<br>7.7<br>7.8<br>7.9<br>7.10   | Rated Current [A]<br>Rated Frequency [Hz]<br>Burden [VA]<br>Overload Capability Of Current Path  |                |  | 30, 31, 10, 31hly   | 5<br>50 Hz<br>Vendor to Ad<br>100xIn < 15   | vise<br>lec.                          | ar are Keray) |                     | Confirmed<br>Confirmed<br>Acc To Catalog<br>Confirmed  |  |  |  |
| D00<br>D00<br>D00<br>D00                | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12                         | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W]   |                |  | 30, 31, 10, 31110,  | 5<br>50 Hz<br>Vendor to Ad<br>100xIn < 1 S<br>110V DO   | vise<br>ec.<br>f Un                   | al are relay) |                     | Confirmed<br>Confirmed<br>Acc To Catalog<br>Confirmed<br>Confirmed   |  |  |  |
| D00 D00 D00 D00 D00 D00 D00             | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13                 | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts   |                |  | 30, 31, то, 31ы,  | 5<br>50 Hz<br>Vendor to Ad<br>100xln < 1 S<br>110V DC<br>Min. ± 15% o<br>Vendor to Ad<br>2NO + 2NC at                 | vise<br>ec.<br>f Un<br>vise<br>least  | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed   |  |  |  |
| D00 D00 D00 D00 D00 D00                 | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13                 | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts Alarm Relay Contacts  |                |  | 30, 31, то, 31ы,  | 5<br>50 Hz<br>Vendor to Ad<br>100xln < 1<br>110V DC<br>Min. ± 15% o<br>Vendor to Ad                                   | vise<br>ec.<br>f Un<br>vise<br>least  | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed Confirmed Confirmed Confirmed Confirmed   |  |  |  |
| D00 | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13<br>7.14         | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts Alarm Relay Contacts Auxiliary Contacts Ratings   |                |  | 30, 31, то, 31ы,  | 5<br>50 Hz<br>Vendor to Ad<br>100xln < 1 S<br>110V DC<br>Min. ± 15% o<br>Vendor to Ad<br>2NO + 2NC at                 | vise<br>ec.<br>f Un<br>vise<br>least  | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed                               |  |  |  |
| D00 D00 D00 D00 D00 D00 D00             | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13<br>7.14         | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts Alarm Relay Contacts Auxiliary Contacts Ratings • Contacts Voltage Rating [V]                                     |                |  | 30, 31, то, 31ы,  | 5<br>50 Hz<br>Vendor to Ac<br>100xln < 1 S<br>110V DC<br>Min. ± 15% o<br>Vendor to Ac<br>2NO + 2NC at<br>2NO + 2NC at | vise<br>lec.<br>f Un<br>vise<br>least | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed   |  |  |  |
| D00 | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13<br>7.14         | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts Alarm Relay Contacts Auxiliary Contacts Ratings   |                |  | 30, 31, то, 31ы,  | 5 50 Hz Vendor to Ac 100xln < 1.5 110V DC Min. ± 15% o Vendor to Ac 2NO + 2NC at 2NO + 2NC at                         | vise<br>lec.<br>f Un<br>vise<br>least | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed Confirmed                               |  |  |  |
| D00 | 7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12<br>7.13<br>7.14<br>7.15 | Rated Current [A] Rated Frequency [Hz] Burden [VA] Overload Capability Of Current Path Rated Voltage Auxiliary Voltage [V] Auxiliary Voltage Permissible Range [V] Power Consumption [W] Trip Relay Contacts Alarm Relay Contacts Auxiliary Contacts Ratings • Contacts Voltage Rating [V] • Contacts Rated Continuous Current |                |  | 30, 31, 10, 31ы,  | 5 50 Hz Vendor to Ac 100xln < 13 110V DC Min. ± 15% o Vendor to Ac 2NO + 2NC at 2NO + 2NC at 110V DC Vendor to Ac     | vise<br>lec.<br>f Un<br>vise<br>least | at are relay) |                     | Confirmed Confirmed Acc To Catalog Confirmed |  |  |  |





#### سطحالارض





نسخه

D03



| NISOC          |       |           |            |         |      |          |       |  |  |
|----------------|-------|-----------|------------|---------|------|----------|-------|--|--|
| - شماره پیمان: | پروژه | بسته کاری | صادر كننده | تسهيلات | رشته | نوع مدرک | سريال |  |  |
|                | BK    | GCS       | PEDCO      | 120     | EL   | DT       | 0004  |  |  |

شماره صفحه: ۲ از ۱۰

|        |                                     | T   | Technical Data For Expansion of 11 KV MV Switchgear  Required                      |  |  |  |  |  |
|--------|-------------------------------------|---|--|--|--|--|--|--|
| Rev    | Item                                | Description   | Vendor Data  |  |  |  |  |  |
| . Trar | Transformer Feeder Protection Relay |   |  |  |  |  |  |  |
| D01    | 8.1                                 | Manufacturer's Name   | Vendor to Advise   | Schneider/France                                   |  |  |  |  |
| D01    | 8.2                                 | Manufacturer's Type Designation   | Vendor to Advise   | P3U20  |  |  |  |  |
| D01    | 8.3                                 | Туре  | Digital Multi-Function Relay + Display with adjustment Menu                        | Confirmed  |  |  |  |  |
| 001    | 8.4                                 | Installation  | Flush Mounted  | Confirmed  |  |  |  |  |
| 001    | 8.5                                 | Included Protection (ANSI Codes)  | 50, 51, 51N,50G (Separate Relay)   | Confirmed  |  |  |  |  |
| 001    | 8.6                                 | Rated Current [A]   | 5  | Confirmed  |  |  |  |  |
| 001    | 8.7                                 | Rated Frequency [Hz]  | 50 Hz  | Confirmed  |  |  |  |  |
| 01     | 8.8                                 | Burden [VA]   | Vendor to Advise   | Acc To Catalog                                     |  |  |  |  |
| 001    | 8.9                                 | Overload Capability Of Current Path   | 100xIn < 1 Sec.  | Confirmed  |  |  |  |  |
| 001    | 8.10                                | Rated Voltage Auxiliary Voltage [V]   | 110V DC  | Confirmed  |  |  |  |  |
| 01     | 8.11                                | Auxiliary Voltage Permissible Range [V]   | Min. ± 15% of Un   | Confirmed  |  |  |  |  |
| 01     | 8.12                                | Power Consumption [W]   | Confirmed  |  |  |  |  |  |
| 01     | 8.13                                | 8.13 Trip Relay Contacts 2NO + 2NC at least   |  | Confirmed  |  |  |  |  |
| 001    | 8.14                                | Alarm Relay Contacts  | 2NO + 2NC at least   | Confirmed  |  |  |  |  |
| 001    | 8.15                                | Auxiliary Contacts Ratings  • Contacts Voltage Rating [V] 110V DC Confirmed  • Contacts Rated Continuous Current Vendor to Advise |  |  |  |  |  |  |
| 001    | 8.16                                | 8.16 Ingress Protection IP42 Confirmed  |  |  |  |  |  |  |
| 01     | 8.17                                | Routine Tests   | IEC 255  | Confirmed  |  |  |  |  |
| 001    | 8.18                                | Type Tests (Certificates)   | IEC 255  | Confirmed  |  |  |  |  |
| Note   | s                                   |   |  |  |  |  |  |  |
| 000    | 9.1                                 | According to "BK-GCS-PEDCO-120-EL-SL-0003", in the extensio   | n of existing MV switchgear, there are only 8 outgoing feeder for 11 KV switchgear | & no extension is required for incoming & outgoing |  |  |  |  |
| 01     | 9.2                                 | The rated short time current of busbar & rated peak withstand current will be recheked after power system study.                  |  |  |  |  |  |  |
| 01     | 9.3                                 | Minimum conductor sizes shall be 2.5 mm2 for protection (CT/l   | PT) and bonding conductors and 1.5 mm2 for control and signal wiring.              |  |  |  |  |  |
| 01     | 9.4                                 | Accessories required for proper and safe operation of the switchgear shall be supplied by vendor                                  |  |  |  |  |  |  |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





NISOC

 $\textbf{D} = \{ \textbf{C} \mid \textbf{C}$ بسته کاری صادر کننده نوع مدرک پروژه تسهيلات سر يال نسخه شماره پیمان: ВК GCS PEDCO 120 EL DT 0004 D03

شماره صفحه: ۱ از ۱۰

|                      | Technical Data for Starter Panel of Fire Water Pump |   |   |                        |  |  |  |  |
|----------------------|---|---|---|------------------------|--|--|--|--|
| Rev Item Description |   |   | Required  | Vendor Data            |  |  |  |  |
|                      |   | tal Data  | Requireu  | venuoi Data            |  |  |  |  |
| D00                  |   | Name of Project / Plant   | Binak Oilfield in Bushehr Province  | Confirmed              |  |  |  |  |
| D00                  |   | Ambient Temperature (Min/Max)   | Min ~ Max: +5 ~ +52°C   | Confirmed              |  |  |  |  |
| D02                  |   | Max.Design Temperature:   | 50°c  | Confirmed              |  |  |  |  |
| D00                  | 1.4   | Max. Sun Temperature:   | +85°c   | Confirmed              |  |  |  |  |
| D00                  | 1.5   | Max.Relative Humidity:  | 100%  | Confirmed              |  |  |  |  |
| D00                  | 1.6   | Mean Sea Level:   | 12.5 m Above Sea Level  | Confirmed              |  |  |  |  |
| D00                  | _   | Seismic Factor:   | 0.3g  | Confirmed              |  |  |  |  |
| D00                  |   | Max. Wind Velocity(Max)   | 120 km/hr   | Confirmed              |  |  |  |  |
| 2-Swite              |   |   | 120 Kiii/ Iii   | Commined               |  |  |  |  |
| D00                  |   | Manufacturer  | By Vendor   | Parstableau/DNF4       |  |  |  |  |
|                      |   |   | IPS-M-EL-144(4), IPS-E-EL-100(1),   | ,                      |  |  |  |  |
| D00                  | 2.2   | Standard(s)   | BK-GNRAL-PEDCO-000-EL-SP-0005   | Confirmed              |  |  |  |  |
| D00                  | 2.3   | Quantity  | 1 Feeder of Outgoing, Type C3   | Confirmed              |  |  |  |  |
| D00                  | 2.4   | Service   | Expansion of Exsiting MV Switchgear from Both Side  | Confirmed              |  |  |  |  |
| D00                  | 2.5   | Tag Number  | GCS-3.3-SWG-001   | Confirmed              |  |  |  |  |
|                      |   |   | BK-GCS-PEDCO-120-EL-SL-0001   |                        |  |  |  |  |
| D00                  | 2.6   | Applicable SLD  | BK-GCS-PEDCO-120-EL-SL-0003<br>BK-GCS-PEDCO-120-EL-DG-0001  | Confirmed              |  |  |  |  |
| D00                  | 2.7   | Location  | Indoor  | Confirmed              |  |  |  |  |
| D00                  | 2.8   | Type and Construction   | Metal Clad, Withdrawable  | Confirmed              |  |  |  |  |
| D01                  | 2.9   | Rated Voltage & Variation   | 3.6 kV ± 10 %   | Confirmed              |  |  |  |  |
| D01                  | _   | Rated Frequency & Variation   | 5.0 KV ± 10 7/0<br>50 Hz ± 5 %  | Confirmed              |  |  |  |  |
| D00                  | _   | No. of Phases   | 30 HZ 1 3 70  | Confirmed              |  |  |  |  |
| DOO                  | 2.11  | Rated Insulation Levels between earth and phase                                   |   | Conninied              |  |  |  |  |
|                      |   | One Minute Power Frequency  | 10 KV   |                        |  |  |  |  |
| D02                  | 2.12  | Withstand Voltage (RMS)   | 40 KV   | Confirmed              |  |  |  |  |
| 502                  | 2.12  | One Minute Power Frequency  Mish at and Malana of Ann. County (DMC)               |   |                        |  |  |  |  |
|                      |   | Withstand Voltage of Aux. Circuit (RMS)  Impulse Withstand Voltage (Peak)         | 2 KV  |                        |  |  |  |  |
| D00                  | 2.13  | Rated Normal Current of Busbars   | 630 A   | Confirmed              |  |  |  |  |
| D01                  | 2.14  | Rated Short Time Current of Busbar  | 25 kA; 1 sec (Note 8.2)   | Confirmed              |  |  |  |  |
| D00                  | 2.15  | Rated Peak Withstand Current  | 63 kA   | Confirmed              |  |  |  |  |
|                      |   | Busbars:  |   |                        |  |  |  |  |
|                      |   | • Material  | Copper (Flame Retardant Non-Hygroscopic)  |                        |  |  |  |  |
| D01                  | 2.16  | Main Horizontal Bus Cross Section Area     Main Vertical Bus Cross Sectional Area | Vendor to Advise<br>Vendor to Advise  | Confirmed              |  |  |  |  |
|                      |   | Earth Bus Cross Sectional Area  | Vendor to Advise  | oo                     |  |  |  |  |
|                      |   | Busbars Color & Joints  | Silver Plated   |                        |  |  |  |  |
| D00                  | 2.17  | Maximum Tolerable Temperature Rise  | Acc. to IEC62271  | Confirmed              |  |  |  |  |
| D00                  |   | *   | IPS-M-EL-144(4)   |                        |  |  |  |  |
| D00                  |   | Rated Voltage for Control And Protection Circuits                                 | 110 V DC  | Confirmed              |  |  |  |  |
| D00                  |   | Rated Voltage for Space Heaters and Panel Lighting                                | 400 / 230 VAC   | Confirmed Confirmed    |  |  |  |  |
| D00                  | 2.20  | Enclosure   | Withdrawable Metal Clad, Compartmented  |                        |  |  |  |  |
| D01                  | 2.21  | Degree of Protection by Enclosure   | External: IP 42, Internal: IP 20, Internal partitions between functional units and shutters for bus bar & cable side: IP 4X | Confirmed              |  |  |  |  |
| D.0.0                | 0.00  | 7 . 17 . 1  |   |                        |  |  |  |  |
| D00                  | _   | Installation  | Floor Self-Standing, Side by Side   | Confirmed              |  |  |  |  |
| D00                  | _   | Rear / Front Access   | Rear and Front Access   | Confirmed              |  |  |  |  |
| D00                  |   |   | Cables: Bottom Entry  | Confirmed              |  |  |  |  |
| D00                  |   | Sheet Steel Thickness, Fram & Walls   | Minimum 2.5 mm  | Minimum 2mm            |  |  |  |  |
| D00                  |   | Paint   | Electrostatic Powder  | Confirmed              |  |  |  |  |
| D00                  | 2.27  | Color finish  | RAL 7032  | Confirmed              |  |  |  |  |
| D00                  | 2.28  | Routine Tests   | Required (Withstand tests and reports as per IEC 62271-200 or IEC 298, IEC 60694, IPS-M-EL-144 (4) and Specification)       | Confirmed              |  |  |  |  |
| D00                  |   | Type Tests  | Test certificates of the SWGR type as per IEC62271-200 or IEC 298, IEC60694, and IPS-M-EL-144 (4)                           | Confirmed              |  |  |  |  |
| D00                  | 2.30  | Overall Dimensions (HxWxD) [mm]   | Vendor to Advise  | Acc To Tech Offer      |  |  |  |  |
| D00                  |   | Total Weight [kg]   | Vendor to Advise  | Acc To Tech Offer      |  |  |  |  |
| D00                  |   | Overall Dimensions of 1 Cubicle (HxWxD)   | Vendor to Advise  | Acc To Tech Offer      |  |  |  |  |
| D00                  |   | Dynamic Load of One Cubicle [kg]  | Vendor to Advise  | Acc To Tech Offer      |  |  |  |  |
| 3.MV C               | ircuit  | Breaker   |   |                        |  |  |  |  |
| D00                  | 3.1   | Manufacturer  | Vendor to Advise  | Hyundai/South Korea    |  |  |  |  |
|                      | 3.2   | Standard  | IEC62271-100  | Confirmed              |  |  |  |  |
| D00                  |   |   |   | ·                      |  |  |  |  |
| D00                  | 3.3   | Туре  | Vacuum  | Confirmed              |  |  |  |  |
|                      | 3.3   | Type<br>Fixed/ Withdrawable   | Vacuum<br>Withdrawable  | Confirmed<br>Confirmed |  |  |  |  |
| D00                  |   |   |   |                        |  |  |  |  |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





NISOC

 Document Remains a Mall and Ma

شماره صفحه: ۱۰ ز ۱۰

|          |        | To   | echnical Data for Starter Panel of Fire Water Pump           |   |
|----------|--------|--|--|---|
| Rev Item |        | Description  | Required   | Vendor Data                             |
| 000      | 3.7    | No. Of Phases and Poles  | 3-Phase  | Confirmed                               |
| -        |        | Rated Insulation Levels between earth and phase  |  | *************************************** |
|          |        | One Minute Power Frequency   | 10 KV  |   |
| 00       | 3.8    | Withstand Voltage (RMS)  | 2 KV   | Confirmed                               |
| ,00      |        | One Minute Power Frequency   | Z KV   |   |
|          |        | Withstand Voltage of Aux. Circuit (RMS)  Impulse Withstand Voltage (Peak)                        | 40 KV  |   |
| 200      | 2.0    |  | 600.4  |   |
| 000      |        | Rated Normal Current   | 630 A  | Confirmed                               |
| 000      |        | Rated Short Time Current   | 10 kA  | Confirmed                               |
| 000      |        | Rated Peak Withstand Current   | 62.5 kA  | Confirmed                               |
| 000      |        | Rated Short Circuit Breaking Current   | Vendor to Advise   | Acc To Catalog                          |
| D00      | _      | Rated Short Circuit Making Current   | Vendor to Advise   | Acc To Catalog                          |
| 000      | _      | Maximum Tolerable Temperature Rise   | Acc. to IEC62271-100   | Confirmed                               |
| D00      | 3.15   | Design Temperature Rise  | Acc. to IEC62271-100   | Confirmed                               |
| D00      | 3.16   | Operating Mechanism  | Motor & Hand operated Spring Charged Stored Energy Mechanism | Confirmed                               |
| D00      | 3.17   | Release type   | Shunt Trip   | Confirmed                               |
| D00      |        | Rated Operating Sequence   | 0-0.3S-CO-3MIN-CO  | Confirmed                               |
| D00      | _      | Rated Voltage of Auxiliary Equipment   | 110V DC  | Confirmed                               |
| D00      |        | Rated Operating Voltage of Releases  | 110V DC  | Confirmed                               |
| D00      |        | Rated Operating Voltage of Charging Motors   | 110V DC  | Confirmed                               |
|          |        | Voltage Tolerances for Auxiliary Apparatus:  |  |   |
|          |        | Trip Circuit   | 70%-110%<br>85%-110%   | Confirmed                               |
| D00      | 3.22   | Close Circuit     Mater Propries   | 85%-110%<br>85%-110%   | Confirmed                               |
|          |        | <ul><li>Motor Running</li><li>Motor at the Instant of Start</li></ul>                            | 70%-110%   |   |
|          |        | Power consumption of Auxiliary Apparatus:[W]   |  |   |
|          |        | • Trip Circuit   |  |   |
|          |        | Closed Circuit   | 110V DC  |   |
| D00      | 3.23   | Charging motor   | Vdk- Addi  | Confirmed                               |
|          |        | Under voltage release     Multifunction relay  | Vendor to Advise   |   |
|          |        | • Transducers  |  |   |
|          |        | 1 C.B. Open/Close Auxiliary Contacts:  | 6  |   |
|          |        | No. Of Make Contacts   | 6  |   |
| D00      | 3.24   | No. Of Break Contacts     Rated Voltage  | 110V DC  | Confirmed                               |
|          |        | Rated Current at 110V DC   | VTA  |   |
|          |        | Breaking Current at 110V DC  | VTA  |   |
|          |        | Truck Position Auxiliary Contacts:   | 1NO + 1NC  |   |
|          |        | No of Make Contacts     No of Bunda Contacts   | 1NO + 1NC  |   |
| D00      | 3.25   | No of Break Contacts     Rated Voltage   | 110V DC  | Confirmed                               |
|          |        | Rated Current at 110V DC   | VTA  |   |
|          |        | Breaking Current at 110V DC  | VTA  |   |
| D00      | 3.26   | Routine Tests  | IEC62271-100   | Confirmed                               |
| D00      | 3.27   | Type Tests   | IEC62271-100   | Confirmed                               |
| .MV \    | oltage | Transformers   |  |   |
| D00      | 4.1    | Manufacturers Name   | Vendor to Advise   | Pars Shar/Iran                          |
| D00      | 4.2    | Standard   | IEC60044-2   | Confirmed                               |
| D00      | 4.3    | Туре   | Epoxy Cast Resin   | Confirmed                               |
| D00      | 4.4    | Fixed Withdrawable   | Withdrawable   | Tilting                                 |
| D00      | 4.5    | Highest System Voltage   | 3.6 kV   | Confirmed                               |
| D00      | 4.6    | Rated Frequency  | 50 Hz  | Confirmed                               |
| D00      | 4.7    | No. of Phase   | Single Phase   | Confirmed                               |
| D00      | 4.8    | Rated Primary Voltage [kV]   | 3.3/√3 kV  | Confirmed                               |
| D00      | 4.9    | Rated Secondary Voltage [V]  | 110/√3 V   | Confirmed                               |
|          |        | Rated Insulation Levels between earth and phase  | 10 kV /√3  |   |
|          |        | One Minute Power Frequency      (PMC)      (PMC)   | 2111/10  |   |
| D00      | 4.10   | Withstand Voltage (RMS)  One Minute Power Frequency  | 2 kV / √3  | Confirmed                               |
|          |        | One Minute Power Frequency Withstand Voltage of Aux. Circuit (RMS)                               | 40 kV / √3   |   |
|          |        | Impulse Withstand Voltage (Peak)   | ,  |   |
| 001      | 4.11   | System Earthing  | TNS by Resistor  | Confirmed                               |
| D00      | 4.12   | Rated Voltage Factor   | Vendor to Advise   | Acc To Catalog                          |
|          | 4.13   | Rated Burden   | Vendor to Advise   | Acc To Catalog                          |
| D00      |        |  |  |   |
|          |        | Accuracy Class:  | CL. 3P   |   |
| 000      |        | Accuracy Class: • for Protection (with separate Winding) • for Measuring (with separate Winding) | CL. 3P<br>1.0  | Confirmed                               |





#### سطحالارض

#### احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک





NISOC

 D

 D
 R

 Image: Control of the point of the point

شماره صفحه: ۹ از ۱۰

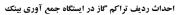
|            |                         |  | BK      | GCS     | PEDCO   | 120  | EL   | DT   | 0004  | D03       |                          |  |  |
|------------|-------------------------|--|---------|---------|---|--|--|--|---|-----------|--------------------------|--|--|
|            |                         |  |         | Te      | echnical Data   | for Starter  | Panel of Fi  | e Water Pum  | р   |           |                          |  |  |
| Rev        | Item                    |  |         |         |   | Required   |  |  |   |           | Vendor Data              |  |  |
|            |                         | ent Transformers   |         |         |   | Required .   |  |  |   |           | 1 000000 00000           |  |  |
| D00        |                         |  |         |         |   | V  | endor to Ad  | vise   |   |           | Pars Shar/Iran           |  |  |
| D00        |                         |  |         |         |   |  | IEC60044-  |  |   |           | Confirmed                |  |  |
| D00        |                         |  |         |         |   |  | Dry Type   |  |   |           | Confirmed                |  |  |
| D00        |                         |  |         |         |   |  | 3.6 kV   |  |   |           | Confirmed                |  |  |
| D00        | 5.5                     | Rated Frequency  |         |         |   |  | 50 Hz  |  |   |           | Confirmed                |  |  |
| D00        | 5.6                     | Rated Secondary Current:   |         |         |   | 1A/5   | A Accordir   | g to SLD   |   |           | Confirmed                |  |  |
| D00        | 5.7                     | Rated Continuous Thermal Current:  |         |         |   | 1.2 x R  | ated primar  | y current  |   |           | Confirmed                |  |  |
| D00        |                         | Rated Short Time, Current:   |         |         |   |  | 10 kA, 1 Se  | eC .   |   |           | Confirmed                |  |  |
| D00        |                         | Rated Dynamic Current:   |         |         |   |  | 63 kA  |  |   |           | Confirmed                |  |  |
| D00        | _                       | Rated Burden   |         |         |   |  | endor to Ad  |  |   |           | Acc To Catalog           |  |  |
| D00        | 5.11                    | Rated Transformation Ratio and No. of Cor  | res     |         |   |  |  | ine Diagram  |   |           | Confirmed                |  |  |
| D00        | 5.12                    | Accuracy Class: • Measuring  |         |         |   |  | ass 1: Class<br>X: where r   |  |   |           | Confirmed                |  |  |
| Doo        | 5.12                    | • Protection   |         |         |   |  | 5P20 prot  |  |   |           | - Comminde               |  |  |
| D00        | 5.13                    | Routine Tests  |         |         |   |  | IEC60044-  | 1  |   |           | Confirmed                |  |  |
| D00        | 5.14                    | Type Tests   |         |         |   |  | IEC60044-  | 1  |   |           | Confirmed                |  |  |
|            |                         | Rated Insulation Levels between earth and  | d phase |         |   |  | 10 kV / √  | 3  |   |           |                          |  |  |
|            |                         | One Minute Power Frequency Withstand Voltage (RMS)   |         |         |   |  | 2 kV / √3  |  |   |           |                          |  |  |
| D01        |                         | One Minute Power Frequency   |         |         |   |  | 2117 / 13  |  |   |           | Confirmed                |  |  |
|            |                         | Withstand Voltage of Aux. Circuit (RMS)  |         |         | 40 kV / √   | 3  |  |  |   |           |                          |  |  |
| 6 Fartl    | h Swite                 | Impulse Withstand Voltage (Peak)   |         |         | <u> </u>  |  |  |  |   | <u> </u>  |                          |  |  |
| D00        | _                       | Manufacturer's Name  |         |         |   | 17   | endor to Ad  | vice   |   | T         | Parstableau/Iran         |  |  |
| D00        |                         | Manufacturer's Type Designation  |         |         |   |  | endor to Ad<br>endor to Ad   |  |   |           | Parstableau/Iran  Manual |  |  |
| D00        |                         | Standard   |         |         |   |  | IEC62271-1   |  |   |           | Confirmed                |  |  |
| D00        |                         | Туре   |         |         |   |  | Make Prod  |  |   |           | Confirmed                |  |  |
| D00        | -                       |  |         |         | 3   |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Frequency  |         |         | 50 Hz   |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Rated Voltage  |         |         | 3.3 kV  |  |  |  |   | Confirmed |                          |  |  |
| D00        | 6.8                     | Rated Lighting Impulse Withstand Voltage   |         |         | 40 kV   |  |  |  |   | Confirmed |                          |  |  |
| D00        | 6.9                     | Rated 1 Minute Power Frequency Voltage   |         |         | 10 kV   |  |  |  |   | Confirmed |                          |  |  |
| D00        | 6.10                    |  |         |         | 10 kA   |  |  |  |   | Confirmed |                          |  |  |
| D00        | 6.11                    | Rated Peak Withstand Current   |         |         | 62.5 kA   |  |  |  |   | Confirmed |                          |  |  |
| D00        | 6.12                    | Rated Short Circuit Making Current   |         |         | 62.5 kA   |  |  |  |   | Confirmed |                          |  |  |
| D00        |                         | Actuation Mechanism  |         |         | Pre-tension Spring  |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | No. of Auxiliary Contacts (Min.)   |         |         | 2NO + 2NC   |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Aux. Contacts Rated Voltage  |         |         | 110V DC<br>1A   |  |  |  |   |           | Confirmed  Confirmed     |  |  |
|            | 6.17                    | Aux. Contacts Rated Current Interlocks   |         |         | To prevent  To prevent  To prevent co                       | closure of E<br>wi<br>Insertion o<br>Innection of<br>In i.e. electro | ed) to Apper<br>specifically<br>arth Switch<br>ithdraw pos<br>f CB when E<br>Earth Switco<br>magnetic co | when CB is no<br>ition<br>arth Switch is<br>h when upstre<br>oil (only for inc | t in Test or<br>connected.<br>cam Switch is |           | Confirmed                |  |  |
| D00        | _                       | Routine Tests  |         |         | IEC62271-102  |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Type Tests (Certificates) ler Protection Relay   |         |         | IEC62271-102  |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Manufacturer's Name  |         |         | Vendor to Advise  |  |  |  |   |           | Schneider/France         |  |  |
| D00        |                         | Manufacturer's Type Designation  |         |         | Vendor to Advise  Vendor to Advise                          |  |  |  |   | 1         | P3U20                    |  |  |
| D00        |                         | Type   |         |         | Digital Multi-Function Relay + Display with adjustment Menu |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Installation   |         |         | Flush Mounted   |  |  |  |   |           | Confirmed                |  |  |
| D00        | -                       | Included Protection (ANSI Codes)   |         |         | 50, 51, , 50G, 51G, , 86 (Separate Relay)                   |  |  |  | )   | 1         | Confirmed                |  |  |
| D00        | _                       | Rated Current [A]  |         |         | 5   |  |  |  |   |           | Confirmed                |  |  |
| D00        | 7.7                     | Rated Frequency [Hz]   |         |         | 50 Hz   |  |  |  |   |           | Confirmed                |  |  |
| D00        | 7.8                     | Burden [VA]  |         |         | Vendor to Advise  |  |  |  |   |           | Acc To Catalog           |  |  |
| D00        | 7.9                     | Overload Capability Of Current Path  |         |         | 100xIn < 1 Sec.   |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Rated Voltage Auxiliary Voltage [V]  |         |         | 110V DC   |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Auxiliary Voltage Permissible Range [V]  |         |         | Min. ± 15% of Un  |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Power Consumption [W]  |         |         | Vendor to Advise  |  |  |  |   |           | Confirmed                |  |  |
| D00        |                         | Trip Relay Contacts  |         |         | 2NO + 2NC at least  |  |  |  |   |           | Confirmed                |  |  |
| D00        | 7.14                    | Alarm Relay Contacts   |         |         | 2NO + 2NC at least  |  |  |  | -   | Confirmed |                          |  |  |
| D00        | 7.15                    | Auxiliary Contacts Ratings  Contacts Voltage Rating [V]  Contacts Rated Continuous Current |         |         |   | v  | 110V DC<br>endor to Ad   | vise   |   |           | Confirmed                |  |  |
|            | 7.16 Ingress Protection |  |         | IP42    |   |  |  |  |   | Confirmed |                          |  |  |
| D00        | 7.16                    | 0  |         | IEC 255 |   |  |  |  |   |           |                          |  |  |
| D00<br>D00 | 7.17                    | Routine Tests Type Tests (Certificates)  |         |         |   |  | IEC 255<br>IEC 255   |  |   |           | Confirmed                |  |  |







#### سطحالارض







|  |  | NIS |
|--|--|-----|
|  |  |     |

 $\textbf{D} = \{ \textbf{C} \mid \textbf{C}$ صادر کننده نوع مدرک پروژه بسته کاری تسهيلات سر يال نسخه شماره پیمان: ВК GCS PEDCO 120 EL DT 0004 D03

شماره صفحه: ۱۰ از ۱۰

|        | Technical Data for Starter Panel of Fire Water Pump  |   |  |  |  |  |  |  |
|--------|--|---|--|--|--|--|--|--|
| Rev    | Item   | n Description Required Vendor Data  |  |  |  |  |  |  |
| 8.Note | 8.Notes  |   |  |  |  |  |  |  |
| D00    | 8.1  | According to "BK-GCS-PEDCO-120-EL-SL-0003", in the extension of existing MV switchgear, there is only 1 outgoing feeder for 3.3 KV switchgear & no extension is required for incoming & outgoing. |  |  |  |  |  |  |
| D01    | 8.2  | The rated short time current of busbar & rated peak withstand current will be recheked after power system study.  |  |  |  |  |  |  |
| D01    | 8.3  | Minimum conductor sizes shall be 2.5 mm2 for protection (CT/PT) and bonding conductors and 1.5 mm2 for control and signal wiring.   |  |  |  |  |  |  |
| D01    | 8.4  | Accessories required for proper and safe operation of the switchgear shall be supplied by vendor  |  |  |  |  |  |  |
| D01    | 8.4 Accessories required for proper and safe operation of the switchgear shall be supplied by vendor |   |  |  |  |  |  |  |

