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| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | |
| **MTO FOR POWER & CONTROL CABLES - BK14**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | |
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| D00 | May. 2023 | IFI | H.Shakiba | M.Fakharian | A.M.Mohseni |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **Client Approval** |
| **Class:3** | | **Client Doc. Number:** **F8Z-708201** | | | | |
| **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** | | | | | |

**REVISION RECORD SHEET**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |  | **PAGE** | **D00** | **D01** | **D02** | **D03** | **D04** |
| **1** | X |  |  |  |  | **51** |  |  |  |  |  |
| **2** | X |  |  |  |  | **52** |  |  |  |  |  |
| **3** | X |  |  |  |  | **53** |  |  |  |  |  |
| **4** | X |  |  |  |  | **54** |  |  |  |  |  |
| **5** | X |  |  |  |  | **55** |  |  |  |  |  |
| **6** | X |  |  |  |  | **56** |  |  |  |  |  |
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| **MV POWER CABLE** | | | | | |
| Insulation Grade - Service Voltage: 19/33 (36) KV | | | | | |
| Conductor: Plain Annealed Stranded Copper (Class 2) | | | | | |
| Insulation: XLPE Insulation (Color Coding as per IEC) | | | | | |
| Semiconducting Material: Yes | | | | | |
| Screening : Semi-Conductor | | | | | |
| Binder Tape: Yes | | | | | |
| Fillers : PVC | | | | | |
| Bedding: Extruded PVC | | | | | |
| Armor: Multi-Core Cables : Galvanized Steel Wire Armor (SWA)  Single-Core Cables : Aluminum Wire Armor (AWA) | | | | | |
| Other Sheath: PVC (UV Resistant & Flame Retardant with Red Color) | | | | | |
| Color of Core: 1Core Cables= Black  3Cores cables= Red, Yellow, Blue | | | | | |
| **Item** | **Description** | **Type** | **QTY.** | **Spare** | **Remark** |
| 1 | **CU/XLPE/SWA/PVC (Red, Yellow, Blue)** | - |  |  |  |
| 1.1 | 3C×50 mm2 | - | 100 | - |  |

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| **LV POWER CABLE** | | | | | |
| Insulation Grade - Service Voltage: 600/1000 V | | | | | |
| Conductor: Plain Annealed Stranded Copper (Class 2) | | | | | |
| Insulation: XLPE | | | | | |
| Binder Tape: If Required | | | | | |
| Fillers : PVC | | | | | |
| Bedding: Extruded PVC | | | | | |
| Armor: Multi-Core Cables : Galvanized Steel Wire Armor (SWA)  Single Core Cables : Aluminum Wire Armor (AWA) | | | | | |
| Other Sheath: PVC (UV Resistant & Flame Retardant with Black Color) | | | | | |
| Color of Core: (A): 1Core Cables (Single Phase)= Black  (B): 1Core + Neutral (Single Phase)= Red & Black  (C): 1Core + Neutral + Earth (Single Phase)= Red, Black & G/Y  (D): 2Cores Cables (for DC Cable)= Red & Black  (E): 3Cores Cables (Three Phase)= Red, Yellow, Blue (3 Phases)  (F): 3Cores + Neutral (Three Phase)= Red, Yellow, Blue, Black  (G): 3Cores + Earth (Three Phase)= Red, Yellow, Blue, G/Y  (H): 3Cores + Neutral + Earth (Three Phase)= Red, Yellow, Blue, Black & G/Y | | | | | |
| **Item** | **Description** | **Type** | **QTY.** | **Spare** | **Remark** |
| **1** | **CU/XLPE/AWA/PVC** |  |  |  |  |
| 1.1 | 1C×185 mm2 | A | 650 | 50 |  |
| 1.2 | 1C×95 mm2 | 20 | - |  |
| **2** | **CU/XLPE/SWA/PVC** |  |  |  |  |
| 2.1 | 4C×50 mm2 | F | 20 | - |  |
| 2.2 | 4C×4 mm2 | F | 40 | - |  |
| 2.3 | 2C×6 mm2 | D | 40 | 10 |  |
| 2.4 | 4C×10 mm2 | F | 10 | 5 |  |
| 2.5 | 4C×6 mm2 | F | 70 | 10 |  |
| 2.6 | 5C×10 mm2 | H | 280 | 20 |  |
| 2.7 | 4C×70 mm2 | G | 210 | 10 |  |

The cable for 1-PU-40 Pump is by IRP manufacturer. It consists of 2 parts. One is from LV switchgear to VFD & second is from VFD to IRP pump in field.

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| **CONTROL CABLE** | | | | | |
| Insulation Grade - Service Voltage: 600/1000 V | | | | | |
| Conductor: Plain Annealed Stranded Copper (Class 2) | | | | | |
| Insulation: PVC | | | | | |
| Binder Tape: If Required | | | | | |
| Fillers : PVC | | | | | |
| Bedding: Extruded PVC | | | | | |
| Armor: Galvanized Steel Wire Armor (SWA) | | | | | |
| Other Sheath: PVC (UV Resistant & Flame Retardant with Black Color) | | | | | |
| Color of Core: Black with White Identification Numbers | | | | | |
| **Item** | **Description** | **Type** | **QTY.** | **Spare** | **Remark** |
| 3 | **CU/PVC/LSH/PVC/SWA/PVC (Black-Numbered)** |  |  |  |  |
| 3.1 | 12C×2.5 mm2 | 20 | 5 |  |

Notes:

1. This document shall be Based on below references:

Document Title: “Electrical Power & Control Cable List of Well Pads”

Document No.: “BK-SSGRL-PEDCO-110-EL-LI-0002”

Document Title: “Area Electrical Cable Route & Section Layout of Well Pads”

Document No.: “BK-SSGRL-PEDCO-110-EL-PY-0006”

Document Title: “Electrical Cable Route & Section Layout For Switchgear Building of Well Pads”

Document No.: “BK-SSGRL-PEDCO-110-EL-PY-0007”