|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | |
| **MTO FOR POWER & CONTROL CABLES - BK05**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 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-708451** | | | | |
| **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**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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** |  |  |  |  |  |
| **7** |  |  |  |  |  | **57** |  |  |  |  |  |
| **8** |  |  |  |  |  | **58** |  |  |  |  |  |
| **9** |  |  |  |  |  | **59** |  |  |  |  |  |
| **10** |  |  |  |  |  | **60** |  |  |  |  |  |
| **11** |  |  |  |  |  | **61** |  |  |  |  |  |
| **12** |  |  |  |  |  | **62** |  |  |  |  |  |
| **13** |  |  |  |  |  | **63** |  |  |  |  |  |
| **14** |  |  |  |  |  | **64** |  |  |  |  |  |
| **15** |  |  |  |  |  | **65** |  |  |  |  |  |
| **16** |  |  |  |  |  | **66** |  |  |  |  |  |
| **17** |  |  |  |  |  | **67** |  |  |  |  |  |
| **18** |  |  |  |  |  | **68** |  |  |  |  |  |
| **19** |  |  |  |  |  | **69** |  |  |  |  |  |
| **20** |  |  |  |  |  | **70** |  |  |  |  |  |
| **21** |  |  |  |  |  | **71** |  |  |  |  |  |
| **22** |  |  |  |  |  | **72** |  |  |  |  |  |
| **23** |  |  |  |  |  | **73** |  |  |  |  |  |
| **24** |  |  |  |  |  | **74** |  |  |  |  |  |
| **25** |  |  |  |  |  | **75** |  |  |  |  |  |
| **26** |  |  |  |  |  | **76** |  |  |  |  |  |
| **27** |  |  |  |  |  | **77** |  |  |  |  |  |
| **28** |  |  |  |  |  | **78** |  |  |  |  |  |
| **29** |  |  |  |  |  | **79** |  |  |  |  |  |
| **30** |  |  |  |  |  | **80** |  |  |  |  |  |
| **31** |  |  |  |  |  | **81** |  |  |  |  |  |
| **32** |  |  |  |  |  | **82** |  |  |  |  |  |
| **33** |  |  |  |  |  | **83** |  |  |  |  |  |
| **34** |  |  |  |  |  | **84** |  |  |  |  |  |
| **35** |  |  |  |  |  | **85** |  |  |  |  |  |
| **36** |  |  |  |  |  | **86** |  |  |  |  |  |
| **37** |  |  |  |  |  | **87** |  |  |  |  |  |
| **38** |  |  |  |  |  | **88** |  |  |  |  |  |
| **39** |  |  |  |  |  | **89** |  |  |  |  |  |
| **40** |  |  |  |  |  | **90** |  |  |  |  |  |
| **41** |  |  |  |  |  | **91** |  |  |  |  |  |
| **42** |  |  |  |  |  | **92** |  |  |  |  |  |
| **43** |  |  |  |  |  | **93** |  |  |  |  |  |
| **44** |  |  |  |  |  | **94** |  |  |  |  |  |
| **45** |  |  |  |  |  | **95** |  |  |  |  |  |
| **46** |  |  |  |  |  | **96** |  |  |  |  |  |
| **47** |  |  |  |  |  | **97** |  |  |  |  |  |
| **48** |  |  |  |  |  | **98** |  |  |  |  |  |
| **49** |  |  |  |  |  | **99** |  |  |  |  |  |
| **50** |  |  |  |  |  | **100** |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MV POWER CABLE** | | | | | |
| Insulation Grade - Service Voltage: 6/10 (12) 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 | - |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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”