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| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | | |
| **MTO FOR PAGA**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | | |
|  |  |  |  |  |  |  |
| D03 | May. 2024 | FI | H.Shakiba | M.Fakharian | S.Faramarzpour |  |
| D02 | Feb. 2023 | FI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| D01 | Sep. 2022 | IFI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| D00 | May. 2022 | IFI | H.Shakiba | M.Fakharian | M.Mehrshad |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **Client Approval** |
| **Class: 3** | | **Client Doc. Number: F8Z-709096** | | | | |
| **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 | X | X | X |  | **51** |  |  |  |  |  |
| **2** | X | X | X | X |  | **52** |  |  |  |  |  |
| **3** | X |  |  |  |  | **53** |  |  |  |  |  |
| **4** | X |  |  |  |  | **54** |  |  |  |  |  |
| **5** | X |  |  |  |  | **55** |  |  |  |  |  |
| **6** | X | X |  |  |  | **56** |  |  |  |  |  |
| **7** | X | X |  |  |  | **57** |  |  |  |  |  |
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1. **INTRODUCTION**

Binak oilfield in Bushehr province is a part of the southern oilfields of Iran, is located 20 km northwest of Genaveh city.

With the aim of increasing production of oil from Binak oilfield, an EPC/EPD Project has been defined by NIOC/NISOC and awarded to Petro Iran Development Company (PEDCO). Also PEDCO (as General Contractor) has assigned the EPC-packages of the Project to "Hirgan Energy - Design and Inspection" JV.

As a part of the Project, a New Gas Compressor Station (adjacent to existing Binak GCS) shall be constructed to gather of 15 MMSCFD (approx.) associated gases and compress & transfer them to Siahmakan GIS.

**GENERAL DEFINITION**

The following terms shall be used in this document.

|  |  |
| --- | --- |
| CLIENT: | National Iranian South Oilfields CLIENT (NISOC) |
| PROJECT: | Binak Oilfield Development – Surface Fcilities; New Gas Compressor Station |
| EPD/EPC CONTRACTOR (GC): | Petro Iran Development Company (PEDCO) |
| EPC CONTRACTOR: | Joint Venture of : Hirgan Energy – Design & Inspection (D&I) Companies |
| VENDOR: | The firm or person who will fabricate the equipment or material. |
| EXECUTOR: | Executor is the party which carries out all or part of construction and/or commissioning for the project. |
| THIRD PARTY INSPECTOR (TPI): | The firm appointed by EPD/EPC CONTRACTOR (GC) and approved by CLIENT (in writing) for the inspection of goods. |
| SHALL: | Is used where a provision is mandatory. |
| SHOULD: | Is used where a provision is advisory only. |
| WILL: | Is normally used in connection with the action by CLIENT rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR. |
| MAY: | Is used where a provision is completely discretionary. |

1. **GENERAL**

* This document presents the item material requisitions for Contractor’s use as appropriate.
* This material requisition covers the requirements for the design, manufacturing, testing and supply of **PAGA SYSTEM** as listed below.

The supplier shall supply Telephone System. The supplier shall include in the supply, all other equipment/devices/items not listed in the following, but necessary for a good design and a safe operation, taking into account process data and installation conditions such as area classification and climatic conditions.

The grade of shop assembly of the equipment/devices/items supplied shall be at maximum extent to facilitate site erection and pre-commissioning activities.

1. **BILL OF MATERIAL LIST**

| **Item** | **Description** | **Design** | **Unit** | **Remark** |
| --- | --- | --- | --- | --- |
|  | **IP-Based PAGA Unit:**  Centralized Communication System for Intercom, PA and General Alarm Data Transmission through a Standard IP Ethernet-Network according to DIN EN 60849/VDE 0828 installed in 19" rack swing standalone WxHxD:800x2000x800 mm/ 40 HU, With 100mm Base, RAL 7035 Equipped with:  - Controller  - Power Module  **- 4x Amplifier Class D 19" 250W/100V (Total 1000 W in operation with considering N+1 Configuration)**  - Tone Generator Module  - Zone selection module  - 230VAC  - 1x SIP link to PABX  - Relay Contact with F&G  - 1x AM/FM radio / CD / mp3 player 2HU/19"  - Customized Software programmed & ready to site connection  - SIP Interface to radio System  - Service Laptop including software  - MDF Terminal | 1 | Set |  |
|  | **Master Call Station:**  IP21, Desktop mounted including keyboard and Neck swan MIC | 1 | Set |  |
|  | **28 Unit Rack 19”** with full accessories and earth bar (Light, fan, power socket...) | 1 | Set |  |
|  | LAN Switch Layer 2 , 24x 10/100/1000 Base T +2 SFP Module | 1 | Set |  |
|  | **Ceiling Loudspeaker: Flush Mounted**  Ceiling Loud speaker 5 watt at 100 V ,with matching transformer 1.5, 3, 6W, Frequency Range 70 Hz to 20 kHz , SPL 90 dB (1watt/1m ) and **SPL 96 dB (6w/1m)+local JB** | 7 | Set | CCR |
|  | **Indoor Horn Loudspeaker:**  Weather proof pressure chamber Loud speaker 15/25 watt at 100 V, Adjustable Sound level, Frequency Range, Frequency Range 300Hz to 6 kHz, with matching transformer 3,6,12W, SPL 108 dB (1watt/1m ) and **SPL 118 dB (12w/1m),** Pole mounting with U-shaped , non-rusting stainless steel Bracket, **IP54** | 0 | Set |  |
|  | **Weather Proof 30 watts:**  Weather proof pressure **Loud speaker 30 watt at 100 V**, Adjustable Sound level, Frequency Range 300Hz to 6 kHz, with matching transformer 6,12,25W, SPL 108 dB (1watt/1m ) so it can be used in low power case too ,**and SPL 121 dB** **(30w/1m),AL/ABS/fiber glass reinforced plastic enclosure**, Pole mounting with U-shaped, non-rusting stainless steel Bracket, **IP65** | 16 | Set | Outdoor CGS Area |
|  | **Weather Proof Flash Beacon , Yellow Color,5 Joule** | 12 | Set | For noisy area |
|  | **Explosion proof Call Station: IP 65**  Digital Explosion proof Call station **with Hood‐**  ‐ Break Glass housing for the unit  party line /speech key master/ conference cancellation keys, volume control functions, with speech memory  **Equipped with 2m H.D.G pole** | 2 | Set |  |
|  | **Explosion Proof Flash Beacon , Yellow Color,5 Joule** | 2 | Set |  |
|  | **HDG Pole**  seamless industrial Hot dipped Galvanized & base plate including **adaptor for 4 speakers**  **Note; The right height for Horn Loud Speakers pole is around 4 m High**. More than this height the loss sound power will be high amount. | 4 | Set |  |
|  | **Outdoor Metal box for Intercom Station, Explosion proof, IP65 ,**with all required explosion proof cable glands For 4Px0.8 mm cable And required terminal , **2X M20 Gland and Terminal**  mounting accessories and blind plug | 2 | Set |  |
|  | **Outdoor Metal Type WP PJB for Loud speakers**, with all required cable glands, mounting accessories and blind plug  **10 xM20 Gland and Terminal** | 4 | Set |  |
|  | **Indoor AL material PJB for Paging, IP42**, with all required cable glands .Capable to install inside the building  Minimum **2x M25 Gland Bottom and 5 No.M20 Gland in Top and Terminal** | 1 | Set |  |
|  | **Indoor Loud Speaker Cable , CU/PVC/ XLPE ,3X1.5 mm 2, LSZH**  **Fire Resistance** | 100 | m | D03 |
|  | **Outdoor Loud Speaker Cable, 3x4mm2, TWISTED, PAIR, FLAME RETARDANT, Fire Resistance , CU/PVC/XLPE,SWA** | 1000 | m |  |
|  | **Outdoor Loud Speaker Cable, 3x2.5 mm2, TWISTED, PAIR, FLAME RETARDANT, Fire Resistance , CU/PVC/XLPE,** | 200 | m |  |
|  | **Outdoor Intercom cable ,A2Y(St)2Y, 4x2x0.8mm** | 1000 | m |  |
|  | **Outdoor LV Power cable ,3x2.5 mm2 , CU/XLPE/SWA** | 1000 | m | For Flashers |