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| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | | |
| **N2 PURGING PROCEDURE**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | | |
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| V00 | APR. 2025 | IFA | MFS | M.Fakharian | S.Faramarzpour |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **CLIENT Approval** |
|  | | | | | | |
| **Status:** | **IFA: Issued For Approval**  **IFI: Issued For Information**  **AFC: Approved For Construction** | | | | | |

**REVISION RECORD SHEET**

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| **PAGE** | **V00** | **V01** | **V02** | **V03** | **V04** |  | **PAGE** | **V00** | **V01** | **V02** | **V03** | **V04** |
| **1** | X |  |  |  |  | **66** |  |  |  |  |  |
| **2** | X |  |  |  |  | **67** |  |  |  |  |  |
| **3** | X |  |  |  |  | **68** |  |  |  |  |  |
| **4** | X |  |  |  |  | **69** |  |  |  |  |  |
| **5** | X |  |  |  |  | **70** |  |  |  |  |  |
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# Scope

This procedure covers requirements of Preservation and Long-Term Storage, which will be applied by Masnouat Felezi Sangin Co. National Iranian South Oilfields Company (NISOC).

# DEFINITIONS

|  |  |
| --- | --- |
| **CLIENT:** | National Iranian South Oilfields Company (NISOC) |
| **PROJECT:** | Binak Oilfield Development – General Facilities |
| **EPD/EPC CONTRACTOR (GC):** | Petro Iran Development Company (PEDCO) |
| **EPC CONTRACTOR:** | Joint Venture of: Hirgan Energy – Design & Inspection(D&I) Companies |
| **VENDOR:** | MFS Co. |

# N2- PURGE & EQUIPMENT:

After the completion of fabrication process and before dispatching the equipment to site, all equipment internal volume shall be filled by nitrogen gas as it is described below and suitably packed based on project packing specification:

4.1- When the hydrostatic test has been successfully conducted, all equipment shall be drained, dried and cleaned. Afterwards all openings shall be closed hermetically with suitable blinds and gaskets, so that the N2-gas which fills the equipment internal not able to escape from any un-wanted orifice.

4.2- Before Nitrogen filling equipment inside will be visually checked for any residue dirt, oil residue, metal chips or other forms of contamination, residue water or any contamination,

debris, oil and grease shall be cleaned and remained water shall be dried with compressed air.

4.3- All flange connections should be closed and relevant bolts to be tight before purging process. Repairs and rework are not allowed on purged Equipment. If repairs are required the purging must be stopped & started again after finishing repair process.

4.4- After all necessary instruments have been checked, the nitrogen gas shall be inserted through one of the bottom nozzles already prepared, the remaining nozzles shall be air tightened except the one upper which will act as the air drainage nozzle.

4.5- The purity of nitrogen gas used for purging should be 99 percent.

4.6- While nitrogen gas being inserted into the equipment, the remaining air content within the equipment will forcefully be exhausted through the designated drainage nozzle, so, gradually all the air exist within the equipment will be evacuated, to assure a complete air evacuation is to simply release the internal gas from vent hole and light a match in front of the escaping gas, if the light goes off, then no air is trapped inside the equipment, therefore, what is coming out is pure Nitrogen. Drainage nozzle shall be placed at the top point of the vessel.

4.7- After all the above procedure is fulfilled, the air drainage nozzle shall be fully tightened to avoid any un-wanted leakage.

4.8- After one of the pressure gauges is mounted, fill-in the equipment with cleaned N2-gas the way that filled gas pressure raises to about 0.5 barg, maximum 0.7 barg.

4.9- After making sure that equipment internal is completely with N2 gas, feeding entrance shall be tightened and pack as it was mentioned.

4.10- As the Nitrogen is normally kept in pressured liquid form in portable capsules, special precautions shall be considered to prevent freezing especially in small diameter branch connections while filling. Visual inspection shall conduct after N2 purge.

4.11- Afterward the equipment is ready for transport to the site.

4.12- For Sealing of all flanges, MFS will use Blinds which will be extracted from Plate, with metal gaskets non asbestos and suitable temporary bolt and nuts.

4.13- During storage of equipment at site, The Inert gas pressure shall be checked by Owner periodically and as required. If needed it shall be re-pressurized with the same inert gas.

# Reporting

After purging, all necessary information shall be reported in Report form which has been mentioned in the next page.

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|  | | **N2 PURGING REPORT** | | |  | |
| **REFERENCE CODE:PR-08-01** | | **FORM CODE:FR-08-01/63** | |
| **REVISION NO:05** | | **REVISION NO.:00** | |
| **REVISION DATE: 2024-05-29** | | **REVISION DATE: 2024-05-29** | |
| Project: | | OWNER: | | | Report No: | |
| Reference: | | Equipment No.: | | | DWG NO.: | |
| ITP No: | | Report Date: | | | Page: | |
| Precleaning: | | | | Method of precleaning: | | |
| Pressure: | | | | Method of purging: | | |
| Pressure Gauge: | | | | Pressure Range: | | |
| Result of Inspection: | | | | | | |
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| V: | C: | | TPI: | | | O: |