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| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | | |
| **CALCULATION NOTE FOR FLOW ELEMENT SIZING**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | | |
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| D01 | DEC.2022 | IFA | M.Aryafar | M.Fakharian | M.Mehrshad |  |
| D00 | JUN.2022 | IFC | M.Aryafar | M.Fakharian | M.Mehrshad |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **CLIENT Approval** |
| **Class:2** | | **CLIENT Doc. Number:** **F0Z-708741** | | | | |
| **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 |  |  |  | **66** |  |  |  |  |  |
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| **3** | X |  |  |  |  | **68** |  |  |  |  |  |
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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 Company (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. **Scope**

The purpose of this document is to provide report for sizing of all orifices used in the BINAK Gas compressor station.

1. **NORMATIVE REFERENCES**

## Local Codes and Standards

* IPS-E-IN-130 Engineering Standard for flow instruments.

## International Codes and Standards

* AS 2360.1.1/ISO 5167-1 Measurement of fluid flow in closed conduits.

## The Project Documents

* BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis of Design
* BK-GNRAL-PEDCO-000-PR-DC-0001 Process Design Criteria
* BK-GCS-PEDCO-120-PR-PF-0001 Process Flow Diagram (PFD)

## ENVIRONMENTAL DATA

Refer to "Process Basis of Design; Doc. No. BK-GNRAL-PEDCO-000-PR-DB-0001".

1. **software**

The software using for sizing flow elements is InstruCalc (version 9.0.0).

1. **Diameter of orifice**

The diameter ratio β= d/D is always greater than or equal to 0.15 and less than or equal to 0.70. (Base on IPS-E-IN-130).

1. **ORIFICE SIZEs**

Below is a table that contains the sizing details for the orifices to be installed in BINAK Gas compressor station.



D01



D01



D01

1. **attachment**