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| **طرح نگهداشت و افزایش تولید 27 مخزن** | | | | | | | |
| **SPECIFICATION FOR PIPE SUPPORT**  **نگهداشت و افزایش تولید میدان نفتی بینک** | | | | | | | |
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| D01 | Feb. 2023 | AFD | M.Noori | M.Fakharian | S.Faramarzpour |  |
| D00 | Aug. 2021 | IFC | M.Asgharnejad | M.Fakharian | Sh.Ghalikar |  |
| **Rev.** | **Date** | **Purpose of Issue/Status** | **Prepared by:** | **Checked by:** | **Approved by:** | **CLIENT Approval** |
| **Class: 2** | | **CLIENT Doc. Number: F0Z-707144** | | | | |
| **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** |
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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.

**GENERAL DEFINITION**

The following terms shall be used in this document.

|  |  |
| --- | --- |
| COMPANY: | National Iranian South Oilfields Company (NISOC) |
| PROJECT: | Binak Oilfield Development – General Facilities |
| EPD/EPC CONTRACTOR: | 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 EPC CONTRACTOR and approved by GC & COMPANY (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 COMPANY rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR. |
| MAY: | Is used where a provision is completely discretionary. |

**GUIDANCE FOR USE OF THIS DOCUMENT**

The amendments/supplement to the related IPS Standard(s) given in this document are directly related to the equivalent sections or clauses in the IPS Standard(s). For clarity, the section and paragraph numbering of the IPS Standard(s) has been used as long as possible. Where clauses in IPS are referenced within this document, it shall mean those clauses are amended by this document. Clauses in” IPS” that are not amended by this document shall remain valid as written.

For ease of reference, the clause or section numbering of the related IPS Standard(s) has been used throughout this specification. For the purpose of this specification, the following definitions shall hold:

Sub. (Substitution): The IPS Std. Clause is deleted and replaced by a new clause.

Del. (Deletion): The IPS Std. Clause is deleted without any replacement.

Add. (Addition): A new clause with a new number is added.

Mod. (Modification): Part of the IPS Std. Clause is modified, and/or a new description and/or condition is added to that clause.

1. **Scope (MoD.)**

This specification gives amendment and supplement to IPS-G-PI-280(2), "General Standard for Pipe Supports" for definition the requirements governing the design, fabrication and application of pipe supports in this project.

It shall be used in conjunction with standard drawings for present document subject.

IPS-G-PI-280(2) contains the requirements for selection, design, fabrication and erection of supports and supporting elements used for on-plot and off-plot piping in oil, gas and Petrochemical Industries. Both insulated and uninsulated piping are covered by this Standard.)

1. **NORMATIVE REFERENCES (MOD.)**

Following Codes, Standards and Documents shall be added to the IPS-G-PI-280.

## Local Codes and Standards (ADD.)

* NIOC Standard Drawing
* IPS-E-GN-100 “Engineering Standard for Units” 'BK-SUR-ENG-PIP-00-01462

## The Project Documents (ADD.)

* BK-GNRAL-PEDCO-000-PI-DC-0001 Piping Design Criteria
* BK-SSGRL-PEDCO-110-PI-DW-0001 Standard Pipe Support drawings
* BK-GNRAL-PEDCO-000-PI-SP-0006 Specification for Painting
* BK-GNRAL-PEDCO-000-PI-SP-0015 Specification for Construction, Fabrication

and Erection

* BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis of Design
* BK-GNRAL-PEDCO-000-PI-SP-0011 Specification for Welding of Plant Piping

System

* BK-GNRAL-PEDCO-000-PI-SP-0012 Specification for Flexibility Analysis

## ENVIRONMENTAL DATA

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

## STANDARD

MSS (MANUFACTURERS STANDARDIZATION SOCIETY)

SP-69: 2002 “Pipe Hangers and Supports Selection and

Application”

ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)

ASTM A 123/A123M-02 “Standard Specification for Zinc (Hot Dip

Galvanized) Coatings on Iron and Steel Products.”

ASTM A 653/A653M/04a “Standard Specification for Steel Sheet, Zinc

Coated (Galvanized) or Zinc-Iron Alloy-Coated

(Galvanized) by the Hot-Dip Process.”

ASTM B696-00(2004)e1 “Standard Specification for Coatings of Cadmium

Mechanically Deposited.”

ASTM B766-86 “Standard Specification for Electrodeposited

Coatings of Cadmium.”

ASME (AMERICAN SOCIETY OF MECHANICAL ENGINEERS)

ASME Section IX “Welding and Brazing Qualifications”

1. **DEFINITION AND TERMINOLOGY**

Contractor

Person, Firm, Company or corporation with whom the company has entered in to a contract for

design engineering, procurement, construction and commissioning of the project.

Supplier/ Vendor

Party, which manufactures or supplies equipment and services to perform the duties specified by

the Contract.

1. **UNITS**

This Standard is based on International System of Units (SI) as specified in IPS-E-GN-100.

1. **GENERAL**

Pipe supports shall be designed, manufactured, fabricated, inspected and/or selected for installation

In accordance with ASME B31.3, MSS SP-58-2002, MSS SP-69-2002, MSS SP-89-1998, UL203-

2005, IPS-D-PI-130 and this Standard.

1. **DESIGN**

Supporting Cold-Insulated Pipes (Del.)

Typical Spring assembly details showing the various components and spring assemblies

covered by this specification shall be provided by the CONTRACTOR.

Theses assemblies shall be crossreferenced on the spring/hanger Data sheets, as appropriate,

to indicate to the Supplier the items required to produce complete spring/hanger support

assemblies.

1. **FABRICATION AND INSTALLATION OF PIPE SUPPORTS**

No amendments or supplements are to state.

1. **DELETED**
2. **LIMIT OF SUPPORTS DESCRIPTION (ADD.)**

- Supports shall be described during the detail engineering, for all piping 2” and above.

- They shall be defined on piping drawing isometric and Piping Plan Drawing.

- Supports for pipe 1 ½” and smaller shall be selected on site, during construction; however during detail engineering the various possibilities for support installation shall be reviewed.

- All pipe clips, pads and gussets on vessels and tanks shall be specified when required during study phase of Detail Engineering, regardless of line diameter.

- Support types and location for critical lines shall conform to “Standard Support Drawing:

BK-SSGRL-PEDCO-110-PI-DW-0001” and Piping Stress Analysis Report.

- Supporting for non-metallic piping shall be in accordance with vendor requirement.

1. **SUPPORT CLASSIFICATION (add.)**

- Standard supports are those defined and detailed in “Standard Support Drawing; BK-SSGRL-PEDCO-110-PI-DW-0001.

- Special supports cover all other supports not included in the scope of standard supports and are defined for specific cases, due to heavy loads or abnormal temperatures and conceptual details.

- Special supports shall be detailed individually and assigned a special number.

1. **SURFACE PROTECTION (ADD.)**

- Unless otherwise specified, All supports shall be coated in accordance with “Specification for Painting; Doc. No. BK-GNRAL-PEDCO-PI-SP-0006”.