



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض

عمومی و مشترک



شماره پیمان:

053 - 073 - 9184

SPECIFICATION FOR PIPELINE VALVES

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D02	0006	SP	PL	000	PEDCO	GNRAL	BK

شماره صفحه: 1 از 8

طرح نگهداشت و افزایش تولید 27 مخزن

SPECIFICATION FOR PIPELINE VALVES

نگهداشت و افزایش تولید میدان نفتی بینک

Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D02	MAR. 2023	IFA	M.Noori	M.Fakharian	M.Mehrshad	
D01	JAN. 2022	IFA	H.Shahrokhi	M.Fakharian	M.Mehrshad	
D00	AUG. 2021	IFC	M.Asgharnejad	M.Fakharian	Sh.Ghalikar	

Class: 2

CLIENT Doc. Number: F0Z-707156

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



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض

عمومی و مشترک



شماره پیمان:

053 - 073 - 9184

SPECIFICATION FOR PIPELINE VALVES



نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
D02	0006	SP	PL	000	PEDCO	GNRAL	BK

شماره صفحه: 2 از 8

REVISION RECORD SHEET



PAGE	D00	D01	D02	D03	D04
1	X		X		
2	X		X		
3	X				
4	X	X			
5	X				
6	X				
7	X	X			
8	X	X			
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					

PAGE	D00	D01	D02	D03	D04
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
101					
102					
103					
104					
105					
106					
107					
108					
109					
110					
111					
112					
113					
114					
115					
116					
117					
118					
119					
120					
121					
122					
123					
124					
125					
126					
127					
128					
129					
130					

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p style="text-align: center;">SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادر کننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GNRAL</td> <td>PEDCO</td> <td>000</td> <td>PL</td> <td>SP</td> <td>0006</td> <td>D02</td> </tr> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GNRAL	PEDCO	000	PL	SP	0006	D02	<p>شماره صفحه: 3 از 8</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GNRAL	PEDCO	000	PL	SP	0006	D02											

CONTENTS

1.0	INTRODUCTION	4
2.0	SCOPE	4
3.0	NORMATIVE REFERENCES.....	5
3.1	LOCAL CODES AND STANDARDS.....	5
3.2	INTERNATIONAL CODES AND STANDARDS	5
3.3	ENVIRONMENTAL DATA	7
4.0	PIPELINE VALVE	8
4.1	MODIFICATION TO IPS-M-PI-110.....	8
5.0	WELLHEAD AND FLOWLINE VALVE.....	8
5.1	VALVE (UNDER 2")	8
5.2	VALVE (2"AND ABOVE).....	8

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 – 073 – 9184</p>	<p>SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" data-bbox="391 383 1177 448"> <tr> <th>نسخه</th> <th>سریال</th> <th>نوع مدرک</th> <th>رشته</th> <th>تسهیلات</th> <th>صادرکننده</th> <th>بسته کاری</th> <th>پروژه</th> </tr> <tr> <td>D02</td> <td>0006</td> <td>SP</td> <td>PL</td> <td>000</td> <td>PEDCO</td> <td>GNRAL</td> <td>BK</td> </tr> </table>	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D02	0006	SP	PL	000	PEDCO	GNRAL	BK	<p>شماره صفحه : 4 از 8</p>
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه											
D02	0006	SP	PL	000	PEDCO	GNRAL	BK											

1.0 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.

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:	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.

2.0 SCOPE

This document covers the requirements for fabrication of multi-purpose Pipeline Valves for this project which shall be observed by vendors. This Specification covers the minimum requirements for production and testing of Pipeline Valves from the suitable materials as specified hereunder in this specification.

Deviations from this specification shall be approved by client. Any omission in these requirements

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 – 073 – 9184</p>	<p>SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">پروژه</td> <td style="width: 10%;">بسته کاری</td> <td style="width: 10%;">صادر کننده</td> <td style="width: 10%;">تسهیلات</td> <td style="width: 10%;">رشته</td> <td style="width: 10%;">نوع مدرک</td> <td style="width: 10%;">سریال</td> <td style="width: 10%;">نسخه</td> </tr> <tr> <td>BK</td> <td>GNRAL</td> <td>PEDCO</td> <td>000</td> <td>PL</td> <td>SP</td> <td>0006</td> <td>D02</td> </tr> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GNRAL	PEDCO	000	PL	SP	0006	D02	<p>شماره صفحه: 5 از 8</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GNRAL	PEDCO	000	PL	SP	0006	D02											

shall not relieve the vendor of his responsibility of requirements specified in the project documentation.



3.0 NORMATIVE REFERENCES

3.1 LOCAL CODES AND STANDARDS

- IPS-M-PI-110 Material and Equipment Standard for Valves



3.2 INTERNATIONAL CODES AND STANDARDS

- ASME B 16.5 Pipe Steel pipe flanges, flanged fittings
- ASME B31.4 Liquid Transportation System for Hydro Carbons and other liquids
- ASME B31.8 Gas Transmission and Distribution Piping Systems
- ASME Section VIII Division 1 Rules for Construction of Pressure Vessels
- ASME Section IX Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators
- ASME B16.10 Face-to-Face and End-to-End Dimensions of Valves
- ASME B16.11 Forged Fittings, Socket Welding and Threaded
- ASME B16.25 Butt Welding Ends
- ASME B16.34 Valves-Flanged, Threaded and Welding End
- ASME B16.47 Large Diameter Steel Flanges NPS 26 through NPS 60 Metric/Inch Standard
- ASME B36.10 Welded and Seamless Wrought Steel Pipe
- ASME B16.11 Forged Fittings, Socket Welding and Threaded
- API Spec. 5L Specification for Line Pipe
- API 6D Pipeline Valves (Gate, Plug, Ball and Check Valves)
- API spec 6A Specification for Wellhead and Christmas Tree Equipment
- API 594 Check Valves: Wafer, Wafer-Lug and Double Flanged Type
- API 598 Valve Inspections and Testing
- API 599 Metal Plug Valves-Flanged and Welding Ends
- API 600 Steel Gate Valves, Flanged and Butt Welding Ends, Bolted and Pressure Bonnets
- API 602 Compact Steel Gate Valves-Flanged, Threaded,

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p>SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>پروژه</th> <th>بسته کاری</th> <th>صادر کننده</th> <th>تسهیلات</th> <th>رشته</th> <th>نوع مدرک</th> <th>سریال</th> <th>نسخه</th> </tr> </thead> <tbody> <tr> <td>BK</td> <td>GNRAL</td> <td>PEDCO</td> <td>000</td> <td>PL</td> <td>SP</td> <td>0006</td> <td>D02</td> </tr> </tbody> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GNRAL	PEDCO	000	PL	SP	0006	D02	<p>شماره صفحه: 6 از 8</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GNRAL	PEDCO	000	PL	SP	0006	D02											

Welding and Extended Body Ends

- API 603 Class 150, Cast Corrosion-Resistant, Flanged end Gate Valves
- API 605 Large-Diameter Carbon Steel Flanges
- API 607 Fire Test for Soft-Seated Quarter-Turn Valve
- API 608 Metal Ball Valves-Flanged and Butt-Welding Ends
- API 609 Butterfly Valves: Double Flanged, Lug and Wafer Type
- API 6FA Fire Test for Valves
- ASTM A435 Standard Specification for Straight-beam ultrasonic examination of steel plates
- ASTM A216 Standard Specification for Steel Casting, Carbon Suitable for Fusion Welding, for High-Temperature Service
- ASTM A694 Standard Specification for Carbon and Alloy Steel Forging for Pipe Flanges, Fittings, Valves, and Parts for High Pressure Transmission Service
- ASTM B650 Standard Specification for Electrodeposited Engineering Chromium Coatings on Ferrous Substrate
- ASTM B656 Standard Guide for Autocatalytic (Electro less) Nickel-Phosphorus Deposition on Metals for Engineering Use
- ASTM E112 Standard Test Methods for Determining Average Grain Size
- ASTM E446 Standard Reference Radiographs for Steel Casting up to 2in. in Thickness
- ASNT-SNT-TC-1 American Society for Non-destructive Testing
- BS 1133 Packaging Code
- BS 1868 Specification for Steel Check Valves (Flanged and Butt-welding Ends) for the Petroleum, Petrochemical and Allied Industries
- BS 1873 Specification for Steel Globe and Globe Stop and Check Valves (Flanged and Butt-Welding Ends) for the Petroleum, Petrochemical and Allied Industries
- BS 5151 Specification for Cast Iron Gate (Parallel Slide) Valves for General Purpose
- BS 5152 Specification for Cast Iron Globe and Globe Stop and Check Valves for General Purpose

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 – 073 – 9184</p>	<p>SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">پروژه</td> <td style="width: 10%;">بسته کاری</td> <td style="width: 10%;">صادر کننده</td> <td style="width: 10%;">تسهیلات</td> <td style="width: 10%;">رشته</td> <td style="width: 10%;">نوع مدرک</td> <td style="width: 10%;">سریال</td> <td style="width: 10%;">نسخه</td> </tr> <tr> <td>BK</td> <td>GNRAL</td> <td>PEDCO</td> <td>000</td> <td>PL</td> <td>SP</td> <td>0006</td> <td>D02</td> </tr> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GNRAL	PEDCO	000	PL	SP	0006	D02	<p>شماره صفحه: 7 از 8</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GNRAL	PEDCO	000	PL	SP	0006	D02											



- BS 5153 Specification for Cast Iron Check Valves for General Purpose
- BS 5154 Specification for Copper Alloy Globe, Globe Stop and Check and Gate Valves
- BS 5155 Specification for Butterfly Valves
- BS 5157 Specification for Gate (Parallel Slide) Valves for General Purposed
- BS 5159 Specification for Cast Iron and Carbon Steel Ball Valves for General Purpose
- MSS-SP-6 Standard Finishes for Contact Faces of Pipe Flanges and Connecting End Flanges of Valves and Fittings
- MSS-SP-44 Steel Pipeline Flanges
- MSS-SP-54 Quality Standard for Steel Castings for Valves, Flanges and Fittings and Other Piping Components Radiographic Examination Method
- MSS-SP-70 Cast Iron Gate Valves, Flanged and Threaded En
- MSS-SP-78 Cast Iron Plug Valves, Flanged and Threaded Ends
- MSS-SP-80 Bronze Gate, Globe, Angle and check Valves
- MSS-SP-81 Stainless Steel, Bonnet less, Flanged Knife Gate Valves
- MSS-SP-84 Steel Valves, Socket Welding and Threaded Ends
- MSS-SP-25 Standard Marking System for Valves, Fittings, Flanges, and Unions
- NACE MR 0175/ISO 15156 Materials For Use In H2S Containing Environments (HIC) Test

3.3 ENVIRONMENTAL DATA

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

3.4 CONFLICT REQUIREMENT

In case of any conflict between requirements specified herein & the requirements of any other referenced document, this subject shall be reflected to CLIENT and the final decision will be made by CLIENT.

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>عمومی و مشترک</p>																	
<p>شماره پیمان: 053 – 073 – 9184</p>	<p>SPECIFICATION FOR PIPELINE VALVES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>پروژه</th> <th>بسته کاری</th> <th>صادر کننده</th> <th>تسهیلات</th> <th>رشته</th> <th>نوع مدرک</th> <th>سریال</th> <th>نسخه</th> </tr> </thead> <tbody> <tr> <td>BK</td> <td>GNRAL</td> <td>PEDCO</td> <td>000</td> <td>PL</td> <td>SP</td> <td>0006</td> <td>D02</td> </tr> </tbody> </table>	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GNRAL	PEDCO	000	PL	SP	0006	D02	<p>شماره صفحه : 8 از 8</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GNRAL	PEDCO	000	PL	SP	0006	D02											

4.0 PIPELINE VALVE

4.1 MODIFICATION TO IPS-M-PI-110

This part of specification is based on the latest edition of IPS-M-PI-110 "Material and Equipment Standard for Valves" without any modification.

5.0 WELLHEAD AND FLOWLINE VALVE

5.1 VALVE (UNDER 2")

5.1.1 MODIFICATION TO IPS-M-PI-110

This part of specification is based on the latest edition of IPS-M-PI-110 "Material and Equipment Standard for Valves" without any modification.

5.2 VALVE (2"AND ABOVE)

5.2.1 MODIFICATION TO API6A

This part of specification is based on the latest edition of API 6A "Specification for Wellhead and Christmas Tree Equipment" without any modification.

NOTE:

For Lines which are subjected to Pigging, Ball Valves shall be considered as "Full Bore" type and Gate Valves shall be considered as "Thru Conduit" Valves.