



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض



احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

شماره پیمان:

053 - 073 - 9184

DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0004	SP	PR	120	PEDCO	GCS	BK

شماره صفحه : 1 از 8

طرح نگهداشت و افزایش تولید 27 مخزن

DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE

نگهداشت و افزایش تولید میدان نفتی بینک

D04	NOV.2023	AFD	M.Aryafar	M.Fakharian	S.Faramarzpour	
D03	FEB.2023	IFA	M.Aryafar	M.Fakharian	M.Mehrshad	
D02	NOV.2022	IFA	M.Aryafar	M.Fakharian	M.Mehrshad	
D01	AUG.2022	IFA	M.Aryafar	M.Fakharian	M.Mehrshad	
D00	MAR.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-708738

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

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

053 - 073 - 9184

DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE



نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D04	0004	SP	PR	120	PEDCO	GCS	BK

شماره صفحه: 2 از 8

REVISION RECORD SHEET





PAGE	D00	D01	D02	D03	D04
1	X	X	X	X	X
2	X	X	X	X	X
3	X				
4	X				
5	X				
6	X	X		X	X
7	X		X	X	X
8	X	X	X		X
9	X				
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</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p>DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE</p> <table border="1"> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادرکننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GCS</td> <td>PEDCO</td> <td>120</td> <td>PR</td> <td>SP</td> <td>0004</td> <td>D04</td> </tr> </table>	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	PR	SP	0004	D04	<p>شماره صفحه : 3 از 8</p>
پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	PR	SP	0004	D04											

CONTENTS

1.0	INTRODUCTION	4
2.0	SCOPE	5
3.0	NORMATIVE REFERENCES	5
3.1	LOCAL CODES AND STANDARDS.....	5
3.2	THE PROJECT DOCUMENTS.....	5
3.3	ENVIRONMENTAL DATA	5
3.4	ORDER OF PRECEDENCE.....	5
4.0	CORROSION INHIBITOR INJECTION PACKAGE	6
4.1	PACKAGE DESCRIPTION AND REQUIREMENTS	6
4.2	PROCESS DESCRIPTION	6
4.3	VENDOR SCOPE	6
4.4	SOLVENT SPECIFICATION	7
4.5	PUMPS SPECIFICATION.....	7
4.6	TANK SPECIFICATION	7
4.7	PACKAGE INSTRUMENT & CONTROL SYSTEM	8
5.0	METHANOL INJECTION PACKAGE	8

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک	 شرکت توسعه و پترو ایران  																
شماره پیمان: 053 - 073 - 9184	DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE	شماره صفحه : 4 از 8																
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادرکننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GCS</td> <td>PEDCO</td> <td>120</td> <td>PR</td> <td>SP</td> <td>0004</td> <td>D04</td> </tr> </table>	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	PR	SP	0004	D04	
پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	PR	SP	0004	D04											

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.

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 Facilities; 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.

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p>DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE</p> <table border="1"> <thead> <tr> <th>پروژه</th> <th>بسته کاری</th> <th>صادرکننده</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>GCS</td> <td>PEDCO</td> <td>120</td> <td>PR</td> <td>SP</td> <td>0004</td> <td>D04</td> </tr> </tbody> </table>	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	PEDCO	120	PR	SP	0004	D04	<p>شماره صفحه: 5 از 8</p>
پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه											
BK	GCS	PEDCO	120	PR	SP	0004	D04											

2.0 SCOPE

This specification outlines the minimum process requirements for design of Associated Chemical Injection packages in Binak Plant.

3.0 NORMATIVE REFERENCES

3.1 LOCAL CODES AND STANDARDS

- IPS-E-PR-492 Process Requirements Of Caustic And Chemical Systems

3.2 THE PROJECT DOCUMENTS



- BK-GNRAL-PEDCO-000-PR-DC-0001 Process Design Criteria
- BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis Of Design
- BK-GCS-PEDCO-120-PR-PF-0002 PFD
- BK-GCS-PEDCO-120-PR-UF-0001 UFD
- BK-GCS-PEDCO-120-PR-PI-0018 P&IDs

3.3 ENVIRONMENTAL DATA

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

3.4 ORDER OF PRECEDENCE

In case of any conflict between the contents of this document or any discrepancy between this document and other project documents or reference standards, this issue must be reported to the CLIENT. The final decision in this situation will be made by CLIENT.

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک																	
شماره پیمان: 053 - 073 - 9184	DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE	شماره صفحه: 6 از 8																
	<table border="1" style="width: 100%; text-align: center;"> <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>D04</td> <td>0004</td> <td>SP</td> <td>PR</td> <td>120</td> <td>PEDCO</td> <td>GCS</td> <td>BK</td> </tr> </table>	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D04	0004	SP	PR	120	PEDCO	GCS	BK	
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه											
D04	0004	SP	PR	120	PEDCO	GCS	BK											



4.0 CORROSION INHIBITOR INJECTION PACKAGE

4.1 PACKAGE DESCRIPTION AND REQUIREMENTS

VENDOR shall include all necessary equipment as described below to make a complete and operable unit. The minimum necessary equipment is shown in P&ID No. BK-GCS-PEDCO-120-PR-PI-0018 .This shall include but not be limited to the following:

- One storage tank with mixer
- Four injection pumps
- Piping and all instrumentation required for safe operation
- Filters
- Pulsation dampeners
- Calibration pots
- Skid
- Package Piping with supports
- Vents and drains
- Dampener charge kits (one / skid)
- Internals and accessories
- Drip pan for skids
- Necessary platforms, ladders, handrails and davits
- Package Instrumentation & cabling to junction boxes
- Cable trays and support
- Local control panel
- Package Electricals

4.2 PROCESS DESCRIPTION

The package will provide corrosion inhibitor to injection points.



Corrosion inhibitor will be stored in tank. The capacity of tank is estimated for 7 days storage of maximum corrosion inhibitor consumption rate.

Injection is ensured by metering pumps, which will be stopped bay tank low low liquid level.

4.3 VENDOR SCOPE

The vendor shall provide a skid mounted injection package with all associated interconnecting pipe work and instrumentation to operate the package safely and efficiently.

The design and performance of storage tank and pumping facilities shall comply with all requirements.

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p style="text-align: center;">DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>نسخه</td> <td>سریال</td> <td>نوع مدرک</td> <td>رشته</td> <td>تسهیلات</td> <td>صادرکننده</td> <td>بسته کاری</td> <td>پروژه</td> </tr> <tr> <td>D04</td> <td>0004</td> <td>SP</td> <td>PR</td> <td>120</td> <td>PEDCO</td> <td>GCS</td> <td>BK</td> </tr> </table>	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D04	0004	SP	PR	120	PEDCO	GCS	BK	<p>شماره صفحه : 7 از 8</p>
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه											
D04	0004	SP	PR	120	PEDCO	GCS	BK											

4.4 SOLVENT SPECIFICATION

Gasoil could be used as solvent for corrosion inhibitor, with following specification:

- Specific gravity 15/15°C = 082 ~ 0.86 (Gasoil Solvent)
- Viscosity, Cst at 38°C = 2 ~ 5.5 (Gasoil as Solvent)

4.5 PUMPS SPECIFICATION

The inhibitor injection pumps are 2 types of pump; One set for High Pressure consumers and One set for Low Pressure consumers with following specifications:

4.6.1 High Pressure (P-2207A/B)

- Quantity: 2 (1+1)
- Rated capacity: 1.11 lit/hr lit/hr
- Type: P.D-Controlled Volume/Metering (Acc. to API 675 Std. & IPS-M-PM-150)
- Discharge pressure: 62 barg
- Design temperature: 55°C

4.6.2 Low Pressure (P-2207C/D)

- Quantity: 2 (1+1)
- Rated capacity: 1.56 lit/hr
- Type: P.D-Controlled Volume/Metering (Acc. to API 675 Std. & IPS-M-PM-150)
- Discharge pressure: 9 barg
- Design temperature: 55°C

4.6 TANK SPECIFICATION

4.6.1 Operating condition



- Pressure: Atmospheric
- Temperature: Ambient

4.6.2 Design condition

- Pressure: Atm. + Full of Water
- Temperature: 55°C

4.6.3 Tank Sizing (Vertical):

- Tank Working Capacity : 0.4 m³
- Tank Nominal Capacity : 1.0 m³

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>																	
<p>شماره پیمان: 053 - 073 - 9184</p>	<p style="text-align: center;">DUTY SPECIFICATION FOR CHEMICAL INJECTION PACKAGE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <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> </thead> <tbody> <tr> <td>D04</td> <td>0004</td> <td>SP</td> <td>PR</td> <td>120</td> <td>PEDCO</td> <td>GCS</td> <td>BK</td> </tr> </tbody> </table>	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D04	0004	SP	PR	120	PEDCO	GCS	BK	<p>شماره صفحه : 8 از 8</p>
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه											
D04	0004	SP	PR	120	PEDCO	GCS	BK											

4.7 PACKAGE INSTRUMENT & CONTROL SYSTEM

Package control system is "Package type A" (Refer to Project Specifications for Instrumentation of Package Units Doc. No. BK-GNRAL-PEDCO-000-IN-SP-0004.

The package is equipped with its instruments and controlled by its attached local panel (LCP). shall be connected to the PCS, ESD, for required monitoring, control functions and shutdowns as per P&ID.

400/230 VAC Power supply will be submitted by Contractor. Any convertor, battery backup, stabilizer, distributed system,... shall be provided by package vendor.

For instrumentation and cabling refer to Specification for Instrumentation, Doc.No.BK-GNRAL-PEDCO-000-IN-SP-0001, Specification For Instrument/F&G Cables, Doc.No.BK-GNRAL-PEDCO-000-IN-SP-0010, Instrument & Control Design Criteria, Doc.No.BK-GCS-PEDCO-120-IN-DC-0002.

5.0 METHANOL INJECTION PACKAGE

The required methanol is supplied from the existing plant.