

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک ( قرارداد BK-HD-GCS-CO-0008_03 )</p>							 
شماره پیمان:  053 – 073 – 9184	FAT PROCEDURE (BARE-BLOCK MRT)							6 از 1 :شماره صفحه
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	
	BK	GCS	HY	120	QC	PR	0007	
							V00	

## طرح نگهداشت و افزایش تولید 27 مخزن

## FAT PROCEDURE -BARE BLOCK MRT

### نگهداشت و افزایش تولید میدان نفتی بینک

V00	27.02.2024	IFR	Havayar Co.	M.Fakharian	S. Faramarzpour	
Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 2

Status:

IFA: Issued For Approval  
IFR: Issued For Review  
IFI: Issued For Information  
AFC: Approved For Construction

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)</p>																						
	<p>FAT PROCEDURE</p> <table border="1"> <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>GCS</td> <td>HY</td> <td>120</td> <td>QC</td> <td>PR</td> <td>0007</td> <td>V00</td> </tr> </table>						پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	HY	120	QC	PR	0007	V00	<p>6 از 2: شماره صفحه</p>
پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه																
BK	GCS	HY	120	QC	PR	0007	V00																
<p>شماره پیمان: 053 - 073 - 9184</p>																							

### REVISION RECORD SHEET

PAGE	V00	V01	V02	V03	V04
1	X				
2	X				
3	X				
4	X				
5	X				
6	X				
7	X				
8	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	V00	V01	V02	V03	V04
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					

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)</p>							 	
شماره پیمان: 053 – 073 – 9184	FAT PROCEDURE							6 از 3 :شماره صفحه	
	نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری		پروژه
	V00	0007	PR	QC	120	HY	GCS		BK

1.0	Introduction	4
2.0	General Definition	4
1.0	Mechanical Running Test	5
2.0	Inspection and Test Item	5
3.0	Acceptance criteria	5
4.0	BAR-OVER Check	6

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)</p>								
شماره پیمان: 053 – 073 – 9184	FAT PROCEDURE							6 از 4 :شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	QC	PR	0007		V00

## 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.

## 2.0 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:	HAVAYAR
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.

 <b>NISOC</b>	و افزایش تولید میدان نفتی بینک ح الارض و ابنیه تحت الارض  کمپرسور گاز (رفت و برگشتی) بینک ( BK-HD-GCS-CO-0008_03					<p>Mechanical running test of full package also shall be done at havayar shop with Job motor and relevant auxiliary, so the below statement is just refereed to performance of bare block compressor. so the procedure of performance of bare block shall be added here</p>  	
شماره پیمان:	FAT PROCEDURE						6 از 5
053 – 073 – 9184	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته		
	BK	GCS	HY	120	QC		

## 1.0 Mechanical Running Test

### 1.1. Mechanical Running Test:

1.1.1. The test shall prove mechanical operation as complete unit loaded used.

1.1.2. The compressor does not have to be pressure loader for mechanical running test. The compressor suction/discharge valves shall be dismantled. Voltage, current, operation speed, vibration, bearing temperature shall be checked

### 1.2. Test Condition:

- Compressor shall be tested at the specified number of revolutions.
- The testing may be performed at a number of revolutions within +10% and 5% of the specified number of revolutions.

standard discharge point shall be defined and guaranteed at the terminal outlet of the package

## 2.0 Inspection and Test Item

2.1. The compressor will be operated at rated RPM for 4 hours without cylinder valve and it will be checking every 1 hours. Following parameters shall be check:

- Voltage & Current
- Operation Speed
- Vibration
- Bearing temperature and oil temperature

## 3.0 Acceptance criteria

3.1 Number of Revolutions The measurement shall be carried out by using a preliminary calibrated hand tachometer. The measurement of the number of revolutions shall be carried out of 2 or 3 times under the same condition and the average value shall be taken.




3.2 The testing may be performed at a number of revolutions.

Reference standard No. for compressor shall be added such as API618, ISO1217 , ISO5176-1,...

### 3.3 Vibration

As a rule, vibration shall be measured at the bearings or in the vicinity thereof with respect to three directions (Axial/Vertical/Horizontal)

Applicable code: ISO 20816-8

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض  خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)		 	
	Vibration value after final assembly with main components and compressor bed and supports shall be measured and shall be in the range specified by vendor		شماره صفحه 6 از 6	سریال 0007

PART	mm/s (RMS)	PART	mm/s (RMS)
FOUNDATION BOLT	2.0	CYLINDER LATERAL	8.7
FRAME (TOP)	5.3	CYLINDER ROD	10.7

Note: The vibration measurement value measured by KWANDSHIN is a reference value because it is a project that supplies only the Bare Body without the compressor bed and support.

### 3.4 Temperature

During mechanical running test, bearing temperature shall be below ambient + 40 °C.

During mechanical running test, check the lube oil temperature and record it on the check sheet.

Following bearing temperature shall be measured:

- 1- Main bearing temperature drive side
- 2- Main bearing temperature non drive side

## 4.0 BAR-OVER Check

### 4.1 Piston clearance check

Rotating coupling by hand, and the piston may be brought into contact with the cylinder cover at the top and bottom dead point. And check the clearance with lead the acceptance clearance spec is as below:

Bottom = to be later

instrument list shall be added in procedure

The measuring instrument (analogue or digital) shall have an accuracy of  $\pm 1\%$  at the measured value. please add a note and relevant certificate shall be attached to Test report.

Transmitters and gauges shall be calibrated under pressure and temperature conditions similar to those prevailing during the test, using dead-weight or electrical testing equipment of an equivalent accuracy. please add here

Shaft speed shall be determined by using methods that have an accuracy of  $\pm 0,5\%$  or better.

Maximum deviations from specified values and fluctuations from average readings based on standard shall be added