طرح نگهداشت و افزایش تولید 27 مخزن

N2 Purging Procedure

نگهداشت و افزایش تولید میدان نفتی بینک

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IFI: Issued For Information
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PAGE	V00	V01	V02	V03	V04
1	X				
2	X				
3	X				
4	X				
5	X				
6	X				
7					
8					
9					
10					
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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					
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115					
116					
117					
118					
119					
120					
121					
122					
123					
124					
125					
126					
127					
128					
129					
130					

Content:

1. INTRODUCTION 4
2. PURPOSE 4
3. DEFINITION 4
4.REFERENCE 5
5.TECHNIQUE 5

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.

CLIENT:	National Iranian South Oilfields Company (NISOC)
PROJECT:	Binak Oilfield Development – Manufacturing (w/Engineering & Material Supply) of Air Coolers
EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company (PEDCO)
OWNER:	OWNER is collectively refer to National Iranian South Oil Company (NISOC) and Petro Iran Development Company (PEDCO)
EPC CONTRACTOR:	Joint Venture of : Hirgan Energy – Design & Inspection(D&I) Companies
VENDOR:	Aban Air Cooler (AAC)
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
THIRD PARTY INSPECTOR (TPI):	Third Party Inspector
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. PURPOSE

This procedure describes the N2 purging for air cooler.

3. DEFINITION

CLIENT:	National Iranian South Oilfields Company (NISOC)
PROJECT:	Binak Oilfield Development – Manufacturing (w/Engineering & Material Supply) of Air Coolers

EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company (PEDCO)
OWNER:	OWNER is collectively refer to National Iranian South Oil Company (NISOC) and Petro Iran Development Company (PEDCO)
EPC CONTRACTOR:	Joint Venture of : Hirgan Energy – Design & Inspection(D&I) Companies
VENDOR:	Aban Air Cooler (AAC)

4.REFERENCE

ASME CODE Sec. VIII

5.TECHNIQUE

NITROGEN FILLING

Internal surface shall be dry with blowing hot air. The absolute absence of water pockets must be ensured by using hygrometer.

All flanges shall be completely blind with BLANK & GASKET. Rubber gasket for small size and spiral wound gaskets for large size flange will be used.

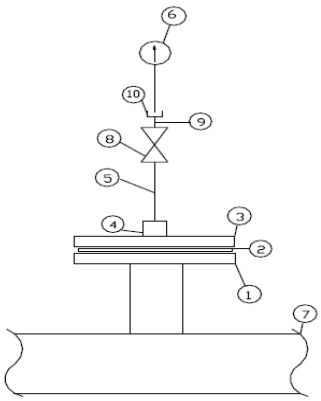
The purge gas flow rate shall be controlled by the use of a pressure regulator and flow meter or combination thereof.

In order to ensure that all ambient air has been removed from the heat exchanger, an oxygen analyzer or other practices shall be used to verify the effectiveness of the purge. The oxygen analyzer shall read below 1 percent oxygen concentration.

Open nitrogen cylinder valve and allow dry nitrogen to flow through the system until air is removed from the system.

As follows components shall be used & assembled as shown in following figure:

1. FLANGE
2. GASKET
3. BLANK
4. COUPLING 1/2 "
5. NIPPLE 1/2 "
6. GAGE,0-2 bar



7. AIR COOLED HEAT EXCHANGER

8. VALVE 1/2"

9. NIPPLE 1/2 "

10. CAP 1/2"

Valve, compound gauge, protective cover & warning tag shall be installed on the nozzles.

Pressurizing method shall be applied to sweep air out of shell and channel side.

Pressurize to 0.7 kg/cm2.g (10 psig) with nitrogen

Release to 0.0 kg/cm2.g (0.0 psig)

Pressurize to 0.7 kg/cm2.g (10 psig) with nitrogen

Reduce the pressure to 0.5 kg/cm2.g (7 psig) minimum, 0.7 kg/cm2.g (10 psig) maximum.

The tube bundle shall be completely purged & blocked in, test all flanged, gasket & plugged opening for leakage with soap solution confirm zero leakage.

The pressure of nitrogen gas shall be kept at 0.5 kg/cm2.g (.483 bar) minimum,0.7 kg/cm2.g (.689 bar)maximum pressure. Minimum pressure shall be verified, after the unit is loaded onto the ship.

For N2 detection in outlet a flame shall be used to ensure that N2 filled completely inside the cooler.

Warning tag attached to pressure valve: the following minimum information shall appear on the warning tags attached to the pressure nozzle.

WARNING

The equipment is under low pressure nitrogen blanket. Do not open equipment until pressure has been reduced to atmospheric & verified.

Note : The valve & pressure gauge for nitrogen purging shall be as below.

Valve: 1/2" (oil free type) NPT with cap

pressure gauge : 1/2" x75 with the range of 0~2 kg/cm2.G (Oil free type)