

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید مخازن ذخیره ایستگاه تقویت فشار گاز بینک (قرارداد BK-HD-GCS-CO-0026_00)</p>							
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	WELDING REPAIR PROCEDURE							شماره صفحه : 1 از 7
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	
	BK	GCS	IDR	120	QC	PR	0005	
							V00	

طرح نگهداشت و افزایش تولید ۲۷ مخزن

WELDING REPAIR PROCEDURE

نگهداشت و افزایش تولید میدان نفتی بینک

V00	Nov.2024	IFA	IDrill M.E.	M.Fakharian	M.Sadeghian	
Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Status:

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

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید مخازن ذخیره ایستگاه تقویت فشار گاز بینک (قرارداد BK-HD-GCS-CO-0026_00)</p>																									
<p>شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴</p>	<table border="1"> <tr> <th colspan="8">WELDING REPAIR PROCEDURE</th> </tr> <tr> <th>نسخه</th> <th>سریال</th> <th>نوع مدرک</th> <th>رشته</th> <th>تسهیلات</th> <th>صادر کننده</th> <th>بسته کاری</th> <th>پروژه</th> </tr> <tr> <td>V00</td> <td>0005</td> <td>PR</td> <td>QC</td> <td>120</td> <td>IDR</td> <td>GCS</td> <td>BK</td> </tr> </table>	WELDING REPAIR PROCEDURE								نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه	V00	0005	PR	QC	120	IDR	GCS	BK	<p>شماره صفحه: 2 از 7</p>
WELDING REPAIR PROCEDURE																										
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### REVISION RECORD SHEET

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شماره پیمان:  ۰۵۳ - ۰۷۳ - ۹۱۸۴	WELDING REPAIR PROCEDURE							شماره صفحه : 3 از 7
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## 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 ( <b>NISOC</b> )
PROJECT:	Binak Oilfield Development SUPPLY STORAGE TANK.
EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company ( <b>PEDCO</b> )
EPC CONTRACTOR/PURCAHSE:	Joint Venture of: Hirgan Energy – Design & Inspection Companies ( <b>HE/DI</b> )
VENDOR:	iDrill Middle East ( <b>iDrill M.E</b> )
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
TPI:	Third-Party Inspector
SHALL:	Is used where a provision is mandatory.
SHOULD:	Is used where a provision is advisory only.
MAY:	Is used where a provision is completely discretionary.

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## 2.0 SCOPE

This procedure covers the requirement for repairing of weld defect while will be employed by iDrill Middle East Company for storage tanks related to the Binak Oilfield Development of Gas Dehydration Package project. This procedure is required for Tag No.: TK-2209-TK -TK-2102-TK-2301 A/B

## 3.0 REFERENCES CODE AND STANDARD

1. API-650
2. ASME Sec. – V

## 4.0 SCOPE OF WORK

All of activities in regard to repairing should be according to this procedure.

## 5.0 PERFORMANCE

- 5.1 All defects found in welds shall be called to the attention of the Purchaser's inspector, and the inspector's approval shall be obtained before the defects are repaired. All completed repairs shall be subject to the approval of the Purchaser's inspector. Acceptance criteria are specified in API 650 Para. 8.2, 8.4, and 8.5, as applicable.
- 5.2 Pinhole leaks or porosity in a tank bottom joint may be repaired by applying an additional weld bead over the defective area. Other defects or cracks in tank bottom or tank roof joints shall be repaired as required by API 650 Para. 8.1.7. Mechanical caulking is not permitted.
- 5.3 All defects, cracks, or leaks in shell joints or the shell-to-bottom joint shall be repaired in accordance with API 650 Para. 8.1.7.
- 5.4 Repairs of defects discovered after the tank has been filled with water for testing shall be made with the water level at least 0.3 m (1 ft.) below any point being repaired or, if repairs have to be made on or near the tank bottom, with the tank empty. welding shall not be done on any tank unless all connecting lines have been completely blinded, repairs shall not be attempted on a tank that is filled with oil or that has contained oil until the tank has been emptied, cleaned, and gas freed. Repairs on a tank that has contained oil shall not be attempted by the manufacturer unless the manner of repair has been approved in writing by purchaser and repairs are made in the presence of the Purchaser's inspector.
- 5.5 Defects in welds shall be repaired by grinding out the defects from one side or both sides of the joint, as required, and re-welding. All repaired welds in joints shall be checked by repeating the original inspection procedure and by repeating one of the testing methods of API 650 Para. 7.3, subject to the approval of the Purchaser.

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- 5.6 All of defects in welds and parent material such as: undercut, etc. which detect by Visual inspection shall be removed by grinding.
- 5.7 Before re-welding the repair area shall be grinded smoothly, removal of defects shall be verified and confirm by Visual check and PT or MT.
- 5.8 Repair welding of defects shall be done by qualified welders using relevant welding procedure, that approved by purchaser.
- 5.9 All of the welding shall be done by the same welding procedure specification (WPS) as the original weld.
- 5.10 After weld completion the sufficient NDT (RT for subsurface defect & PT or MT for surface defect) should be done in the area, for compliance of welding repair of defect, and the surface shall be re-examined by Visual check.
- 5.11 Ultrasonic test shall be done where Radiography test cannot be used or whenever requested by the inspectors.
- 5.12 All repairing shall be performed before Hydro test.
- 5.13 All repairs caused by Hydro test shall be eliminate under inspector's supervision.
- 5.14 Repair welding shall be done by shielded metal arc welding (SMAW) by an approved WPS.
- 5.15 Where weld repairs are required, they shall be done progressively while the tank is being fabricated to minimize possible peaking and banding.

## 6.0 REPORTING

For each part which repaired, a report shall be issued. The report shall contain all necessary information for defines.

- Location (including Item No. Part No, and exactly Place.)
- NDT Reports

## 7.0 BUILD UP

- 7.1 Prepare the surface by grinding.
- 7.2 Build Up welding shall be done by shielded metal arc welding (SMAW) by an approved WPS.
- 7.3 After welding should be smooth surface.
- 7.4 Magnetic particle inspection or penetrant testing shall be done.

## 8.0 ATTACHMENT (REPAIR REPORT)

	<b>نگهداشت و افزایش تولید میدان نفتی بینک</b> <b>سطح الارض و ابنیه تحت الارض</b> <b>خرید مخازن ذخیره ایستگاه تقویت فشار گاز بینک</b> <b>(قرارداد BK-HD-GCS-CO-0026_00)</b>						 	
	WELDING REPAIR PROCEDURE						شماره صفحه: 7 از 7	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	BK	GCS	IDR	120	QC	PR	0005	V00

<b>Project Name:</b> Binak Oilfield Development of Gas Dehydration Package.	<b>Vendor:</b> iDrill Middle East	<b>Purchaser:</b> Hirgan Energy – Design & Inspection Companies	<b>Date:</b> .....
<b>P.O No:</b>	<b>Procedure No.:</b>	<b>Report No.:</b> .....	<b>Page No.:</b> Page 1 of 1

ITEM	WELD NO.	LOCATION	DEFECT TYPE	METHOD OF REPAIRING	NDT TEST	RESULT	REMARK

IDRILL M. E	HIRGAN / DI	PEDCO	TPI	NISOC
Name:	Name:	Name:	Name:	Name:
Date:	Date:	Date:	Date:	Date:
Signature:	Signature:	Signature:	Signature:	Signature: