



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض
احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

SPECIFICATION FOR OVERHEAD TRAVELING CRANES

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
D01	0009	SP	ME	120	PEDCO	GCS	BK

شماره صفحه : ۱ از ۱۱

طرح نگهداشت و افزایش تولید ۲۷ مخزن

SPECIFICATION FOR OVERHEAD TRAVELING CRANES

نگهداشت و افزایش تولید میدان نفتی بینک

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AB-R: As-Built for Client Review AFP: Approved For Purchase
AB-A: As-Built –Approved
IFC: Issued For Comment
IFA: Issued For Approval
AFD: Approved For Design
AFC: Approved For Construction

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	SPECIFICATION FOR OVERHEAD TRAVELING CRANES								شماره صفحه: ۲ از ۱۱
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	SP	0009	D01	

REVISION RECORD SHEET

PAGE	D00	D01	D02	D03	D04
1	X	X			
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PAGE	D00	D01	D02	D03	D04
56					
57					
58					
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110					

	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۳ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

CONTENTS

1.0	INTRODUCTION	4
2.0	SCOPE	5
3.0	NORMATIVE REFERENCES	6
4.0	ORDER OF PRECEDENCE	7
5.0	TECHNICAL SPECIFICATION.....	8

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۴ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

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
GENERAL 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:	Executer 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.

	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	SPECIFICATION FOR OVERHEAD TRAVELING CRANES								شماره صفحه : ۵ از ۱۱
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	SP	0009	D01	


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 specification outlines the general requirements for the supply of Electrical Motor Driven Overhead Cranes and is intended to supplement the Iranian Petroleum Standard IPS-M-GN-350(2), "Material and Equipment Standard for Overhead and Gantry Cranes", issued Nov. 2008. Works of this section consisting of the design, supply, fabrication, testing, preparation for shipment and guarantee, transportation and installation of electrical motor driven overhead travelling cranes includes but not limited to:

All material necessary for complete installation of the above-mentioned equipment.

- Crane end trucks and hoist runways and runway stops and supporting steel for runway rails. Crane runways shall be proposed and priced as an option (including all of necessary works as erection, welding ...).
- Crane bridges with travel mechanism and drive.
- Electrical parts
- Bumper stop (for trolley and bridge), rails, and fastener.
- All interconnecting cables (power/control) inside the package including festoon cable and relevant fastening facilities, isolating switches including relevant cable gland (battery limit of supply will be the mentioned isolator switch).
- Controls complete with remote controller and safe interlocks.
- Spare parts for pre commissioning, commissioning and two years operation according to vendor recommendation.

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شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۶ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

- One set of special tools required for the maintenance and repairs for cranes.

- Name Plate.

- Earth Connections.

Areas which shall be equipped with overhead cranes are defined and specified in the project's "Access Philosophy".

EPC contractor is responsible for engineering, procurement, installation and commissioning of overhead cranes, wherever they are required within scope of the project at his own expense.

3.0 NORMATIVE REFERENCES

The latest edition of following codes & standards are applicable in this project (unless otherwise mentioned):

3.1 LOCAL CODES AND STANDARDS

- | | |
|-------------------|--|
| ➤ IPS-M-GN-350(2) | Material and Equipment Standard for Overhead and Gantry Cranes. |
| ➤ BS 466 | Specification for power driven overhead traveling cranes, semi-goliath and goliath cranes for general use. |
| ➤ IPS-E-EL-100 | Engineering Standard for Electrical System Design. |
| ➤ IPS-M-EL-161(2) | Material and Equipment Standard for Electrical Items. |

3.2 INTERNATIONAL CODES AND STANDARDS

- | | |
|--------------|---|
| ➤ ASTM | All related parts. |
| ➤ ASME B30.2 | Overhead and Gantry Crane.
Stress Calculations & Design of |

	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۷ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

➤ ISO 8306

Mechanisms.

Over Head Traveling Cranes
and Portal Bridge-Tolerances for
Cranes and Trucks.

3.3 THE PROJECT DOCUMENTS

- | | |
|-------------------------------------|--|
| • BK-GNRAL-PEDCO-000-PR-DB-0001 | Process Basis of Design |
| • BK- GNRAL -PEDCO -000-PR-DC-0001 | Process Design Criteria |
| • BK- GNRAL - PEDCO -000-EL-DC-0001 | Electrical System Design Criteria |
| • BK- GNRAL - PEDCO -000-EL-SP-0010 | Specification For LV Electro Motors |
| • BK- GNRAL - PEDCO -000-PI-SP-0006 | Specification For Painting |
| • BK- GNRAL - PEDCO -000-EL-SP-0017 | Specification For MV Electro Motors |
| • BK- GNRAL - PEDCO -000-SA-SP-0002 | Specification For Hazardous
Area Classification |

3.4 ENVIRONMENTAL DATA

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

4.0 ORDER OF PRECEDENCE

In case of conflict between requirements specified herein and the requirements of any other referenced document, the most Approved stringent requirements of below listed items shall be considered

- Purchase order

	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>								
شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴	SPECIFICATION FOR OVERHEAD TRAVELING CRANES								شماره صفحه : ۸ از ۱۱
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	SP	0009	D01	

- Material Requisition
- Data sheets
- This specification
- Drawings and other reference project specifications
- IPS standards
- International codes and standards

When the terms “Authorized”, “Authorization”, “Approval” or “Approved” are used in this specification, it shall mean authorization or approval from Client.

5.0 TECHNICAL SPECIFICATION

Acceptability Criteria

Vendor shall not offer prototype design or a design with less than 2 years of successful operation in similar service.

A reference equipment/ Client list shall be submitted together with proposal. The Vendor may offer alternative designs for Client’s consideration and approval.

Obviously the proposed equipment should have similar performances and the supplier will guarantee them.

Deviations



No deviations from project specifications, this general specification are allowed, without prior written approval of the Client.

Guidelines

Sub. (Substitution): The IPS standard clause is deleted and replaced by the new clause.

Del. (Deletion): The IPS standard clause is deleted without any replacement.

Add. (Addition): A new clause with a new number is added.

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شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۹ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

Mod. (Modification): Part of the IPS standard clause is modified, and/or a new description and/or condition is added to that clause.

AMENDMENT TO IPS-M-GN-350(2)

5. DESIGN, CONSTRUCTION AND INSTALLATION

5.1 Design, Construction and Installation (Add.)

5.1.5 (Add.)

Elevation of crane installation shall such that the truck loading/unloading will be performed easily. Height from crane hook to finish floor level shall not be less than following:

Truck (Bogie) height + Highest package height + 1.5m Vertical free board.

5.9 Brakes (Add.)

5.9.1 (Add.)

Brakes shall be DC Electromagnetic and Fail-Safe type.

5.10 Electrical (Mod.)

Electrical motors shall be complied with the project specifications mentioned in References.

5.10.1 (Add.)



The cranes, including all electrical and mechanical parts shall be suitable for installation at area classifications that has been mentioned in related data sheets. The motor and all electrical and control panels of cranes when installed in hazardous area shall be selected explosion proof (Exd for zone 1 and Exe for zone 2) and also related wheels shall be anti-spark type.

5.10.2 (Add.)

The protection of cranes electro motors shall be according to NISOC- E-EL-100(1) Clause 7.5.

5.10.3 (Add.)

All overhead cranes and associated metal structures and equipment shall be suitably connected to the main earthing network of the plant. The crane wheels shall not be used as means of earthing.

	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۱۰ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

5.10.4 (Add.)

The cables for crane bridge and bridge traveling electro motors shall be selected from festoon type.

5.14 Painting (Sub.)

Surface preparation and painting to be done according to manufacturer standard, client approval on painting system to be taken by manufacturer.

5.16 Site Condition (Add.)

Site condition to be considered according to "BK- GNRAL -PEDCO -000-PR-DC-0001". The equipment shall be designed for the conditions of temperatures, humidity, airborne salt and dust prevailing at site.

5.17 Travelling (Add.)

The crane shall travel the length and width of the shelter as specified in relevant data sheet.

5.18 Material (Add.)

The materials of construction shall be in accordance with applicable ASTM specifications or other approved standards and shall be of suitable grade and quality for required applications. All materials necessary for the proper installation and protection of the equipment shall be included. Supplier shall submit the material certificates for major load holding components of the crane.


6.0 Inspection, Testing and Maintenance

6.2 Testing

6.2.3 (Add.)

The cranes shall be completely assembled in the shop. All motors, controls and machinery shall be connected, and all machinery on the crane shall be operated under its own power at rated voltage and the volts, amperes and watts recorded for each operation.

Electrical circuits and interlocks shall be tested for correct operation and sequence. Crane shall be tested for satisfactory operation motions.

	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
شماره پیمان:	SPECIFICATION FOR OVERHEAD TRAVELING CRANES							شماره صفحه : ۱۱ از ۱۱
۰۵۳ - ۰۷۳ - ۹۱۸۴	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	PEDCO	120	ME	SP	0009	D01

6.3 Maintenance

6.3.1 (Add.)

The crane shall be designed with facilities for easy inspection and maintenance. Filling and drain plugs on gearboxes shall be easily accessible, and to be provided with the necessary means to avoid spillage.