


 <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>																	
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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.

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.

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MAY: Is used where a provision is completely discretionary.

2.0 GENERAL



- This document presents the item material requisitions for Contractor's use as appropriate.
- This material requisition covers the requirements for the design, manufacturing, testing and supply of general service pumps as listed below. All equipment/devices/items shall conform to this requisition and all specifications which have been mentioned in attachment 1 of this material requisition.
- The vendor's supply shall include:



No.	Item	Description	Total QTY.
1	P-2206 A/B	Diesel Pump	2
2	P-2104	Glycol Drain Pump	1
3	P-2209	Potable Water Pump	1
4	P-2203 A/B	Sump Pump	2
5	P-2103 A/B	Glycol Transfer Pump	2
6	P-2102	Glycol Manual Pump	1

3.0 REFERENCE / ATTACHED DOCUMENTS

- Specified documents in attachment 1 shall be considered as a part of this material Requisition.
- All codes and standards which have been referenced in above mentioned specs shall be considered.
- 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.
- Deviations

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Any exceptions/clarifications to codes/standards and specifications listed in attachment 1 must be clearly stated in a separate dedicated section of the proposal in the format submitted in attachment 3.

The proposed deviations/comments list shall include as minimum:

- Reference for the involved specification, chapter and paragraph.
- Technical justification for the non-compliance.
- Detailed description of the proposed alternative.

If no exceptions or clarifications exist, either for the complete referenced document or an individual paragraph, the supplier shall be considered to be in full compliance with the relevant document.

The supplier may propose materials of equivalent or better quality compared to those indicated in the equipment data sheet. Even these cases shall be duly included/technically supported in the deviations/clarifications list.

4.0 SUBJECT OF THE SUPPLY

The supplier shall supply centrifugal pumps each one shall be driven by an electromotor completely assembled and tested. The scope of supply is detailed at para. 5. The supplier shall include in the supply, all other equipment/devices/items not listed in the following, but necessary for a good design and a safe operation, taking into account process data and installation conditions such as area classification and climatic conditions.

The grade of shop assembly of the equipment/devices/items supplied shall be at maximum extent to facilitate site erection and pre-commissioning activities.

5.0 LIMITS OF SUPPLY



5.1 SCOPE OF SUPPLY

5.1.1 MAIN DESCRIPTION

- ❖ The scope of supply is detailed below



- Centrifugal Pumps



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- appropriate seal system according to its data sheets including all the relevant accessories
- Baseplate common (according to API 686) for each pump train incl. pump, driver, gearbox (If any), seals and sealing systems, coupling with guard and other auxiliary systems (mounted by vendor at shop)
- Coupling (dry flexible spacer with spark proof guard)
- Electrical motor for each pump with terminal boxes and accessories incl. anti-condensation heater, RTD's and etc. (if applicable)
 - On-skid cabling, tray and fittings
 - Outdoor MCC for Auxiliaries Electrical Load (if any)
 - All motor junction boxes complete with necessary terminals
- Instrumentation including junction box, wiring from instruments to the junction box and manifolds for pressure instruments
- Earthing lugs and material
- All necessary lifting lugs
- Valved casing drain & vent (for horizontal items)
- Gasket, bolts and nuts for on-vessel items
- Foundation bolts and nuts (anchor bolt), skid leveling screws, shims, sub-plates
- Any other accessories and auxiliaries specify in data sheet
- First fill of oil / grease
- Cooling plan with all required piping, valves instruments and etc. routed to the edge of skid
- Charging device for nitrogen and trolley mobile charging unit for all seal pots.
- Barrier filling device
- Suction strainer for vertical pumps
- All necessary accessories for utility distribution
- Name plates

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- Thermal insulation jacket (if needed)
- Insulation clip and supports for line and equipment
- Clip and supports required for equipment fire proofing (if required)
- Sun protection facilities
- Special tools for erection and maintenance
- Spare Parts for erection, pre-commissioning, commissioning and start up and two years operation.
- Capital spare parts (as option)
- All requirements for safe and easy start up of pumps
- Any other items not listed above which are necessary for satisfactory design and operation of the pump shall be furnished by vendor.

5.1.2 ENGINEERING SERVICES

The supplier shall assume overall responsibility for the design, manufacture, assembly, test and performance of all equipment/devices/items supplied as indicated in this requisition. This shall include, but not be limited to:

- Resolve engineering issues relating to equipment/devices/items within the scope of supply.
- Provide detailed design and documentation of all equipment/devices/items and components within the scope of supply in accordance with attachment 2 of this document.
- Provide all necessary information documents in order to allow the contractor to erect, install and verify the proposed equipment/devices/items.
- Implement a quality assurance plan
- The quality plan applied to the scope of supply shall include:
 - QA organization and procedures that shall be submitted for approval.
 - Plan for HOLD points in the production process proposed to PURCHASER for witness or approval particular activities.
 - Production schedule indicating main quality manufacturing processes, inspection and tests.
 - Qualification of all personnel performing tests to be reviewed by the inspector

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- Supplier shall also provide the description of the following quality activities:
 - o Sub suppliers products quality
 - o Quality check and identification of the materials and equipment entering in their manufacturing shop.
- Calibration of test instruments and equipment
- Provide detailed specifications and data sheets.



5.1.3 SPARE PARTS

Following items shall be considered (supplied) and included in the bid documentation:

- Spare parts for commissioning and start-up; a qualified and complete list based on PROJECT SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1).
- Spare parts for two years operation; a qualified and complete list based on PROJECT SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1).
- Capital spare parts (as option / if any)

5.1.4 OTHER ITEMS

- Special tools required for installation and maintenance
- Noise acoustic protection and relevant ancillaries in order to match with max. noise level requirements (if necessary)
- Name plate
- Earthing plate
- Painting of all items in accordance with "Painting Specification".
- Preparation for shipment
- Packing for sea freight transportation
- Shop inspections and testing as per specifications & data sheets
- Free access to manufacturing plants for the PURCHASER's inspectors
- Certificates or declarations of conformance (as required) of all Ex-equipment.
- Daily rate for erection supervision (separate price)
- Daily rate for commissioning and start-up supervision (separate price)
- Training for customer's personnel (separate price)
- KOM
- Technical/Clarification meeting



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- Pre-Inspection Meeting

5.2 SCOPE OF WORK

- Engineering and Documentation
- Manufacturing and assembling
- Mechanical Guarantee
- Performance Guarantee
- Sub-Vendor Coordination
- Mounting of main driver and auxiliary driver on baseplate at shop
- Inspection and testing at shop
- Piping within the Pump Package, all on skid piping/tubing with supports and all required fitting, valves, instruments and etc. on them. All on skid piping / tubing to be supplied by vendor and installed by him at shop
- All drains and vents piping routed to the edge of skid with block valves, manifold piping and blind flanges.
- Painting
- Prime Coats at Shop
- Finish Coats at Shop
- Packing Preservation suitable for more than 18 months at outdoor conditions of the site environment
- Packing including suitable protection for both sea transport and road transport on rough tracks
- Rust prevention for long term (over 6 month)
- Shipping and transportation to point of delivery (according to delivery condition)
- Supervision for installation (Per diem rate and/or lump sum - as an option)
- Supervision for erection, commissioning and start up (Per Diem rate and/or lump sum - as an option)
- Preparing of Final Book (Data Book)



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5.3 EXCLUSIONS



The following items are excluded by the supplier scope of supply and will be provided by purchaser:

- Concrete foundation (which shall be anyway designed based on supplier's technical data)
- Instrument air supply
- Nitrogen supply (if any)
- Electrical supply
- Interconnecting power cables among each skid mounted terminal boxes and remote switch gear
- Interconnecting cabling, serial link, between the remotely mounted unit control panel and the process control system in the main control room
- Connection to plant earthing system
- Transport from receiving port to site
- Shelter for Pumps
- Site erection
- Lubricants (except first filling)

5.4 BATTERY LIMITS

The battery limits are summarized as follows:

- Process Gas
 - Inlet and outlet flanges on pump skid
- Instrumentation and control
 - terminal strips inside junction boxes at skid edges
- Electrical
 - Electrical equipment terminal boxes on skids
 - Incoming Power Supply of AC or DC UPS (if Any)
 - Earth Bosses on Skids.
- Vents and Drains
 - Drain flanges manifold
 - Outlet vent piping flanges

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6.0 INSPECTION AND TESTS

The equipment shall be inspected and tested in accordance with the quality control plan issued by the supplier and approved by the PURCHASER before the award of the order. The QC plan shall at least be according to the "Commodity Procurement and Manufacturing Inspection Instruction"; Doc. No. ICE-EID-MI-SP01-Rev.01 and data sheets (if any).

The supplier shall in any case conduct all the tests required by contractual documents, specifications, codes and standards, manufacturer standard quality system and keep the relevant documentation.



7.0 VENDOR DOCUMENTATION REQUIREMENTS & SCHEDULE

- Vendor shall prepare and submit all of required documents as per relevant "Vendor Data" section of relevant reference standard (ISO 5199).
- As a minimum Vendor document shall be according to attachment 2 of this document.
- All documents, preliminary or final, are to be stamped and signed by the supplier.
- Failure in dispatch of the required documents shall cause the supply to be considered as unfulfilled.
- PURCHASER's approval does not relieve vendor, in any way, from his obligation to fulfill the requirements of the purchase order documents.
- All vendor drawings and documents shall be in English language.
- All drawings and documents are to be identified as per clause 1 **"GENERAL DEFINITION"**

8.0 UNIT RESPONSIBILITY

VENDOR shall be responsible for the design, engineering, co-ordination, supply, delivery, testing, final check-out and satisfactory operation of the equipment/devices/items. The engineering coordination also includes responsibility for handing and expediting drawings.

Also VENDOR shall be responsible for ensuring that all relevant information and documentation is passed on the sub-suppliers.

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9.0 GUARANTEE AND WARRANTY

All material and Equipment/Devices/Items in VENDOR's scope of work/supply shall be guaranteed by VENDOR. The guarantee period shall be eighteen (18) months from the date of delivery and/or twelve (12) months from the installation date of each equipment/packages at site. VENDOR shall guarantee the performance of supplied items (if any). VENDOR shall guarantee that the Equipment/Device/Item is suitable for the operating conditions herein specified, and that all materials and components are free from any defects; verifications of all calculations are in VENDOR's responsibility.



VENDOR shall unconditionally guarantee the materials and workmanship of all material and/or services. If, within the guarantee period, any defects occur which are due to faulty material and/or services included in his scope (design, manufacturing, inspection, testing, supply & etc.), VENDOR shall, at his own expense, repair or adjust the condition, or replace the material and/or services to the complete satisfaction of CLIENT's representative. These repairs, replacement or adjustments shall be made only at such time as will be least detrimental to the operation of the CLIENT's business.

VENDOR warrants promptly repairing or replacing the defective parts in the warranty period.

Vendor shall ensure a correct and safe operation of the unit, providing all safety protection Devices.

Vendor shall be responsible for the safe, reliable, continuous functioning of the Equipment/Devices/Items.

VENDOR is fully responsible for the design of package for correct and safe operation based on project requirement during package life time; therefore, VENDOR shall specify any documents/specifications which may be required for design, manufacture and finalizing of Equipment/Devices/Items to avoid any problems during the package operation at site before P.O; otherwise, VENDOR shall be hold responsible for any corresponding deviation from expectations from the Equipment/Devices/Items.

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							D01	

10.0 DEVIATION



VENDOR's proposal shall be prepared in strict compliance with the requirements set forth in the relevant specifications of tender documents.

VENDOR shall include in his proposal the statement of compliance with the tender documents should VENDOR wish to submit exception to the requirements of tender documents. They shall be submitted for PURCHASER's approval.

11.0 PRICE BREAKDOWN

Breakdown price of following items shall be included in the proposal, as well as total price.

- 1) Material and Fabrication for each Section Separately
- 2) Pre-commissioning & commissioning spare parts (E&D-QC-SP-1)
- 3) 2 years operational spare parts (E&D-QC-SP-1)
- 4) Capital spare parts
- 5) Packing & transportation
- 6) Other fee (if any)



 NISOC	<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	PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES							شماره صفحه : ۱۵ از ۲۷	
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	BK	GCS	PEDCO	120	ME	MR	0010	D01	





ATTACHMENT 1

LIST OF REFERENCE / APPLICABLE DOCUMENTS



No.	Document No.	Document Title	Rev.
Process			
1	BK-GNRL-PEDCO-000-PR-DB-0001	Process Basis of Design	D07
2	BK-GNRL-PEDCO-000-PR-DC-0001	Process Design Criteria	D02
3	BK-GCS-PEDCO-120-PR-PI-0001	Symbol & Legend For PFD and P&ID	D02
4	BK-GCS-PEDCO-120-PR-PI-0023	P&ID - Diesel Oil System	D04
5	BK-GCS-PEDCO-120-PR-PI-0024	P&ID - Potable Water System	D04
6	BK-GCS-PEDCO-120-PR-PI-0025	P&ID - Glycol Sump Drum	D04
7	BK-GCS-PEDCO-120-PR-PI-0017	P&ID - Close Drain System	D04
8	BK-GCS-PEDCO-120-PR-PI-0014	P&ID - Lean Glycol Storage Tank	D04
9	BK-GCS-PEDCO-120-PR-DT-0026	Process Data Sheets For Potable Water Pump	D02
10	BK-GCS-PEDCO-120-PR-DT-0029	Process Data Sheets For Diesel Pump	D02
11	BK-GCS-PEDCO-120-PR-DT-0028	Process Data Sheets For Glycol Drain Pump	D02
12	BK-GCS-PEDCO-120-PR-DT-0024	Process Data Sheets For Sump Pump	D02
13	BK-GCS-PEDCO-120-PR-DT-0021	Process Data Sheets For Glycol Transfer Pump	D02
14	BK-GCS-PEDCO-120-PR-DT-0022	Process Data Sheets For Glycol Manual Pump	D02
15	BK-GCS-PEDCO-120-PR-UF-0001	Utility Flow Diagrams (UFD)	D03
16	BK-GCS-PEDCO-120-PR-CN-0001	Calculation Note for Pumps	D04
Mechanical			
17	BK-GNRL-PEDCO-000-ME-DC-0001	Mechanical Design Criteria	D01
18	BK-GCS-PEDCO-120-ME-SP-0004	Specification For Centrifugal Pumps for General Services	D03
19	BK-GCS-PEDCO-120-ME-DT-0025	Mechanical Data Sheets For Potable Water Pump	D03
20	BK-GCS-PEDCO-120-ME-DT-0026	Mechanical Data Sheets For Diesel Pump	D04
21	BK-GCS-PEDCO-120-ME-DT-0035	Mechanical Data Sheets For Glycol Drain Pump	D03
22	BK-GCS-PEDCO-120-ME-DT-0023	Mechanical Data Sheets For Sump Pump	D03
23	BK-GCS-PEDCO-120-ME-DT-0020	Mechanical Data Sheets For Glycol Transfer Pumps	D04
24	BK-GCS-PEDCO-120-ME-DT-0021	Mechanical Data Sheets For Glycol Manual Pump	D04
Piping & Material			
25	BK-GCS-PEDCO-120-PI-SP-0001	Piping Material Specification	D01
26	BK-GNRL-PEDCO-000-PI-SP-0005	Specification For Fittings, Flanges, Gaskets and Bolts	D02
27	BK-GNRL-PEDCO-000-PI-SP-0006	Specification For Painting	D04
28	BK-GNRL-PEDCO-000-PI-SP-0019	Specification For Insulation	D02
29	BK-GNRL-PEDCO-000-PI-SP-0009	Specification For Manual Valves	D00
30	BK-GNRL-PEDCO-000-PI-SP-0011	Specification For Welding of Plant Piping System	D00
31	BK-GNRL-PEDCO-000-PI-DC-0001	Piping Design Criteria	D03

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	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
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No.	Document No.	Document Title	Rev.
32	BK-GNRAL-PEDCO-000-PI-SP-0003	Specification For the Design of Piping in Mechanical Packages	D00
33	BK-GNRAL-PEDCO-000-PI-SP-0007	Specification For Lining (Internal Protection of Equipment by Painting)	D00
34	BK-GNRAL-PEDCO-000-PI-SP-0017	Specification For Piping Cleaning and Flushing	D02
35	BK-GCS-PEDCO-120-PI-RT-0001	Piping Corrosion Study & Material Selection Report	D01
36	BK-GNRAL-PEDCO-000-QC-PR-0041	NDT Plan For steel Structures	D00
37	BK-GNRAL-PEDCO-000-PI-SP-0008	Specification For Material Requirements in Sour service	D00
38	BK-GNRAL-PEDCO-000-PI-SP-0004	Specification For Metallic Pipes	D05
39	BK-GNRAL-PEDCO-000-PI-SP-0001	Specification For Color Coding and Marking	D00
40	BK-GNRAL-PEDCO-000-PI-SP-0010	Specification For Plant Piping Systems Pressure Testing	D00
Structure			
41	BK-GNRAL-PEDCO-000-ST-DC-0001	Structural Design Criteria	D00
42	BK-GNRAL-PEDCO-000-ST-DW-0002	Standard Drawing For Anchor Bolts	D02
Control & Instrumentation			
43	BK-GNRAL-PEDCO-000-IN-SP-0001	Specification For Instrumentation	D04
44	BK-GNRAL-PEDCO-000-IN-SP-0004	Specification For Instrument and Control of package Unit System (PU)	D01
45	BK-GNRAL-PEDCO-000-IN-SP-0010	Specification For Instrument/F&G Cables	D01
Electrical			
46	BK-GNRAL-PEDCO-000-EL-DC-0001	Electrical System Design Criteria	D02
47	BK-GNRAL-PEDCO-000-EL-SP-0001	Specification For LV Switchgear & Motor Control Centers	D03
48	BK-GNRAL-PEDCO-000-EL-SP-0010	Specification For LV Induction Motors	D03
49	BK-GNRAL-PEDCO-000-EL-SP-0017	Specification For MV Induction Motors	D03
50	BK-GNRAL-PEDCO-000-EL-SP-0011	Specification For Electrical Requirements of Packaged Units	D03
51	BK-GCS-PEDCO-120-EL-DT-0008	Data Sheets For LV Induction Motors	D02
52	BK-GCS-PEDCO-120-EL-DT-0009	Data Sheets For MV Induction Motors	D02
Safety & Fire Fighting			
53	BK-GNRAL-PEDCO-000-SA-SP-0002	Specification For Hazardous Area Classification	D03
54	BK-GCS-PEDCO-120-SA-PY-0002	Hazardous Area Classification Layout	D00
General			
55	ICE-EID-MI-SP01	دستورالعمل بازرسی، خرید و ساخت کالا	D01
56	E&D-QC-SP-1	دستورالعمل تامین قطعات یدکی راه اندازی و راهبری دو سالانه	D00
57	ICE-EID-MI-SP02-REV-01	دستورالعمل انتخاب سطح بازرسی کالا و تجهیزات	D01
58	BK-GNRAL-PEDCO-000-QC-PR-0022	Specification For Final Data Book (FDB)	D00

 NISOC	<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	<table><tr><th colspan="8">PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES</th></tr><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>D01</td><td>0010</td><td>MR</td><td>ME</td><td>120</td><td>PEDCO</td><td>GCS</td><td>BK</td></tr></table>	PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES								نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	D01	0010	MR	ME	120	PEDCO	GCS	BK	شماره صفحه : ۱۷ از ۲۷
PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES																										
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه																			
D01	0010	MR	ME	120	PEDCO	GCS	BK																			



No.	Document No.	Document Title	Rev.
		Requirements	
59	BK-GNRAL-PEDCO-000-QC-PR-0045	Packing, Marking, Transportation Procedure	D00

 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>								
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	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	PEDCO	120	ME	MR	0010	D01	



ATTACHMENT 2

VENDOR DOCUMENTS MIN. REQUIREMENT



Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
		Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1)	Calendar days (3)
MANAGEMENT						
001	Vendor Document Index and Schedule (See attachment 2)	4N	6C+E		6C+E	
002	Organization Brief	3N	6C+E			
003	Schedule Level 1, 2, 3 & 4 showing Engineering, Procurement, Fabrication, Inspection, Testing, and Delivery Plan.	4N	6C+E		6C+E	
004	Physically Progress Report (Every 2 Weeks))		6C+E			
005	Project Organization Chart	3N	6C+E			
006	Reference List	3N				
007	Vendor Catalogue	3N				
QUALITY						
008	Quality Assurance Manual /Quality Management System Certificate (according to latest rev. of ISO)	4N			6C+E	
009	Preliminary Inspection and Test Plan	4N				
010	Inspection and Test Plan		6C+E		6C+E	
HSE						
011	HSE Procedure		6C+E		6C+E	
012	Noise & Vibrations Calculations / Reports (If any)		6C+E		6C+E	
INTERFACE						
013	Electrical & Instrumentation Cable Schedule (for all systems)		6C+E		6C+E	
014	Electrical & Instrumentation Wiring Drawings (for all systems)		6C+E		6C+E	
015	Pump Data Sheets	4N	6C+E		6C+E	

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
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Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
		Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1)	Calendar days (3)
016	Reliability, Availability, Maintainability Calculations/Reports	4N	6C+E		6C+E	
017	Performance Curves		6C+E		6C+E	
018	PFD's	4N	6C+E		6C+E	
019	Functional Description		6C+E		6C+E	
020	General Arrangements Drawings	4N	6C+E		6C+E	
021	Mechanical Equipment List	3N	6C+E		6C+E	
022	Electrical Equipment List	3N	6C+E		6C+E	
023	Control, Instrument & Cable List		6C+E		6C+E	
024	Interface Block Diagrams	3N	6C+E		6C+E	
025	Junction Box, Local Panels & Cabinets: wiring diagrams & termination drawings		6C+E		6C+E	
026	Functional Logic Diagram		6C+E		6C+E	
027	P & ID's	3N	6C+E		6C+E	
028	Utility Consumption List	3N	6C+E		6C+E	
029	Power Supply Requirements	3N	6C+E		6C+E	
030	Single Line Diagram	3N	6C+E		6C+E	
031	Earthing Details	3N	6C+E		6C+E	
032	Weight / Centre of Gravity Drawings & Data's		6C+E		6C+E	
033	External Static and Dynamic Forces & Moments (present during test, start-up, normal/maximum operation, shutdown, and other conditions of service)		6C+E		6C+E	
034	Wind and Seismic Loads including shear and moment forces on supports and foundation.		6C+E		6C+E	
035	Anchor Bolt Details Drawings (incl. size, type, locations relative to the equipment center-lines in three planes).		6C+E		6C+E	
036	Ladder & Platform Detail Drawing		6C+E		6C+E	

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
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	BK	GCS	PEDCO	120	ME	MR	0010	
							D01	



Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
		Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1)	Calendar days (3)
037	Steel Structure Detail Drawing		6C+E		6C+E	
ENGINEERING						
038	Detailed Functional Design Specification		6C+E		6C+E	
039	Detailed Overall Description		6C+E		6C+E	
040	Mechanical Detailed Specifications (one per component)		6C+E		6C+E	
041	Detailed Design / Fabrication Drawings for Equipment & Auxiliary Parts		6C+E		6C+E	
042	Cross Sectional Drawings with Part Lists		6C+E		6C+E	
043	Assembly Drawings		6C+E		6C+E	
044	Design Calculation Notes		6C+E		6C+E	
045	Pressure Parts Calculations		6C+E		6C+E	
046	Piping Detailed Specifications (one per component)		6C+E		6C+E	
047	Piping Routing		6C+E		6C+E	
048	Valves & Instruments Location Drawings (incl. provisions for operational and maintenance access)		6C+E		6C+E	
049	Electrical Detailed Specifications (one per component)		6C+E		6C+E	
050	Electrical Cables Routing (incl. cable trays & junction boxes)		6C+E		6C+E	
051	Electrical Equipment Location Drawings (incl. provisions for operational and maintenance access)		6C+E		6C+E	
052	Protection Device Operating Curves		6C+E		6C+E	
053	Electrical Control Schematics		6C+E		6C+E	
054	Instrument & Control Detailed Specifications (one per component)		6C+E		6C+E	
055	Instrument cables routing (incl. cable trays & junction boxes)		6C+E		6C+E	
056	Instrument Equipment Location Drawings		6C+E		6C+E	

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	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	
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Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
		Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1)	Calendar days (3)
	(incl. provisions for operational and maintenance access)					
057	Hook-Up Diagrams		6C+E		6C+E	
058	Wiring Loops Diagrams		6C+E		6C+E	
059	Instrument Control Schematics		6C+E		6C+E	
060	Instrument Mounting & Housing Instructions		6C+E		6C+E	
061	Power Distribution & Consumption		6C+E		6C+E	
062	Cause & Effect Charts		6C+E		6C+E	
063	Original Software for Control & Monitoring System		6C+E		6C+E	
064	Software System Specifications		6C+E		6C+E	
065	Approximate Weight & Dimension	4N				
066	Shipping Detail Drawing		6C+E		6C+E	
067	Final Data Book		6C+E		6C+E	
068	Pressure Loss Calculations		6C+E		6C+E	
069	Lubrication System Detailed Specifications / Drawings		6C+E		6C+E	
070	Cooling System Detailed Specifications/Drawings		6C+E		6C+E	
071	Shaft Sealing System Detailed Specifications/Drawings	4N	6C+E		6C+E	
072	Completed Equipment Datasheets	4N	6C+E		6C+E	
073	Calculation sheets for safety valves, control valves & orifice plate		6C+E		6C+E	
074	Complex loop & automation descriptions, list of alarms & shutdown with set points		6C+E		6C+E	
075	Electrical Equipment Catalogue	3N	6C+E		6C+E	
076	Electrical Interface Block Diagrams		6C+E		6C+E	
077	Local Control Station of motors wiring diagram, termination drawing and general arrangement		6C+E		6C+E	

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>							
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	پروژه BK	بسته کاری GCS	صادرکننده PEDCO	تسهیلات 120	رشته ME	نوع مدرک MR	سریال 0010	



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			For Review		Final Issue	
			Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1) Calenda r days (3)
078	Gear System Detailed Specifications / Drawings			6C+E		6C+E
079	Coupling System Detailed Specifications / Drawings			6C+E		6C+E
PROCUREMENT						
080	List of Sub-Suppliers (table giving: part of equipment, tag no., sub-supplier reference)(5.1.3)	4N				6C+E
081	Unpriced copy of sub-orders			6C+E		
MANUFACTURING						
082	Weld and NDT Map			6C+E		6C+E
083	Surface Preparation and Painting Procedures			6C+E		6C+E
084	Heat Treatment Procedures			6C+E		6C+E
085	Welding Procedure Specification (including repair procedures).			6C+E		6C+E
086	Welder Qualification Procedure			6C+E		6C+E
087	Fabrication Degree	3N				
TESTING						
088	Hydrostatic / Pneumatic Testing Procedure			6C+E		6C+E
089	Performance & Functional Test Procedure			6C+E		6C+E
090	Non-Destructive Testing/Examination Procedures			6C+E		6C+E
091	Factory Acceptance Test (FAT) Procedure			6C+E		6C+E
RECORDS, REPORTS & CERTIFICATES						
092	Material Conformity Certificate			6C+E		6C+E
093	Testing Authority Approval Certificate (if any)			6C+E		6C+E
094	Hazardous Area Certificates.			6C+E		6C+E
095	Ingress Protection Certificate			6C+E		6C+E
096	Conformity Certificates (sub-			6C+E		6C+E

 NISOC	<p>نگهداشت و افزایش تولید میدان نفتی بینک</p> <p>سطح الارض</p> <p>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</p>								
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	BK	GCS	PEDCO	120	ME	MR	0010	D01	

Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
		Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1)	Calendar days (3)
	supplier/equipment)					
097	Material Certificates Identification Diagram. (cross-reference material location ; certificates for critical components)		6C+E		6C+E	
098	Welding Procedure Qualification Record		6C+E		6C+E	
099	Welder Qualification Records.		6C+E		6C+E	
100	NDT Operator Qualifications		6C+E		6C+E	
101	Detailed NDT Reports		6C+E		6C+E	
102	Weld/ NDT Identification Diagram. (Cross-reference weld locations, WPS, welders, NDT reports).		6C+E		6C+E	
103	Dimensional Control Reports		6C+E		6C+E	
104	Hardness Test Reports		6C+E		6C+E	
105	PWHT Charts & Reports, including calibration records of recorders (for each heat treatment)		6C+E		6C+E	
106	Pressure Test Reports / Certificates		6C+E		6C+E	
107	FAT Test Report / Certificates		6C+E		6C+E	
108	Performance Test Report / Certificates		6C+E		6C+E	
109	Noise & Vibration Test Report / Certificates		6C+E		6C+E	
110	Electric Motor Type Test Report (if any)		6C+E		6C+E	
111	Electric Motor Routine Test Report		6C+E		6C+E	
112	Cable Continuity and Resistance Test Reports		6C+E		6C+E	
113	Calibration Curves of Control Equipment		6C+E		6C+E	
114	Calibration Test Certificates		6C+E		6C+E	
115	Surface Preparation & Coating Reports		6C+E		6C+E	
116	Hydrostatic / Pneumatic Testing Certificates		6C+E		6C+E	
117	Welding Consumable Certificate		6C+E		6C+E	
118	Inspection and Test Reports(if any)		6C+E		6C+E	

 NISOC	<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	PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES							شماره صفحه : ۲۴ از ۲۷	
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	PEDCO	120	ME	MR	0010	D01	

Item No.	Document	With Bid	TIME SCHEDULE			
			For Review		Final Issue	
			Copies No./Type (7)	Copies No./Type (1)	Solar days (2)	Copies No./Type (1) Calenda r days (3)
119	Rust Prevention Report			6C+E		6C+E
120	Non-Conformities Report			6C+E		6C+E
INSTALLATION						
121	Sub-Assembly Documentation			6C+E		6C+E
122	Sub-Assembly Drawings			6C+E		6C+E
123	Erection/Installation Manual (if required)			6C+E		6C+E
124	Name Plate Documents			6C+E		6C+E
125	Handling, Transportation & Storage Instructions			6C+E		6C+E
126	Unpacking & Inspection Instructions			6C+E		
127	Preliminary Packing List	4N				
128	Packing List			6C+E		6C+E
OPERATION & MAINTENANCE						
129	Operating Instructions			6C+E		6C+E
130	Maintenance Instructions (if required)			6C+E		6C+E
131	Commissioning & Start-up Manual			6C+E		6C+E
132	List of Spare Parts Commissioning & Start-up	4N		6C+E		6C+E
133	List of Spare Parts 2 Years Operation	4N		6C+E		6C+E
134	List of Special Tools	4N		6C+E		6C+E
135	Lube Oil Schedule			6C+E		6C+E
136	Software Manual (incl. Troubleshooting)			6C+E		6C+E
137	Consumables List			6C+E		6C+E
138	Function Test Procedure			6C+E		6C+E
OTHERS						
139	All others documents (if required) will be listed in the order			6C+E		

 NISOC	<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	PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES							شماره صفحه : ۲۶ از ۲۷
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	
	BK	GCS	PEDCO	120	ME	MR	0010	
							D01	



ATTACHMENT 3
DEVIATIONS / EXCEPTIONS TO JOB SPECIFICATION

Requisition No.:

Description:

Equipment No.:

Item No.	Description of Proposed Exception	Recommended Revision to JOB SPECIFICATION	Reason for Proposed Exception	Effect on Base PROPOSAL if CONTRACTOR Rejects Exception

 NISOC	<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	PMR FOR CENTRIFUGAL PUMPS FOR GENERAL SERVICES							شماره صفحه : ۲۷ از ۲۷
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	
	BK	GCS	PEDCO	120	ME	MR	0010	
							D01	

ATTACHMENT 4
ALTERNATIVES TO JOB SPECIFICATION

Requisition No.:

Description:

Equipment No.:

Item No.	Job Specification No. & Paragraph No.	Requirements of Job Specification	Description of Proposed Alternative	Reason for Proposed Alternative