

 NISOC	<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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طرح نگهداشت و افزایش تولید 27 مخزن

PMR FOR FLARE PACKAGES

نگهداشت و افزایش تولید میدان نفتی بینک

D00	JAN. 2024	IFI	H.Ghadyani	M.Fakharian	S.Faramarzpour	
Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Class: 3

CLIENT Doc. Number: F0Z-709237

Status:

IDC: Inter-Discipline Check
 IFC: Issued For Comment
 IFA: Issued For Approval
 AFD: Approved For Design
 AFC: Approved For Construction
 AFP: Approved For Purchase
 AFQ: Approved For Quotation
 IFI: Issued For Information
 AB-R: As-Built for CLIENT Review
 AB-A: As-Built –Approved

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REVISION RECORD SHEET

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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 /PURCHASER:	Joint Venture of : Hirgan Energy – Design & Inspection (D&I) Companies
VENDOR:	The firm or person who will fabricate/supply 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

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CLIENT rather than by an EPC/EPD CONTRACTOR, **VENDOR.**

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 flare packages 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	QTY.
1	FST-2201	LP FLARE PACKAGE	1 SET
2	IG-2201	LP FLARE IGNITION PACKAGE	1 SET

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, VENDOR shall be considered to be in full compliance with the relevant document.

VENDOR 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

Vendor's Scope of supply and works shall be in accordance to Para. 5 of this Material Requisition. Exceptions, deviations and alternatives will be valid only by written approval of Purchaser.

The Vendor shall include in the supply, all other equipment/ devices/ item not listed in the following but not necessary for good design and a safe operation, taking into account process data and installation conditions such as area classification and climatic conditions.

For general terms and conditions of material/equipment purchasing (e.g. delivery condition,...) reference should be made to Purchaser's inquiry package.

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5.0 LIMITS OF SUPPLY

5.1 SCOPE OF SUPPLY

Vendor's technical proposal shall include but not be limited to, equipment, materials specified in the following table. Hereunder articles marked with "X" shall be within Vendor's Scope of Supply and articles marked with "O" shall be considered as optional.

Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
Flare package including:			
1. Flare Tip including:	[X]	[]	Sub-sonic type
• Self-inspiring pilots	[X]	[]	
• Windshield	[X]	[]	
• Thermocouples (for flame monitoring)	[X]	[]	K type Dual element
• Flame retention device	[X]	[]	
• Purge conservation device (as integrated)	[X]	[]	Molecular seal
• Lifting lugs	[X]	[]	
• All clips and supports for cable ducts, ignition and gas/air pipes, etc.	[X]	[]	
• All required bolts, nuts and gaskets	[X]	[]	
2. Flare stack including:	[X]	[]	
• Flanged connection at top (for Tip)	[X]	[]	Retractable type
• Davit (mounted on top)	[X]	[]	
• Air craft warning light (with all required cables, etc.)	[X]	[]	
• Winch (manual and electrical) with all required pulleys	[X]	[]	

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Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
• Earthing lugs	[X]	[]	
• Lifting lugs	[X]	[]	
• All clips and supports for cable ducts, ignition and gas/air pipes, ACWL, junction box, nameplate, etc.	[X]	[]	prefabricated
3. Support structure (derrick) including:	[X]	[]	
• Top platform (360°) for maintenance of flare tip, pilot and seal	[X]	[]	
• All access platforms	[X]	[]	
• Caged ladders	[X]	[]	
• Resting platforms	[X]	[]	
• Gratings, toe guards, etc.	[X]	[]	
4. Ignition system including:	[X]	[]	Automatic re-ignition
• High energy igniter (HEI)	[X]	[]	
• Flame front generator (FFG)	[X]	[]	
• Ignition generator	[X]	[]	
• High voltage spark plug	[X]	[]	
• Ignition control panel type A (with all required push buttons and alarms)	[X]	[]	
• Electrical and instrumentation junction boxes	[X]	[]	
• Mounting stand equipped with sun shade and rain hood	[X]	[]	
• Earthing lug	[X]	[]	
• All types of valves, gauges, transmitters and all required piping and cabling/wiring from pilots on the flare tip to local control panel	[X]	[]	

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Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
5. Liquid drain system including piping and valves within the package	[X]	[]	for smokeless operation
6. Air blower including: <ul style="list-style-type: none"> Electrical motor with terminal box All required cables, cable glands, wiring, etc. within the package Control panel All interconnecting ducting/supports 	[X]	[]	
7. LPG cylinders including: <ul style="list-style-type: none"> Bottle rack/skid with sun shade Pressure gauge Piping and required valves Lifting and earthing lugs 	[X]	[]	
8. All necessary piping materials within the package battery limit such as flanges, valves, fittings, supports, gaskets, bolts / nuts, etc according to P&ID	[X]	[]	
9. All necessary electrical equipment within the package battery limit such as motors, cables, cable glands, etc.	[X]	[]	
10. All necessary instrument equipment within the package battery limit such as transmitters, gauges, wiring / tubing, control valves, safety valves, junction boxes, etc.	[X]	[]	
11. Lifting lugs for all other pieces and equipment required inside the package	[X]	[]	where necessary
12. Anchor bolts, nuts, and templates	[X]	[]	10%
13. Touch-up paint	[X]	[]	stainless steel
14. Nameplates	[X]	[]	
15. Spare parts for pre-commissioning, commissioning and start-up	[O]	[]	
16. Spare parts for two years operation (based on project's spare part requirement)	[X]	[]	
17. Special tools for erection and maintenance	[X]	[]	

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Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
18. Other accessories required for safe operation (not referred in this MR.)			

(*) : Bidder to put "C" as confirmation or "D" as deviation and to fill the related form (Att. #3) accordingly.

Commissioning and start-up spare parts shall be listed in a separate SPIR form (Att. #5 If requested).

During bid stage and if requested by the Purchaser, Vendor shall submit a detail list of spare parts for two years of operation (Based on Project's Spare Part requirements)

NOTES:

1. Sub-Vendor List (If applicable) shall be specified in Attachment #5 which will be subject to Purchaser's Approval.
2. Vendor shall confirm and clarify suitability of above mentioned scope of supply based on technical aspect, safe operation, his experience and industrial normal practices.
3. All utilities (Instrument air, nitrogen ...) will be delivered at one point. Distribution is by Vendor.

5.2 SCOPE OF WORK

Vendor's technical proposal shall include but not be limited to works specified in the following table. Hereunder Articles marked with "X" shall be within Vendor's Scope of Work and articles marked with "O" shall be considered as optional.

Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
1. Engineering Design and Documentation, Document control and submissions to purchaser for review/ comments/ Final Filling and updating them progressively	[X]	[]	
2. As built drawing and documents			

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Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
3. Manufacturing and Assembling	[X]	[]	
4. Trial assembling at shop	[X]	[]	
5. PIM (pre-inspection meeting)	[X]	[]	
6. Procurement	[X]	[]	
7. Sub-Vendor Coordination	[X]	[]	
8. Guarantee For: <ul style="list-style-type: none"> Mechanical Process Performance Dispersion and radiation Smokeless Noise level Utility consumption Flue gas emission Gas dispersion Flaring capacity Pressure drop Radiation level Material compliance with the specification 	[X]	[]	
9. Calculations and study reports for: <ul style="list-style-type: none"> Mechanical and structural (including static calculations, foundation load calculations, strength calculations for flare and lifting equipment) Radiation and dispersion Noise Pressure drop 	[X]	[]	
10. HAZOP	[X]	[]	
11. Inspection and Testing at Shop	[X]	[]	
12. Services for Field Test	[X]	[]	
13. Painting at Shop	[X]	[]	

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Description	Required by Purchaser	Bidder's Proposal (*)	Remarks
14. Packing and Marking	[X]	[]	
15. Shipping and Transportation according to Delivery Conditions	[X]	[]	
16. Supervision for Installation / Assembling (per diem)	[O]	[]	
17. Supervision for start-up, Commissioning, Initial Operation & Test Runs	[O]	[]	
18. Certification	[X]	[]	Material, IP, ATEX, etc.
19. Management including coordination with sub-vendors	[X]	[]	
20. Export Customs Clearance	[X]	[]	
21. Obtain any Export License or other Official Authorization for Exportation	[X]	[]	
22. Vendor Shop Training for Client's Personnel (Training for Operation and Maintenance)	[O]	[]	

NOTES:

(*)Bidder to put "C" as confirmation or "D" as deviation and to fill the related form (Att. #3) accordingly.

The Design and Construction shall comply with all Regulations of the Project Defined Codes and Standards.

All document to be submitted with vendor's proposal shall be in reproducible(s) according to attachment #2 requirements and be written in English.

All documents and drawings shall state the name of purchaser work No., Identification No. and the name of commodity.

Vendor should submit the commercial quotation according to procurement instruction for proposal commercial part.

All prefabricated components or loose-supplied components shall be clearly identified by suitable marking method in order to simplify field handling, storage and erection.

All rolled plates shall be shipped on temporary saddles to prevent any deformation during handling and storage (such temporary saddles shall be supplied by VENDOR)

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5.3 SPARE PARTS

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

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

5.4 EXCLUSION

- Site Installation Cathodic protection
- Foundation anchor bolts
- Civil work at site

6.0 INSPECTION AND TESTS

The equipment shall be inspected and tested in accordance with the Inspection & Test plan (ITP) issued by the vendor and approved by the CLIENT/EPC CONTRACTOR before the award of the order . The Inspection & Test plan (ITP) shall be at least according to the Commodity Procurement and Manufacturing Inspection Instruction (Docs .Nos. ICE-EID-MI-SP01-Rev01), Inspection Level of Commodity and Equipment (Docs .Nos. ICE-EID-MI-SP02-Rev01) and Data Sheets. The vendor 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. All required manufacturing and function test/inspection also Factory Acceptance Test /Site Acceptance Test and Quality Assurance requirements shall be considered in vendor responsibility as per-project specification.

7.0 VENDOR DOCUMENTATION REQUIREMENTS & SCHEDULE

- Vendor document shall be according to attachment 2 of this document.
- All documents, preliminary or final, are to be stamped and signed by VENDOR.

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- 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, manufacturing/ fabrication (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-Vendors.

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 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

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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 Equipment for correct and safe operation based on project requirement during Equipment 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 Equipment operation at site before P.O; otherwise, VENDOR shall be hold responsible for any corresponding deviation from expectations from the Equipment/Devices/Items.

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.

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- 1) Material and Fabrication for each Section Separately
- 2) Pre-commissioning & commissioning spare parts (E&C-QC-SP-1)
- 3) 2 years operational spare parts (E&C-QC-SP-1)
- 4) Packing & loading on truck
- 5) Other fee (if any)

12.0 SPECIAL NOTES

12.1 KICK-OFF MEETING (KOM)

After the order is awarded, Vendor shall, upon receipt of Purchaser's notice, dispatch sufficient number of qualified personnel to Purchaser's office at Vendor's cost to hold the Kick-Off Meeting to confirm the procedure at least for the following categories:

- Detail procedures for correspondence, document delivery plan and Purchaser's review method and etc. shall be established.
- Document Handling procedure
- Production plan / time schedule
- Quality Control
- VPIS (Vendor Print Index Schedule)
- Invoicing procedure
- Shipping document
- Other Technical Points

12.2 PRE-INSPECTION MEETING (PIM)

Before starting the fabrication and inspection jobs, a pre-inspection meeting (PIM) will be held (at VENDOR shop or Purchaser's office based on Purchaser decision) with presence of Client (NISOC and PEDCO), Purchaser and Third Party Inspector representatives and Vendor shall submit QCP, ITP and MPS for review and approval prior to PIM with relevant parties (NISOC, PEDCO, HIRGAN Energy, TPI and Vendor).

12.3 TECHNICAL QUOTATION SHALL INCLUDE THE FOLLOWING ITEMS AS A

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MINIMUM:

- Proposal No., date and revision
- Purchaser's Requisition number
- Approximate shipping weight and dimension
- Special tools and test equipment list
- Completed Purchaser's Data Sheets
- Description of System
- Completed TBA Form
- Completed Attachment #1 (Filled designated cells)
- Filled, signed and stamped Exception, Deviation and Alternative list
- Signed and stamped pages of this Material Requisition and cover page of attachments
- Time schedule
- Earliest delivery date(s)
- Vendors reference list
- ITP, QCP, MPS
- Quality system certificates (ISO...)
- Origin of material being quoted (country, place and name of manufacturer)
- All technical documentation and Drawings shall be in English language.
- Purchaser or CLIENT's acceptance of Vendor's drawings or data with or without comments does not relieve VENDOR of the responsibility of complying with all terms, conditions, codes, standards, requirements of this requisition and project specifications.
- Purchaser reserves the right to review and comment on vendor documents that have previously been accepted with or without comments based on project requirement.
- Proven technologies only shall be considered in the selection of equipment. Vendor shall submit reference list with at least two years trouble-free running experience in similar duty and environment to those specified within quotations stage.
- This Requisition sets out the minimum requirements and does not relieve VENDOR

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of his full responsibility for the design and reliable operation of the elements supplied. Therefore VENDOR will be liable for the correct operation of any auxiliary elements involved.

- In the preparation of their proposal, Vendor shall fulfill all the provisions of this Requisition even if they differ from the standard supply. Whenever VENDOR cannot comply with the present Requisition for technical reasons, it shall be stated in detail in the Exception, Deviation and Alternative list (Attachment #3).
- For satisfactory system performance and full compliance with the attached specification, all required accessories and/or components shall be provided by Vendor whether or not requested devices are herein specified.
- Bidders may supplement their basic quotations with alternative design of significant advantages such as improving performance, delivery date, costs, etc. The supplement shall be provided with proper evidence/justification and shall be subjected to Purchaser's written approval prior to start of the work although the base offer shall be always in line with the inquiry.
- Any comments on drawing and/or Vendor data which will be submitted in accordance with Vendor document approval process shall be incorporated by Vendor and shall not affect the contracted price as far as they are in line with the requirements of this specification and/or good industrial engineering practice.
- Purchaser reserves the right to change the delivery sequence, interval and timing in order to meet the requirements of the site erection or overall construction sequence, etc. Upon Purchaser's change requests of the delivery sequence, interval and timing, Vendor shall control and expedite his work and delivery process.
- No protection, paint or other filling shall be applied to the contract works before they have been inspected, tested and approved.
- Spare parts for erection, pre-commissioning, commissioning and start-up:
- The erection, pre-commissioning, commissioning and start-up spare parts shall be supplied together with the equipment (If requested as per Scope of Supply of this MR). All spare parts shall comply with the same standard and spec. as the original equipment and shall be fully interchangeable with the original parts.

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- Supply of Spare Part for two years of operation (If requested as per Scope of Supply of this MR), shall be within Vendor's scope of supply. All spare parts shall comply with the same standard and spec. as the original equipment and shall be fully interchangeable with the original parts.
- Vendor shall provide utility summary within proposal stage.
- VENDOR's quotation shall be in strict conformity with conditions stated in this material requisition and any attached documents. Exceptions, deviations and alternatives will be valid only if approved by PURCHASER. Vendor shall confirm full compliance with the project specification requirements except the deviation listed and Purchaser has no responsibility to discover any more deviations or alternative in other parts of Vendor proposal than the agreed submitted list.
- It is Vendor's responsibility to supply/carry out all devices/measures to achieve proper and safe operation, hence if any additional device(s) is needed in VENDOR's battery limit as result of HAZOP study and it could not be proven to eliminate by Vendor's representative(s) in related HAZOP meeting, shall be supplied by Vendor, without cost impact.
- Vendor shall confirm all purchaser reference documents (with considering revision numbers) which have been attached to MR for providing his technical proposal. After each stage of clarification the revised documents and new applicable documents (if any) will be sent to Vendor and the aforementioned list shall be updated as well. Vendor is responsible to consider all consequences regarding the changes in project documents and specifications through whole BID stage. After P.O. placement no cost impact could be accepted.
- All material should be specified according to ASTM. In case non ASTM, AISI, ASME or SAE materials are applied, Vendor shall submit material equivalent comparison table with ASTM; classification such as C.S or S.S is not acceptable.
- First filling requirements (lube oil, grease, water/glycol ...) shall be supplied by Vendor. Required lube oil for flushing of rotating equipment shall also be included in Vendor scope.
- Scope of supply and work shall be fully based on Scope of supply and work in this

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Material Requisition (Attachment 1).

- Name plates shall be made up of stainless steel.
- Certifications as following shall be supplied by Vendor:
- Material Certification (For pressure parts)
- Material Certification (For Non Pressure parts)
- SPIR (Spare Part Interchangeability/Identification Report) shall be fully filled out by Vendor after purchaser order.
- The minimum ship loose items to be considered and informed to Purchaser.
- All tie-in point connections at B.L. shall be flanged type in accordance with ANSI B16.5 and PMS of the project. Otherwise, mating flanges with bolts, nuts and gaskets shall be supplied by Vendor and considered in the base price.
- Tie-ins shall be designed so that movements and rotation tend to zero and allowable imposed loads and moments from piping conform to those values that specified in Appendix N of "Specification for Pressure Vessels"; Doc. No. "BK-GNRAL-PEDCO-000-ME-SP-0001".
- All gaskets shall be asbestos free.
- Vendor shall provide site supervision for construction, pre-commissioning, commissioning, and start-up according to agree per-diem rates. And Vendor shall issue a detailed program for site erection estimating the number of man/day required for supervision and specifying the technical qualification and experience for the personnel deemed necessary for the erection of the equipment after PO.
- All package (equipment, interconnecting piping...) paintings including final painting shall be carried out at Vendor shop prior to delivery to site as per project paint specification.
- Sound pressure level of equipment shall be less than 85 dB at 1 meter of noise source otherwise noise attenuation covers shall be supplied by Vendor.
- Vendor has already been informed regarding Purchaser's utility conditions and in case any device is needed to meet Vendor's equipment requirements (such as amplifier, regulator, etc.) shall be supplied by Vendor.
- Manifold flange connection with block valve at the edge of base plate for terminal

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point with purchaser for all utility services shall be supplied by vendor.

- Motor sunshade, air finned tube coolers sunshade, cooling fan for air fin coolers (if required) shall be supplied by vendor.
- Coupling guards shall be non-sparking type.
- Provision of PDMS 3D Model (or exported model in *.dgn format) is in Vendor scope.
- Vendor's supervisor, who is to be dispatched to site for installation, start-up inspection, repair and maintenance of equipment supplied by Vendor, shall perform his duty for all equipment including materials provided by his subcontractor.
- Vendor's supervisor shall be sufficiently qualified to perform his duty. Vendor shall provide a resume of expected personnel for Purchaser's approval. Purchaser has right to reject the supervisor proposed by Vendor and to appoint alternative personnel.
- The duty of the Supervisor shall include, but not be limited to the following:
 - 1) Witnessing of unpacking inspection of the goods
 - 2) Supervising and giving direction of assembling and installation
 - 3) Checking of the leveling and alignment
 - 4) Checking of the equipment performance
 - 5) Adjustment of safety device and instruments
 - 6) Supervising of preparation of start-up
 - 7) Supervising and giving direction of start-up operation
 - 8) Executing and/or supervising and giving direction for assembling disassembling, inspection and repair.
 - 9) Preparing of inspection and test records and miscellaneous reports
 - 10) To monitor activities time schedule
 - 11) Supervising and giving technical assistance for maintenance service(s).
- Vendor shall indentify and be responsible for damages to properties and/or personnel injuries resulted from the gross negligence of the Supervisor while performing duty.
- Any other points as per Purchase Order (PO).

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ATTACHMENT #1

LIST OF REFERENCE / APPLICABLE DOCUMENTS

No.	Document No.	Document Title	Rev
1. Process & Safety			
1	BK-GCS-PEDCO-120-PR-PI-0020	P&ID - LP Flare System	D06
2	BK-GCS-PEDCO-120-PR-SP-0003	Duty Specification for LP Flare Package	D03
3	BK-GNRAL-PEDCO-000-PR-DB-0001	Process Basis of Design	D08
4	BK-GNRAL-PEDCO-000-PR-DC-0001	Process Design Criteria	D02
5	BK-GCS-PEDCO-120-SA-PY-0002	Hazardous Area Classification Layout	D00
2. Mechanical			
1	BK-GNRAL-PEDCO-000-ME-DC-0001	Mechanical Design Criteria	D03
2	BK-GCS-PEDCO-120-ME-SP-0013	Specification For Flare Package	D04
3	BK-GNRAL-PEDCO-000-ME-SP-0001	Specification For Pressure Vessel	D03
3. General Document & Procedures			
1	BK-GNRAL-PEDCO-000-QC-PR-0015	Specification for Welding Procedure	D00
2	BK-GNRAL-PEDCO-000-QC-PR-0045	Packing, Marking, Transportation Procedure	D00
3	ICE-EID-MI-SP01	دستورالعمل بازرسی، خرید و ساخت کالا	D01
4	ICE-EID-MI-SP02	دستورالعمل تعیین سطح بازرسی کالا و تجهیزات	D01
5	E&C-QC-SP-1	دستورالعمل تامین قطعات یدکی راه اندازی و راهبری دو سالانه	D01
6	BK-GNRAL-PEDCO-000-QC-PR-0022	Specification For Final Data book(FDB)Requirements	D00
4. Instrument			
1	BK-GNRAL-PEDCO-000-IN-SP-0001	Specification for Instrumentation	D04
2	BK-GNRAL-PEDCO-000-IN-SP-0004	Specification For Instrument and Control of Package Unit System (PU)	D02
3	BK-GNRAL-PEDCO-000-IN-SP-0009	Specification for Fire & Gas Sensor and Devices	D04
5. Electrical			
1	BK-GNRAL-PEDCO-000-EL-DC-0001	Electrical System Design Criteria	D03
2	BK-GNRAL-PEDCO-000-EL-SP-0014	Specification For Power & Control Cables	D03
3	BK-GNRAL-PEDCO-000-EL-SP-0006	Specification For Earthing & Lightning System	D03
4	BK-GNRAL-PEDCO-000-EL-SP-0011	Specification For Electrical Requirements of Packaged Units	D03
6. Piping & Material			
1	BK-GNRAL-PEDCO-000-PI-SP-0011	Specification of welding of plant piping system & NDT	D01

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2	BK-GNRAL-PEDCO-000-PI-SP-0008	Specification for Material Requirements in Sour service	D01
3	BK-GCS-PEDCO-120-PI-SP-0001	Piping Material Specification (PMS)	D02
4	BK-GNRAL-PEDCO-000-PI-DC-0001	Piping Design Criteria	D03
5	BK-GNRAL-PEDCO-000-PI-SP-0005	Specification for Fittings, Flanges, Gaskets and Bolts	D02
6	BK-GNRAL-PEDCO-000-PI-SP-0006	Specification for Painting	D04
7	BK-GNRAL-PEDCO-000-PI-SP-0001	Specification for color coding and marking	D01
8	BK-GNRAL-PEDCO-000-PI-SP-0007	Specification for Lining (Internal Protection of Equipment By Painting)	D02
9	BK-GNRAL-PEDCO-000-PI-SP-0017	Specification for Cleaning and Flushing	D03
10	BK-GNRAL-PEDCO-000-PI-SP-0019	Specification for Insulation	D02
7. Civil			
1	BK-GNRAL-PEDCO-000-CV-DC-0001	Structural Design Criteria	D01
2	BK-GNRAL-PEDCO-000-CV-SP-0005	Specification for Civil Works	D02
3	BK-GNRAL-PEDCO-000-ST-DC-0001	Design Criteria for Concrete Works	D00
4	BK-GNRAL-PEDCO-000-ST-DW-0002	Standard Drawing for Anchor Bolts	D02
5	BK-GNRAL-PEDCO-000-ST-SP-0003	Specification for Fabrication of Steel Structures	D02
6	BK-GNRAL-PEDCO-000-ST-SP-0005	Specification for Erection of Steel Structures	D02
7	BK-GNRAL-PEDCO-000-ST-SP-0006	Specification for Fireproofing	D03
8. Drawing			
1	BK-GNRAL-PEDCO-000-ME-DW-0001	Standard Detail Drawing For Pressure Vessels and Heat Exchangers	D02

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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	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	
013	ESD Instructions		6C+E		6C+E	

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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)
INTERFACE						
014	Electrical & Instrumentation Cable Schedule (for all systems)		6C+E		6C+E	
015	Electrical & Instrumentation Wiring Drawings (for all systems)		6C+E		6C+E	
016	Package Data Sheets	4N	6C+E		6C+E	
017	Reliability, Availability, Maintainability Calculations/Reports	4N	6C+E		6C+E	
018	Performance Curves		6C+E		6C+E	
019	PFD's	4N	6C+E		6C+E	
020	Functional Description		6C+E		6C+E	
021	General Arrangements Drawings	4N	6C+E		6C+E	
022	Mechanical Equipment List	3N	6C+E		6C+E	
023	Electrical Equipment List	3N	6C+E		6C+E	
024	Control, Instrument & Cable List		6C+E		6C+E	
025	Interface Block Diagrams	3N	6C+E		6C+E	
026	Junction Box, Local Panels & Cabinets: wiring diagrams & termination drawings		6C+E		6C+E	
027	Functional Logic Diagram		6C+E		6C+E	
028	P & ID's	3N	6C+E		6C+E	
029	Utility Consumption List	3N	6C+E		6C+E	
030	Power Supply Requirements	3N	6C+E		6C+E	
031	Single Line Diagram	3N	6C+E		6C+E	

 NISOC	<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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	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
032	Earthing Details	3N	6C+E		6C+E	
033	Weight / Centre of Gravity Drawings & Data's		6C+E		6C+E	
034	External Static and Dynamic Forces & Moments (present during test, start-up, normal/maximum operation, shutdown, and other conditions of service)		6C+E		6C+E	
035	Wind and Seismic Loads including shear and moment forces on supports and foundation.		6C+E		6C+E	
036	Anchor Bolt Details Drawings (incl. size, type, locations relative to the equipment center-lines in three planes).		6C+E		6C+E	
037	Ladder & Platform Detail Drawing		6C+E		6C+E	
038	Steel Structure Detail Drawing		6C+E		6C+E	
039	Dimensional Outline Drawing		6C+E		6C+E	
ENGINEERING						
040	Detailed Functional Design Specification		6C+E		6C+E	
041	Detailed Overall Description		6C+E		6C+E	
042	Mechanical Detailed Specifications (one per component)		6C+E		6C+E	
043	Detailed Design / Fabrication Drawings for Equipment & Auxiliary Parts		6C+E		6C+E	
044	Cross Sectional Drawings with Part Lists		6C+E		6C+E	
045	Assembly Drawings		6C+E		6C+E	
046	Valves & Instruments Location Drawings (incl. provisions for operational and maintenance access)		6C+E		6C+E	
047	Electrical Detailed Specifications (one		6C+E		6C+E	

 NISOC	<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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	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
	per component)					
048	Electrical Cables Routing (incl. cable trays & junction boxes)		6C+E		6C+E	
049	Electrical Equipment Location Drawings (incl. provisions for operational and maintenance access)		6C+E		6C+E	
050	Protection Device Operating Curves		6C+E		6C+E	
	Electrical Control Schematics		6C+E		6C+E	
051	Instrument & Control Detailed Specifications (one per component)		6C+E		6C+E	
052	Instrument cables routing (incl. cable trays & junction boxes)		6C+E		6C+E	
053	Instrument Equipment Location Drawings (incl. provisions for operational and maintenance access)		6C+E		6C+E	
054	Hook-Up Diagrams		6C+E		6C+E	
055	Wiring Loops Diagrams		6C+E		6C+E	
056	Instrument Control Schematics		6C+E		6C+E	
057	Instrument Mounting & Housing Instructions		6C+E		6C+E	
058	Power Distribution & Consumption		6C+E		6C+E	
059	Cause & Effect Charts		6C+E		6C+E	
060	Original Software for Control & Monitoring System		6C+E		6C+E	
061	Software System Specifications		6C+E		6C+E	
062	Approximate Weight & Dimension	4N				
063	Shipping Detail Drawing		6C+E		6C+E	
064	Pressure Loss Calculations		6C+E		6C+E	
065	Lubrication System Detailed Specifications / Drawings		6C+E		6C+E	
066	Completed Equipment Datasheets	4N	6C+E		6C+E	

 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: 053 – 073 – 9184	PMR FOR FLARE PACKAGES								شماره صفحه : 28 از 34
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
067	Complex loop & automation descriptions, list of alarms & shutdown with set points		6C+E		6C+E	
068	Electrical Equipment Catalogue	3N	6C+E		6C+E	
069	Electrical Interface Block Diagrams		6C+E		6C+E	
070	Local Control Station of motors wiring diagram, termination drawing and general arrangement		6C+E		6C+E	
071	Coupling System Detailed Specifications / Drawings		6C+E		6C+E	
PROCUREMENT						
072	List of Sub-Vendors (table giving: part of equipment, tag no., sub-Vendor reference)(5.1.3)	4N			6C+E	
073	Unpriced copy of sub-orders		6C+E			
MANUFACTURING						
074	Weld and NDT Map		6C+E		6C+E	
075	Surface Preparation and Painting Procedures		6C+E		6C+E	
076	Heat Treatment Procedures		6C+E		6C+E	
077	Welding Procedure Specification (including repair procedures).		6C+E		6C+E	
078	Welder Qualification Procedure		6C+E		6C+E	
079	Fabrication Degree	3N				
TESTING						
080	Hydrostatic / Pneumatic Testing Procedure		6C+E		6C+E	
081	Performance & Functional Test Procedure		6C+E		6C+E	
082	Non-Destructive Testing/Examination Procedures		6C+E		6C+E	
083	Factory Acceptance Test (FAT)		6C+E		6C+E	

 NISOC	<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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	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
	Procedure					
084	Site Acceptance Test (SAT) Procedure		6C+E		6C+E	
RECORDS, REPORTS & CERTIFICATES						
085	Material Conformity Certificate		6C+E		6C+E	
086	Testing Authority Approval Certificate (if any)		6C+E		6C+E	
087	Ingress Protection Certificate		6C+E		6C+E	
088	Conformity Certificates (sub-Vendor/equipment)		6C+E		6C+E	
089	Material Certificates Identification Diagram. (cross-reference material location ; certificates for critical components)		6C+E		6C+E	
090	Welding Procedure Qualification Record		6C+E		6C+E	
091	Welder Qualification Records.		6C+E		6C+E	
092	NDT Operator Qualifications		6C+E		6C+E	
093	Detailed NDT Reports		6C+E		6C+E	
094	Weld/ NDT Identification Diagram. (Cross-reference weld locations, WPS, welders, NDT reports).		6C+E		6C+E	
095	Dimensional Control Reports		6C+E		6C+E	
096	Hardness Test Reports		6C+E		6C+E	
097	PWHT Charts & Reports, including calibration records of recorders (for each heat treatment)		6C+E		6C+E	
098	Surface Preparation & Coating Reports		6C+E		6C+E	
99	Hydrostatic / Pneumatic Testing Certificates		6C+E		6C+E	
100	Welding Consumable Certificate		6C+E		6C+E	
101	Inspection and Test Reports(if any)		6C+E		6C+E	
102	Rust Prevention Report		6C+E		6C+E	

 <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>								
شماره پیمان: 053 – 073 – 9184	PMR FOR FLARE PACKAGES								شماره صفحه : 30 از 34
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
103	Non-Conformities Report		6C+E		6C+E	
INSTALLATION						
104	Sub-Assembly Documentation		6C+E		6C+E	
105	Sub-Assembly Drawings		6C+E		6C+E	
106	Erection/Installation Manual (if required)		6C+E		6C+E	
110	Name Plate Documents		6C+E		6C+E	
111	Handling, Transportation & Storage Instructions		6C+E		6C+E	
112	Unpacking & Inspection Instructions		6C+E			
113	Preliminary Packing List	4N				
114	Packing List		6C+E		6C+E	
OPERATION & MAINTENANCE						
115	Operating Instructions		6C+E		6C+E	
116	Maintenance Instructions (if required)		6C+E		6C+E	
117	Commissioning & Start-up Manual		6C+E		6C+E	
118	List of Spare Parts Commissioning & Start-up	4N	6C+E		6C+E	136
119	List of Spare Parts 2 Years Operation	4N	6C+E		6C+E	136
120	List of Special Tools	4N	6C+E		6C+E	
121	Lube Oil Schedule		6C+E		6C+E	
122	Software Manual (incl. Troubleshooting)		6C+E		6C+E	
123	Consumables List		6C+E		6C+E	
124	Function Test Procedure		6C+E		6C+E	
125	Lubrication List		6C+E		6C+E	
VENDOR FINAL DOCUMENTS						
126	Vendor Final Book				6C+E	
127	All others documents (if required) will be listed in the order		6C+E			

 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: 053 – 073 – 9184	PMR FOR FLARE PACKAGES								شماره صفحه : 31 از 34
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0012	D00	

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)
NOTES:						
(1) N= Number of document, C=Copy, E=Electronic Copy						
(2) Starting from date of order placement						
(3) Starting from reception of documentation without comments						
(4) First issue of the document is subjected to the release of payment milestone as per purchase order						
(5) Calendar days after reception of drive data,						
(6) Prior to testing						
(7) One copy each bid copy						
(8) Refer to Project's Vendor Document Handling Procedure						
(9) List of Documents will be Finalized in Vendor Document Index and Schedule.						

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 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	0012	D00	

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 <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>								
<p>شماره پیمان: 053 – 073 – 9184</p>	PMR FOR FLARE PACKAGES								<p>شماره صفحه : 33 از 34</p>
	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0002	D00	

ATTACHMENT #4

SUB VENDOR LIST

(To be in accordance with MOP)

Item No.	Material Description	Proposed Sub-Vendor

 NISOC	<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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	پروژه	بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
	BK	GCS	PEDCO	120	ME	MR	0002	D00	

ATTACHMENT #5

SPARE PARTS LIST

(Based on E & C- QC- SP-1)

(TABLE 1-14) PRESSURE VESSELS & TANKS	
ITEMS	QUANTITIES