

|                                                                                                   |                                                                                                      |                  |                     |                |            |                |               |                                                                                                                                                                                                                                                                   |                    |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------|---------------------|----------------|------------|----------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <br><b>NISOC</b> | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح الارض<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                  |                     |                |            |                |               | <br><br> |                    |
|                                                                                                   | TBE FOR INSTRUMENT/PLANT AIR & NITROGEN PACKAGES                                                     |                  |                     |                |            |                |               |                                                                                                                                                                                                                                                                   |                    |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | پروژه<br>BK                                                                                          | بسته کاری<br>GCS | صادر کننده<br>PEDCO | تجهیزات<br>120 | رشته<br>ME | نوع مدرک<br>TB | سریال<br>0006 | نسخه<br>D01                                                                                                                                                                                                                                                       | شماره صفحه: ۱ از ۷ |

## طرح نگهداشت و افزایش تولید ۲۷ مخزن

### TBE FOR INSTRUMENT/PLANT AIR & NITROGEN PACKAGES

#### نگهداشت و افزایش تولید میدان نفتی بینک

|      |          |                           |              |             |                |                 |
|------|----------|---------------------------|--------------|-------------|----------------|-----------------|
| D01  | OCT.2023 | IFI                       | H.Ghadyani   | M.Fakharian | S.Faramarzpour |                 |
| D00  | MAR.2023 | IFI                       | H. Adineh    | M.Fakharian | M.Mehrshad     |                 |
| Rev. | Date     | Purpose of Issue / Status | Prepared by: | Checked by: | Approved by:   | CLIENT Approval |

Class: 3

CLIENT Doc. Number: F0Z-709228

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

|                                                                                                   |                                                                                                                          |               |                |            |                |                     |                                                                                     |             |                    |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------|----------------|------------|----------------|---------------------|-------------------------------------------------------------------------------------|-------------|--------------------|
| <br><b>NISOC</b> | <b>تگداشت و افزایش تولید میدان نفتی بینک</b><br><b>سطح الارض</b><br><b>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک</b> |               |                |            |                |                     |  |             |                    |
|                                                                                                   | TBE for Instrument/Plant Air & Nitrogen Packages                                                                         |               |                |            |                |                     |                                                                                     |             |                    |
| شماره پیمان:<br>۰۵۳ - ۰۷۳ - ۹۱۸۴                                                                  | نسخه<br>D01                                                                                                              | سریال<br>0006 | نوع مدرک<br>TB | رشته<br>ME | تجهیزات<br>120 | صادر کننده<br>PEDCO | بسته کاری<br>GCS                                                                    | پروژه<br>BK | شماره صفحه: ۷ از ۲ |

### REVISION RECORD SHEET

| Page | D00 | D01 | D02 | D03 | D04 | Page | D00 | D01 | D02 | D03 | D04 |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| 1    | X   | X   |     |     |     | 65   |     |     |     |     |     |
| 2    | X   | X   |     |     |     | 66   |     |     |     |     |     |
| 3    | X   | X   |     |     |     | 67   |     |     |     |     |     |
| 4    | X   | X   |     |     |     | 68   |     |     |     |     |     |
| 5    | X   | X   |     |     |     | 69   |     |     |     |     |     |
| 6    | X   | X   |     |     |     | 70   |     |     |     |     |     |
| 7    | X   | X   |     |     |     | 71   |     |     |     |     |     |
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| 21   |     |     |     |     |     | 85   |     |     |     |     |     |
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| 26   |     |     |     |     |     | 90   |     |     |     |     |     |
| 27   |     |     |     |     |     | 91   |     |     |     |     |     |
| 28   |     |     |     |     |     | 92   |     |     |     |     |     |
| 29   |     |     |     |     |     | 93   |     |     |     |     |     |
| 30   |     |     |     |     |     | 94   |     |     |     |     |     |
| 31   |     |     |     |     |     | 95   |     |     |     |     |     |
| 32   |     |     |     |     |     | 96   |     |     |     |     |     |
| 33   |     |     |     |     |     | 97   |     |     |     |     |     |
| 34   |     |     |     |     |     | 98   |     |     |     |     |     |
| 35   |     |     |     |     |     | 99   |     |     |     |     |     |
| 36   |     |     |     |     |     | 100  |     |     |     |     |     |
| 37   |     |     |     |     |     | 101  |     |     |     |     |     |
| 38   |     |     |     |     |     | 102  |     |     |     |     |     |
| 39   |     |     |     |     |     | 103  |     |     |     |     |     |
| 40   |     |     |     |     |     | 104  |     |     |     |     |     |
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| 42   |     |     |     |     |     | 106  |     |     |     |     |     |
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| 45   |     |     |     |     |     | 109  |     |     |     |     |     |
| 46   |     |     |     |     |     | 110  |     |     |     |     |     |
| 47   |     |     |     |     |     | 111  |     |     |     |     |     |
| 48   |     |     |     |     |     | 112  |     |     |     |     |     |
| 49   |     |     |     |     |     | 113  |     |     |     |     |     |
| 50   |     |     |     |     |     | 114  |     |     |     |     |     |
| 51   |     |     |     |     |     | 115  |     |     |     |     |     |
| 52   |     |     |     |     |     | 116  |     |     |     |     |     |
| 53   |     |     |     |     |     | 117  |     |     |     |     |     |
| 54   |     |     |     |     |     | 118  |     |     |     |     |     |
| 55   |     |     |     |     |     | 119  |     |     |     |     |     |
| 56   |     |     |     |     |     | 120  |     |     |     |     |     |
| 57   |     |     |     |     |     | 121  |     |     |     |     |     |
| 58   |     |     |     |     |     | 122  |     |     |     |     |     |
| 59   |     |     |     |     |     | 123  |     |     |     |     |     |
| 60   |     |     |     |     |     | 124  |     |     |     |     |     |
| 61   |     |     |     |     |     | 125  |     |     |     |     |     |
| 62   |     |     |     |     |     | 126  |     |     |     |     |     |
| 63   |     |     |     |     |     | 127  |     |     |     |     |     |
| 64   |     |     |     |     |     | 128  |     |     |     |     |     |



NOTES:

ABBREVIATIONS: A: ACCEPTED By Vendor N: NOT ACCEPTED By Vendor NA: Not Applicable NS: Not Specified C: Clarification Required VT: Vendor to Specify

|                                                                                  |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
|----------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------|------------|--------------|------------------------------------------------------------------------|-------|-------------------------------|--------|--------------|---------------------------------------------------------------|--|-------------------------------------------------------------------------------------|-----------------|----|-----------------|--|
|  |  | نگهداشت و افزایش تولید میدان نفتی بینک<br>سنگ‌لاش                                              |            |              |                                                                        |       |                               |        |              |                                                               |  |  |                 |    |                 |  |
| TBE for Instrument/Plant Air & Nitrogen Packages                                 |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| شماره پیمان:                                                                     |  | وزنه:                                                                                          | بسته کاری: | مکان گنبد:   | تجهیزات:                                                               | رشته: | نوع مدار گک:                  | مرداب: | شماره سند: ۲ |                                                               |  |                                                                                     |                 |    |                 |  |
| ۰۳-۰۳-۱۱۴۴                                                                       |  | BK                                                                                             | GCS        | D01          | PEDCO                                                                  | 120   | ME                            | TB     | 0006         | D02                                                           |  |                                                                                     |                 |    |                 |  |
| REQ. NO: BK-GCS-PEDCO-120-ME-MR-0006                                             |  |                                                                                                |            | BIDDER NAME: |                                                                        |       | HAYAYAR                       |        |              | HAVASAN                                                       |  |                                                                                     | PARS COMPRESSOR |    | ARAZ SANAT ASIA |  |
| QUOTATION NO.:                                                                   |  |                                                                                                |            |              |                                                                        |       | HY/01/1/3118                  |        |              | HAY-BK-HRGN-001                                               |  |                                                                                     | 18910           |    | ASA-LR-02-263   |  |
| QUOTATION DATE:                                                                  |  |                                                                                                |            |              |                                                                        |       | 8/14/2023                     |        |              | 8/30/2023                                                     |  |                                                                                     | 9/11/2023       |    | 9/11/2023       |  |
| No.                                                                              |  | DESCRIPTION                                                                                    |            | UNITS        | REQ'D BY PURCHASER                                                     |       | MEETS REQUESTION REQUIREMENTS |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
|                                                                                  |  |                                                                                                |            |              |                                                                        |       | Bidder's Proposal             |        |              | Status                                                        |  | Bidder's Proposal                                                                   |                 |    | Status          |  |
|                                                                                  |  |                                                                                                |            |              |                                                                        |       | Bidder's Proposal             |        |              | Status                                                        |  | Bidder's Proposal                                                                   |                 |    | Status          |  |
| Nitrogen Generation Package                                                      |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 1 GENERAL                                                                        |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 1.1                                                                              |  | Guarantee & Warranty as per project requirement                                                |            | -            | 12 month after successful start up or 18 months after delivery at site |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 1.2                                                                              |  | Delivery Time                                                                                  |            | -            | As per project requirement                                             |       | 9                             |        |              | YES                                                           |  | 8                                                                                   |                 |    | YES             |  |
| 1.3                                                                              |  | Delivery Location                                                                              |            | -            | As per project requirement                                             |       | As per project requirement    |        |              | YES                                                           |  | As per project requirement                                                          |                 |    | YES             |  |
| 2 DOCUMENTS CHECK LIST                                                           |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 2.1                                                                              |  | Quality System Certificates                                                                    |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.2                                                                              |  | Catalogues                                                                                     |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.3                                                                              |  | Sub-Vendor List                                                                                |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.4                                                                              |  | Scope of Supply & Work (Attachment of MR)                                                      |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.5                                                                              |  | Deviation List                                                                                 |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.6                                                                              |  | Reference and Installation List                                                                |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.7                                                                              |  | Recommended Spare Part List for erection & Commissioning                                       |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.8                                                                              |  | Recommended Spare Part List for 2 Years of Operation                                           |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | NS                                                                                  |                 |    | NO              |  |
| 2.9                                                                              |  | Special Tools List (If Required)                                                               |            | -            | Required                                                               |       | NA                            |        |              | NO                                                            |  | NA                                                                                  |                 |    | NO              |  |
| 2.10                                                                             |  | P&ID                                                                                           |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.11                                                                             |  | Process Flow diagram                                                                           |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | NS                                                                                  |                 |    | NO              |  |
| 2.12                                                                             |  | Control Philosophy                                                                             |            | -            | Required                                                               |       | After P.O                     |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 2.13                                                                             |  | ESD Philosophy                                                                                 |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 2.14                                                                             |  | Main Equipment list                                                                            |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | After P.O.                                                                          |                 |    | YES             |  |
| 2.15                                                                             |  | Calculation Note For PSV Sizing                                                                |            | -            | Required                                                               |       | A                             |        |              | PSV Sizing on skid is as per manufacturer design and standard |  | YES                                                                                 |                 | NA |                 |  |
| 2.16                                                                             |  | Operating Manual                                                                               |            | -            | Required                                                               |       | After PO                      |        |              | YES                                                           |  | After P.O.                                                                          |                 |    | YES             |  |
| 2.17                                                                             |  | Outline/General Lay-out Drawings                                                               |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | After P.O.                                                                          |                 |    | YES             |  |
| 2.18                                                                             |  | Data Sheets for All Equipment Inside the Package                                               |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | After P.O.                                                                          |                 |    | YES             |  |
| 2.19                                                                             |  | Utility Consumption List                                                                       |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 2.20                                                                             |  | Load List                                                                                      |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 2.21                                                                             |  | Control System Architecture Drawing                                                            |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | After P.O.                                                                          |                 |    | YES             |  |
| 3 SCOPE OF SUPPLY                                                                |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 3.1                                                                              |  | Pre filter / After Filter / Dust Filter                                                        |            | -            | 2/2/1                                                                  |       | 2/2/2                         |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 3.2                                                                              |  | Carbon Mole Sieve Adsorption Vessels                                                           |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.3                                                                              |  | Gearbox                                                                                        |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.4                                                                              |  | Chiller Package                                                                                |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.5                                                                              |  | On-skid piping, tubing & wiring                                                                |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.6                                                                              |  | Base plate                                                                                     |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.7                                                                              |  | Earthing system                                                                                |            | -            | Required                                                               |       | A (ON SKID)                   |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.8                                                                              |  | Name plates for all equipment                                                                  |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.9                                                                              |  | Any other required accessories                                                                 |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.10                                                                             |  | Commissioning spare parts                                                                      |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.11                                                                             |  | Two years spare parts                                                                          |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.12                                                                             |  | Special tools (if any)                                                                         |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | NA                                                                                  |                 |    | YES             |  |
| 3.13                                                                             |  | First Filling                                                                                  |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.14                                                                             |  | Unit Control Panel dedicated to each Nitrogen Package as per project requirements (N2 Package) |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 3.15                                                                             |  | Personnel Safety Devices                                                                       |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | NA                                                                                  |                 |    | YES             |  |
| 4 SCOPE OF WORK                                                                  |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 4.1                                                                              |  | Engineering & Documentation                                                                    |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.2                                                                              |  | Manufacturing & Assembling                                                                     |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.3                                                                              |  | PIM (pre-inspection meeting)                                                                   |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.4                                                                              |  | Procurement                                                                                    |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.5                                                                              |  | Inspection & Testing at shop                                                                   |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.6                                                                              |  | PMI for Non-Carbon Steel material                                                              |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.7                                                                              |  | PWHT/ Stress Relieve (if required)                                                             |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.8                                                                              |  | Chemical Cleaning, Pickling & Passivation for Stainless Steel Parts                            |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.9                                                                              |  | Wiring and Tubing to Junction Boxes                                                            |            | -            | Required                                                               |       | A (ON SKID)                   |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.10                                                                             |  | Interconnecting piping inside unit assembly                                                    |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.11                                                                             |  | Review of Purchaser's Drawings                                                                 |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.12                                                                             |  | Painting                                                                                       |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.13                                                                             |  | Participation in HAZOP and SIL Study                                                           |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.14                                                                             |  | Shipping and Transportation                                                                    |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.15                                                                             |  | Packing & Preservation                                                                         |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.16                                                                             |  | Certification                                                                                  |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.17                                                                             |  | Coordination with Sub-vendors                                                                  |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.18                                                                             |  | Export Customs Clearance                                                                       |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.19                                                                             |  | Obtain Any Export License or Other Official Authorization                                      |            | -            | Required                                                               |       | A                             |        |              | YES                                                           |  | N                                                                                   |                 |    | NO              |  |
| 4.20                                                                             |  | Supervision for Installation                                                                   |            | -            | Required (As Option)                                                   |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 4.21                                                                             |  | Supervision for Pre-commissioning, commissioning & Start up                                    |            | -            | Required (As Option)                                                   |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 4.22                                                                             |  | Vendor Shop Training for Owner's Personnel                                                     |            | -            | Required (As Option)                                                   |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 4.23                                                                             |  | Insulation Work (If any)                                                                       |            | -            | Required                                                               |       | NA                            |        |              | YES                                                           |  | NA                                                                                  |                 |    | YES             |  |
| 5 SITE CONDITION                                                                 |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |
| 5.1                                                                              |  | Ambient temperature (Max./Min.)                                                                |            | °C           | 5-50                                                                   |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 5.2                                                                              |  | Relative Humidity (Max./Min.)                                                                  |            | %            | 0-100%                                                                 |       | A                             |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 5.3                                                                              |  | Barometric Pressure                                                                            |            | bars         | 0.914-0.991                                                            |       | 0.991                         |        |              | YES                                                           |  | A                                                                                   |                 |    | YES             |  |
| 6 OIL FREE SCREW COMPRESSOR                                                      |  |                                                                                                |            |              |                                                                        |       |                               |        |              |                                                               |  |                                                                                     |                 |    |                 |  |

|                                                                                           |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|----------------------------------------------------------|-------------------------------------|------------|-----------------------------------------------------------------------------|--------|----------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------|--|--|
| <br>NISOC |                                                                                    | نگهداشت و افزایش تولید میدان نفتی بینک<br>سلطان‌الارض<br><br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          | <br>شماره سند: ۷ |        |  |  |
|                                                                                           |                                                                                    | TBE for Instrument/Plant Air & Nitrogen Packages                                                           |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| شماره پیمان: ۰۳ - ۰۳ - ۱۱۴                                                                |                                                                                    | ورژن: BK                                                                                                   | بسته کاری: GCS              | مکان: PEDCO                              | نوع مدارک: TB                                            | مرکز: 0006                          | شماره: D02 |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| REQ. NO: BK-GCS-PEDCO-D29-ME-MR-0006                                                      |                                                                                    | BIDDER NAME:                                                                                               |                             |                                          |                                                          | HAYAYAR                             |            | HAVASAN                                                                     |        | PARS COMPRESSOR                                    |                                                          | ARAZ SANAT ASIA                                                                                     |        |  |  |
| QUOTATION NO.:                                                                            |                                                                                    |                                                                                                            |                             |                                          |                                                          | HY/01/1/3118                        |            | HAY-BK-HIRGN-001                                                            |        | 18910                                              |                                                          | ASA-LR-02-263                                                                                       |        |  |  |
| QUOTATION DATE:                                                                           |                                                                                    |                                                                                                            |                             |                                          |                                                          | 8/16/2023                           |            | 8/30/2023                                                                   |        | 9/11/2023                                          |                                                          | 9/11/2023                                                                                           |        |  |  |
| No.                                                                                       | DESCRIPTION                                                                        | UNITS                                                                                                      | REQ'D BY PURCHASER          | MEETS REQUISITION REQUIREMENTS           |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
|                                                                                           |                                                                                    |                                                                                                            |                             | Bidder's Proposal                        | Status                                                   | Bidder's Proposal                   | Status     | Bidder's Proposal                                                           | Status | Bidder's Proposal                                  | Status                                                   | Bidder's Proposal                                                                                   | Status |  |  |
| 6.1                                                                                       | Quantity                                                                           | -                                                                                                          | 1                           | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.2                                                                                       | Manufacturer                                                                       | -                                                                                                          | VTS                         | HAYAYAR                                  | YES                                                      | HAYASAN- AirEnd GHHRAND             | YES        | GHH RAND                                                                    | YES    | GHH                                                | YES                                                      |                                                                                                     |        |  |  |
| 6.3                                                                                       | Compressor Allowable Operating Temperature (Max. / Min.)                           | °C                                                                                                         | 5/30                        | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.4                                                                                       | Delivered Flow                                                                     | Nm³/hr                                                                                                     | VTS                         | 194                                      | YES                                                      | 438 @ Site                          | YES        | FAD=320 m³/hr                                                               | YES    | 124                                                | YES                                                      |                                                                                                     |        |  |  |
| 6.5                                                                                       | Design Pressure                                                                    | bar                                                                                                        | 12.5                        | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.6                                                                                       | Package Outlet Air Pressure                                                        | bar                                                                                                        | 9                           | 9.5                                      | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.7                                                                                       | Max. Outlet Air temperature @ after cooler outlet                                  | °C                                                                                                         | 65                          | 60                                       | NO                                                       | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.8                                                                                       | Max Dust Particle Size                                                             | µm                                                                                                         | ≤ 8.2                       | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.9                                                                                       | Noise Level                                                                        | dB(A)                                                                                                      | 85                          | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.10                                                                                      | Capacity Control Method                                                            | -                                                                                                          | Load/Unload                 | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.11                                                                                      | Cooling Type                                                                       | -                                                                                                          | Air Cooled                  | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.12                                                                                      | Intake Filter                                                                      | -                                                                                                          | Required                    | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  | YES                                                      | A                                                                                                   | YES    |  |  |
| 6.13                                                                                      | Air-end Manufacturer / Model                                                       | -                                                                                                          | VTS                         | GHH Rand/CHMD                            | YES                                                      | AirEnd GHHRAND - CD RD              | YES        | GHH Rand/CHMD                                                               | YES    | GHH                                                | YES                                                      |                                                                                                     |        |  |  |
| 6.14                                                                                      | Power Transmission Method                                                          | -                                                                                                          | Direct Coupled or Gear Type | Gear Type                                | YES                                                      | Gear Type                           | YES        | Direct Coupled                                                              | YES    |                                                    | Direct Coupled                                           | YES                                                                                                 |        |  |  |
| 6.15                                                                                      | Weight                                                                             | kg                                                                                                         | VTS                         | 1817                                     | YES                                                      | NS                                  | YES        | NS                                                                          | NO     | according catalogue data for compressor and driver |                                                          |                                                                                                     | YES    |  |  |
| 6.16                                                                                      | Dimension (L x W x H)                                                              | mm                                                                                                         | VTS                         | 2340 x 1370 x 985                        | YES                                                      | 1999 x 1200 x 1650                  | YES        | 2450x1300x1950                                                              | YES    | according catalogue data for compressor and driver |                                                          |                                                                                                     | YES    |  |  |
| 6.17                                                                                      | Enclosure Fan Motor Power / Qty                                                    | kW                                                                                                         | VTS                         | 5.5/1                                    | YES                                                      | 4                                   | YES        | 75                                                                          | YES    | 3kW/1                                              |                                                          |                                                                                                     | YES    |  |  |
| 6.18                                                                                      | Controller of Compressor Skid                                                      | -                                                                                                          | PLC                         | A                                        | YES                                                      | BY N2 PACKAGE UCP                   | YES        | TYPE C, QTY=1                                                               | YES    | PLC                                                |                                                          |                                                                                                     | YES    |  |  |
| 6.19                                                                                      | Control Panel Power                                                                | kW                                                                                                         | VTS                         | 64.5kW (as per hayasan load list)        | YES                                                      | NS                                  | NO         | NS                                                                          | YES    | 10VAC/230VAC                                       |                                                          |                                                                                                     | YES    |  |  |
| 6.20                                                                                      | Out Put Serial Link                                                                | -                                                                                                          | VTS                         | Via handheld                             | NO                                                       | NS                                  | NO         | NS                                                                          | NO     | MODBUS                                             |                                                          |                                                                                                     | YES    |  |  |
| 7 MAIN MOTOR                                                                              |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 7.1                                                                                       | Manufacturer                                                                       | -                                                                                                          | VTS                         | JEMCO                                    | YES                                                      | WEG                                 | YES        | JEMCO/OME                                                                   | YES    | ABB/SIEMENS/WEG                                    |                                                          |                                                                                                     | YES    |  |  |
| 7.2                                                                                       | Motor Power                                                                        | kW                                                                                                         | VTS                         | 55                                       | YES                                                      | 55                                  | YES        | 75                                                                          | YES    | 45                                                 |                                                          |                                                                                                     | YES    |  |  |
| 7.3                                                                                       | Power Supply                                                                       | V / Hz / Ph                                                                                                | 400/50/3                    | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | 400/50/3                                           |                                                          |                                                                                                     | YES    |  |  |
| 7.4                                                                                       | IP Degree / Temperature Class                                                      | -                                                                                                          | VTS                         | 55/B                                     | YES                                                      | IP 55                               | YES        | 55/T3                                                                       | YES    | 55/T4                                              |                                                          |                                                                                                     | YES    |  |  |
| 7.5                                                                                       | Speed, Motor / Compressor                                                          | rpm                                                                                                        | VTS                         | 3000                                     | YES                                                      | 3000                                | YES        | 2950                                                                        | YES    | 3000                                               |                                                          |                                                                                                     | YES    |  |  |
| 8 PROCESS DESIGN                                                                          |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 8.1                                                                                       | Dry Air Demand for Nitrogen Production (at inlet to N2 Generators)                 | Nm³/hr                                                                                                     | VTS                         | 165                                      | YES                                                      | 286.5                               | YES        | 188                                                                         | YES    | 181                                                |                                                          |                                                                                                     | YES    |  |  |
| 8.2                                                                                       | N2 Outlet Operating Pressure                                                       | bar                                                                                                        | 8.5                         | 8                                        | NO                                                       | 6.5                                 | YES        | A                                                                           | YES    | 8.5                                                |                                                          |                                                                                                     | YES    |  |  |
| 8.3                                                                                       | N2 Package Pressure Drop                                                           | bar                                                                                                        | max. 1 bar                  | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 8.4                                                                                       | Design Pressure                                                                    | bar                                                                                                        | 12.5                        | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 8.5                                                                                       | Dew Point                                                                          | °C                                                                                                         | -70 @ 1.013 bara            | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | -40                                                |                                                          |                                                                                                     | NO     |  |  |
| 8.6                                                                                       | Max Oil Content- Inlet                                                             | -                                                                                                          | ≤ 1 ppm wt                  | NA                                       | YES                                                      | NA                                  | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 8.7                                                                                       | Max Oil Content- Outlet                                                            | -                                                                                                          | Oil Free                    | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 8.8                                                                                       | Max Allowable Dust                                                                 | Micron                                                                                                     | Less than 3                 | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 8.9                                                                                       | Nitrogen Purity                                                                    | % vol                                                                                                      | 99.9                        | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | 99.5 UP 99.9                                       |                                                          |                                                                                                     | NO     |  |  |
| 8.10                                                                                      | Oxygen Content                                                                     | % vol                                                                                                      | 0.1 (max)                   | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | 0.5(MAX)                                           |                                                          |                                                                                                     | NO     |  |  |
| 9 AIR DRYER                                                                               |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 9.1                                                                                       | Air Dryer (if Required as per Vendor Design)                                       | Will be considered (Due to Package Outdoor Installation)                                                   |                             |                                          | Will be considered (Due to Package Outdoor Installation) |                                     |            | Will be considered (Due to Package Outdoor Installation)                    |        |                                                    | Will be considered (Due to Package Outdoor Installation) |                                                                                                     |        |  |  |
| 10 NITROGEN GENERATOR                                                                     |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 10.1                                                                                      | Type of Nitrogen Generator                                                         | -                                                                                                          | PSA                         | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.2                                                                                      | Quantity                                                                           | -                                                                                                          | 1                           | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.3                                                                                      | Manufacturer                                                                       | -                                                                                                          | VTS                         | HAYAYAR                                  | YES                                                      | OMEGA AIR                           | NO         | PARS COMPRESSOR                                                             | YES    | ASA CO                                             |                                                          |                                                                                                     | YES    |  |  |
| 10.4                                                                                      | Design Code                                                                        | -                                                                                                          | ASME Sec. VIII, Div. 1 & 2  | A                                        | YES                                                      | N                                   | NO         | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.5                                                                                      | Adsorption Material                                                                | -                                                                                                          | VTS                         | Carbon Molecularsieve                    | YES                                                      | Carbon molecular sieve (CMS)        | YES        | CMS                                                                         | YES    | Carbon Molecular sieve                             |                                                          |                                                                                                     | YES    |  |  |
| 10.6                                                                                      | Adsorption Life Time                                                               | -                                                                                                          | Not less than 3 Years       | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | 1 YEARS                                            |                                                          |                                                                                                     | NO     |  |  |
| 10.7                                                                                      | Adsorber Vessel Material                                                           | -                                                                                                          | VTS                         | SA386 Gr B/SA 234 WPB                    | YES                                                      | Carbon steel                        | YES        | NS                                                                          | YES    | AS16 Gr. 70                                        |                                                          |                                                                                                     | YES    |  |  |
| 10.8                                                                                      | Maximum Allowable Inlet Temperature                                                | °C                                                                                                         | VTS                         | 30                                       | YES                                                      | 55                                  | YES        | 35                                                                          | YES    | 55                                                 |                                                          |                                                                                                     | YES    |  |  |
| 10.9                                                                                      | Volume of One Adsorber                                                             | m³                                                                                                         | VTS                         | After P.O.                               | YES                                                      | 305 cu                              | YES        | After P.O.                                                                  | YES    | NS                                                 |                                                          |                                                                                                     | NO     |  |  |
| 10.10                                                                                     | Design Flow / Regeneration Flow                                                    | Nm³/hr                                                                                                     | 34 / VTS                    | 34                                       | YES                                                      | 35.15                               | YES        | After P.O.                                                                  | YES    | 34/60                                              |                                                          |                                                                                                     | YES    |  |  |
| 10.11                                                                                     | Regeneration Sequence Duration                                                     | Sec                                                                                                        | VTS                         | After P.O.                               | YES                                                      | A (Pressure Swing Adsorption (PSA)) | YES        | After P.O.                                                                  | YES    | 5/3/2                                              |                                                          |                                                                                                     | YES    |  |  |
| 10.12                                                                                     | Room Mounted Control Panel                                                         | -                                                                                                          | PLC Type C                  | N                                        | NO                                                       | NS                                  | N          | PLC Type C                                                                  | YES    | PLC TYPE C                                         |                                                          |                                                                                                     | YES    |  |  |
| 10.13                                                                                     | SIL Rated loops for safety functions                                               | -                                                                                                          | Required                    | NA                                       | NO                                                       | NS                                  | N          | To be Guided by SIL meeting                                                 | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.14                                                                                     | Control Panel Power (UPS/Non UPS)                                                  | kW                                                                                                         | 10VAC/230VAC                | 2kW / 1.5kW (Included in N2 package UCP) | YES                                                      | NS                                  | N          | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.15                                                                                     | Instrumentation / Analyzer                                                         | -                                                                                                          | As per Specification        | A (deviation check)                      | YES                                                      | A (oxygen analyzer)                 | 70         | A (O2/N2 Analyzer)                                                          | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.16                                                                                     | Local Control Panel                                                                | -                                                                                                          | Required per compressor     | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.17                                                                                     | Cabling to LCP                                                                     | -                                                                                                          | Required                    | ON SKID UP TO JB/LCP IS HAYAYAR          | YES                                                      | N                                   | YES        | Within RL                                                                   | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.18                                                                                     | Serial Link connection                                                             | -                                                                                                          | Modbus RTU                  | A                                        | YES                                                      | NS                                  | NO         | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.19                                                                                     | Exhaust Silencer SPL @ 1 m distance                                                | dB (A)                                                                                                     | ≤ 85                        | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.20                                                                                     | Corrosion Allowance                                                                | mm                                                                                                         | 3.2                         | A                                        | YES                                                      | Manufacture STD                     | NO         | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.21                                                                                     | Oxygen analyzer and moisture analyzer                                              | -                                                                                                          | Required                    | A                                        | YES                                                      | A                                   | YES        | A (O2 analyzer at oil outlet and dew point transmitter at Air dryer outlet) | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.22                                                                                     | Relief valves                                                                      | -                                                                                                          | Required                    | A                                        | YES                                                      | A                                   | YES        | A                                                                           | YES    | A                                                  |                                                          |                                                                                                     | YES    |  |  |
| 10.23                                                                                     | PSA Unit Skid Weight                                                               | kg                                                                                                         | VTS                         | 820                                      | YES                                                      | 1215                                | YES        | NS                                                                          | NO     | ACCORDING TO CATALOGUE OF NITROGEN GENERATOR       |                                                          |                                                                                                     | YES    |  |  |
| 10.24                                                                                     | Dimension (L X W X H)                                                              | mm                                                                                                         | VTS                         | 118x610x2154                             | YES                                                      | 1740 x 860 x 2361                   | YES        | NS                                                                          | NO     | ACCORDING TO CATALOGUE OF NITROGEN GENERATOR       |                                                          |                                                                                                     | YES    |  |  |
| 11 Chillers / Heat Exchangers or Refrigerant Dryer                                        |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 11.1                                                                                      | Chillers / Heat Exchangers or Refrigerant Dryer (if Required as per Vendor Design) | Will be considered (Due to Package Outdoor Installation)                                                   |                             |                                          | Will be considered (Due to Package Outdoor Installation) |                                     |            | Will be considered (Due to Package Outdoor Installation)                    |        |                                                    | Will be considered (Due to Package Outdoor Installation) |                                                                                                     |        |  |  |
| 12 PRE FILTER                                                                             |                                                                                    |                                                                                                            |                             |                                          |                                                          |                                     |            |                                                                             |        |                                                    |                                                          |                                                                                                     |        |  |  |
| 12.1                                                                                      | Manufacturer / Model                                                               | -                                                                                                          | VTS                         | HAYAYAR/OMEGA / HFR 006                  | YES                                                      | NS                                  | NO         | MIKROPOR                                                                    | NO     | Domestic hunter                                    |                                                          |                                                                                                     | NO     |  |  |
| 12.2                                                                                      | Volume                                                                             | Lit                                                                                                        | VTS                         | After P.O.                               | YES                                                      | NS                                  | NO         | After P.O.                                                                  | YES    | 1/2 inch AD TYPE                                   |                                                          |                                                                                                     | YES    |  |  |
| 12.3                                                                                      | Casing Material                                                                    | -                                                                                                          | VTS                         | SA386 Gr B/SA 234 WPB                    | YES                                                      | NS                                  | NO         | CS                                                                          | YES    | C.S.                                               |                                                          |                                                                                                     | YES    |  |  |
| 12.4                                                                                      | Filter Cartridge Material                                                          | -                                                                                                          | VTS                         | homopolycarbonate micron filter          | YES                                                      | NS                                  | NO         | SS/PEEK                                                                     | YES    | fiberglass                                         |                                                          |                                                                                                     | YES    |  |  |
| 12.5                                                                                      | Maximum Working Pressure                                                           | bar                                                                                                        | VTS                         | 9.5                                      | YES                                                      | NS                                  | NO         | NS                                                                          | NO     | 16                                                 |                                                          |                                                                                                     | YES    |  |  |
| 12.6                                                                                      | Maximum Working Temperature                                                        | °C                                                                                                         | VTS                         | 30                                       | YES                                                      | NS                                  | NO         | NS                                                                          | NO     | 65                                                 |                                                          |                                                                                                     | YES    |  |  |
| 12.7                                                                                      | Filtration Mesh                                                                    | Micron                                                                                                     | VTS                         | 1                                        | YES                                                      | NS                                  | NO         | 0.1                                                                         | YES    | 0.1                                                |                                                          |                                                                                                     | YES    |  |  |
| 12.8                                                                                      | Residual Oil Content After Filtration                                              | mg/m³                                                                                                      | VTS                         | OIL FREE                                 | YES                                                      | NS                                  | NO         | NS                                                                          | NO     | 0.1                                                |                                                          |                                                                                                     | YES    |  |  |

|                                                                                                                                                   |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------|------------------|--------------------------------------|-------------------------------------------------------------------------------------|-----------------|-------------------|--|
|                                                                   |                                       | نگهداشت و افزایش تولید میدان نفتی بینک<br>سطح آفرش<br>احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک |                           |                           |         |                  |                                      |  |                 |                   |  |
| TBE for Instrument/Plant Air & Nitrogen Packages                                                                                                  |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| شماره پیمان:                                                                                                                                      |                                       | وزنه                                                                                                | بسته گازی                 | مکانگر کننده              | تجهیزات | رشته             | نوع مدار تک                          | مرداب                                                                               | شماره سند: از ۲ |                   |  |
| ۰۴۰ - ۰۳۰ - ۰۱۴۴                                                                                                                                  |                                       | BK                                                                                                  | GCS                       | PEDCO                     | 120     | ME               | TB                                   | 0006                                                                                | D02             |                   |  |
| REQ. NO: BK-GCS-PEDCO-120-ME-MR-0006                                                                                                              |                                       | BIDDER NAME:                                                                                        |                           | HAYAYAR                   |         | HAVASAN          |                                      | PARS COMPRESSOR                                                                     |                 | ARAZ SANAT ASIA   |  |
| QUOTATION NO.:                                                                                                                                    |                                       |                                                                                                     |                           | HY/01/1/3118              |         | HAY-BK-HIRGN-001 |                                      | 18910                                                                               |                 | ASA-LR-02-263     |  |
| QUOTATION DATE:                                                                                                                                   |                                       |                                                                                                     |                           | 8/16/2023                 |         | 8/16/2023        |                                      | 9/11/2023                                                                           |                 | 9/11/2023         |  |
| MEETS REQUESTION REQUIREMENTS                                                                                                                     |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| No.                                                                                                                                               | DESCRIPTION                           | UNITS                                                                                               | REQ'D BY PURCHASER        | Bidder's Proposal         |         | Status           | Bidder's Proposal                    |                                                                                     | Status          | Bidder's Proposal |  |
| 13 AFTER FILTER                                                                                                                                   |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| 13.1                                                                                                                                              | Type / Manufacturer / Model           | -                                                                                                   | Dust filter               | HAYAYAR/OMEGA / HFR 036   |         | YES              | OMEGA AIR- AF 0476-R                 |                                                                                     | NO              | Dust              |  |
| 13.2                                                                                                                                              | Volume                                | Lit                                                                                                 | VTS                       | After P.D.                |         | YES              | 2.4 Lit.<br>310 Nm3/hr               |                                                                                     | YES             | NS                |  |
| 13.3                                                                                                                                              | Casing Material                       | -                                                                                                   | VTS                       | SA386 Gr B/SA 234 WPB     |         | YES              | AL                                   |                                                                                     | YES             | CS                |  |
| 13.4                                                                                                                                              | Filter Cartridge Material             | -                                                                                                   | VTS                       | borosilicate micro filtes |         | YES              | 33073 R<br>borosilicate micro filtes |                                                                                     | YES             | SS                |  |
| 13.5                                                                                                                                              | Maximum Working Pressure              | bar.g                                                                                               | VTS                       | 9.5                       |         | YES              | 16                                   |                                                                                     | YES             | NS                |  |
| 13.6                                                                                                                                              | Maximum Working Temperature           | °C                                                                                                  | VTS                       | 30                        |         | YES              | 65                                   |                                                                                     | YES             | NS                |  |
| 13.7                                                                                                                                              | Filtration Mesh                       | µm                                                                                                  | VTS                       | 0.1                       |         | YES              | 1                                    |                                                                                     | YES             | 5                 |  |
| 13.8                                                                                                                                              | Residual Oil Content After Filtration | mg/m3                                                                                               | VTS                       | OIL FREE                  |         | YES              | OIL FREE                             |                                                                                     | YES             | Oil Free          |  |
| 14 AIR RECEIVER VESSEL                                                                                                                            |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| 14.1                                                                                                                                              | Design Code                           | -                                                                                                   | ASME SEC. VIII DIV. 1 & 2 | ASME SEC. VIII DIV. 1     |         | YES              | ASME SEC. VIII DIV. 1                |                                                                                     | YES             | A                 |  |
| 14.2                                                                                                                                              | Quantity                              | -                                                                                                   | VTS                       | 1                         |         | YES              | 1                                    |                                                                                     | YES             | 1                 |  |
| 14.3                                                                                                                                              | Capacity                              | m³                                                                                                  | VTS                       | 1                         |         | YES              | 10                                   |                                                                                     | YES             | NS                |  |
| 14.4                                                                                                                                              | Position (Vertical/Horizontal)        | -                                                                                                   | VTS                       | Vertical                  |         | YES              | Vertical                             |                                                                                     | YES             | V                 |  |
| 14.5                                                                                                                                              | Dimensions (L x TL/TL)                | mm                                                                                                  | VTS                       | 850x1000                  |         | YES              | ID= 1700 , TL/TL=3650                |                                                                                     | YES             | After P.O.        |  |
| 14.6                                                                                                                                              | Design Pressure                       | bar.g                                                                                               | VTS                       | 12.5                      |         | YES              | 12.5                                 |                                                                                     | YES             | NS                |  |
| 14.7                                                                                                                                              | Hydrotest Pressure                    | bar.g                                                                                               | VTS (1.5PMANWP)           | A                         |         | YES              | 16.25                                |                                                                                     | YES             | NS                |  |
| 14.8                                                                                                                                              | Material                              | -                                                                                                   | VTS                       | SA 516 GR 70              |         | YES              | SA 516 Gr.70                         |                                                                                     | YES             | CS                |  |
| 14.9                                                                                                                                              | Corrosion Allowance                   | mm                                                                                                  | VTS                       | 3.2                       |         | YES              | 3.2                                  |                                                                                     | YES             | 1.6               |  |
| 15 N2 BUFFER VESSEL                                                                                                                               |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| 15.1                                                                                                                                              | Design Code                           | -                                                                                                   | ASME SEC. VIII DIV. 1 & 2 | ASME SEC. VIII DIV. 1     |         | YES              | ASME SEC. VIII, DIV.1                |                                                                                     | YES             | A                 |  |
| 15.2                                                                                                                                              | Quantity                              | -                                                                                                   | VTS                       | 1                         |         | YES              | 1                                    |                                                                                     | YES             | 1                 |  |
| 15.3                                                                                                                                              | Capacity                              | m³                                                                                                  | VTS                       | 1                         |         | YES              | 10                                   |                                                                                     | YES             | After P.O.        |  |
| 15.4                                                                                                                                              | Position (Vertical/Horizontal)        | -                                                                                                   | VTS                       | Vertical                  |         | YES              | Vertical                             |                                                                                     | YES             | V                 |  |
| 15.5                                                                                                                                              | Dimensions (L x TL/TL)                | mm                                                                                                  | VTS                       | 850x1000                  |         | YES              | ID= 1700 , TL/TL=3650                |                                                                                     | YES             | NS                |  |
| 15.6                                                                                                                                              | Design Pressure                       | bar.g                                                                                               | VTS                       | 12.5                      |         | YES              | 12.5                                 |                                                                                     | YES             | NS                |  |
| 15.7                                                                                                                                              | Material                              | -                                                                                                   | VTS                       | L3PDesign pressure        |         | NO               | SA 516 Gr.70                         |                                                                                     | YES             | CS                |  |
| 15.8                                                                                                                                              | Corrosion Allowance                   | mm                                                                                                  | VTS                       | 3.2                       |         | YES              | 3.2                                  |                                                                                     | YES             | 1.6               |  |
| FINAL CONCLUSION                                                                                                                                  |                                       |                                                                                                     |                           | ACCEPTED                  |         | ACCEPTED         |                                      | ACCEPTED                                                                            |                 | ACCEPTED          |  |
| NOTES                                                                                                                                             |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |
| ABBREVIATIONS: A: ACCEPTEd By Vendor N: NOT ACCEPTEd By Vendor NA:Not Applicable NS:Not Specified C:Clarification Required VTS: Vendor to Specify |                                       |                                                                                                     |                           |                           |         |                  |                                      |                                                                                     |                 |                   |  |