| ***#*** | ***Clarification Title*** | ***Clarification Description (Rev00)*** | ***Conclusion (Rev00)***  ***(VENDOR to Confirm & Consider in the Final Offers)*** | ***Clarification Description (Rev01)*** | ***Conclusion (Rev01)***  ***(VENDOR to Confirm & Consider in the Final Offers)*** |
| --- | --- | --- | --- | --- | --- |
| ***GENERAL*** | | | |  |  |
|  | Vendor shall confirm his full compliance to meet all purchaser’s specifications, code and standard listed in specifications and mechanical data sheets, PIDs, Plot Plans and etc.  Any deviations shall be listed in project deviation form, signed and stamped.  Notes:  1-Any exceptions and deviations shall be clearly declared by vendor in writing for purchaser’s approval at bid stage by using of the format included in “Letter Of Conformity” attached to material requisition. Raising no deviation to any single requirement means full compliance of vendor quotation to that requirement.  Purchaser has no responsibility to discover deviations or alternatives scattered over the proposal in addition to what proclaimed explicitly in deviation list; hence such deviation (if any) is disregarded and shall not be considered for vendor claim in future. (Vendor to confirm)  In this regard please be noted that special tools (i.e. spreader bar and skirt bracing if required based on vendor’s lifting calculation & relevant bolts/nuts/gasket, Hydraulic bolt tensioning device for bolts greater than 1-1/2” and etc) shall be provided by vendor if required based on related calculations.  2- Vendor shall confirm that all PMR attachments listed in PMR are available for him for review at bid stage.  3- Considering item 1; please note that any deviation at detail stage will not be accepted by purchaser. (Vendor to confirm) | Confirmed | **Closed** |  |  |
|  | Latest revision / edition of codes and standards which are refereed in PMR and attachments shall be used for design; inspection and construction. | Confirmed | **Closed** |  |  |
|  | Vendor to confirm his compliance with documents stated in PMR. Any conflict between the documents shall be notified by vendor to purchaser and resolved by his agreement. | Confirmed | **Closed** |  |  |
|  | Vendor is sole responsible to consider this clarification and modify his offer based on this TCL. All modifications which need to be considered on the next revision of offer based on this clarification should be clearly marked with revision and cloud marks. All consequences due to changes without cloud marks are in vendor's responsibility.  Anyway, this clarification has priority over the offer. | Confirmed | **Pending to vendor reply:**  **Please reflect in your offer.** |  |  |
|  | Kindly note that Sub-Vendors shall be selected from Project’s approved AVLs .(**Ep.Mop.Ir/Resource**)  Sub-Vendor Lists will be subject to final official Purchaser / Employer approval at PO stage before proceeding with any purchasing activities by Vendor. | Confirmed | **Pending to vendor reply:**  **Please provide all items.** |  |  |
|  | Vendor is requested to submit below items in bid stage:  1-Sub-Vendor List based on project Approved Vendor List (ep.mop.ir/resource)  2-The working capacity and current projects capacity  3-Copy of quality system certificate (Certification for ISO 9001/2 or 3)  4-Vendor’s quality plan & ITP | Confirmed | **Pending to vendor reply:**  **Please provide all items.** |  |  |
|  | Vendor shall have overall responsibility for the coordination with his Sub-Vendors, and for the proper execution of any accessory item assembly, testing, delivery and any other service defined herein. | Confirmed | **Closed** |  |  |
|  | All equipment shall be designed to meet the requirements shown in the Project Specification and data sheets. | Confirmed | **Closed** |  |  |
|  | Vendor shall submit the documents which are specified at “BID stage”. Fail to submit the necessary documents will be deemed as offer is disqualified. | Confirmed | **Closed** |  |  |
|  | All documents required after purchase order shall be submitted in accordance with vendor documents requirements of the PMR. | Confirmed | **Closed** |  |  |
|  | Vendor shall confirm that project PMS will be followed for all pipes, valves, gaskets, etc. and also for Tie-in points in battery limit. | Confirmed | **Closed** |  |  |
|  | All required special tools shall be considered in vendor main offer (they shall be supplied by vendor without any cost impact).  A qualified and complete list has to be included in the bid documentation. | Confirmed | **Please provide Stamped and Filled scope of Work & Supply table which specified in MR.** |  |  |
|  | Vendor shall confirm that Packing, Marking, Preservation and Preparation for Shipment will be done in accordance to project specification mentioned in PMR. | Confirmed | **Closed** |  |  |
|  | Mechanical guarantee shall be in vendor scope of work. Please confirm. | Confirmed | **Closed** |  |  |
|  | Vendor shall confirm project performance and mechanical guarantee based on data in PMR. | Confirmed | **Closed** |  |  |
|  | Material specification consists of class and relative grade shall be submitted by detail based on ASME/ ASTM for the whole package.  Vendor shall prepare material and material grade as per data sheets of equipment. Any substitution shall be expressed in deviation form. Meanwhile substitution after Purchase order is not approved. | Confirmed | **Closed** |  |  |
|  | Impact test for all parts where applicable based on design code considering material, thickness and MDMT shall be considered in vendor’s scope. Please confirm. | Confirmed | **Closed** |  |  |
|  | All test plates (production test plates) including those for filler materials as required by project specifications and codes/standards shall be considered in vendor’s scope. Please confirm. | Confirmed | **Closed** |  |  |
|  | Painting and surface preparation on vessels should be performed based on relevant specification no.: BK-GNRAL-PEDCO-000-PI-SP-0006, BK-GNRAL-PEDCO-000-PI-SP-0007. Primer, intermediate and final coat should be carried out based on approved painting procedure in vendor’s shop before shipment and supply the paint material is by vendor. Touch up paint for field repair works is in vendor’s scope of work. Please confirm.  Considering above please also note that supply of touch-up paint shall be considered in vendor’s base price not as optional. | Confirmed | **Closed** |  |  |
|  | All internal & external welded parts to the equipment such as baffle ,vortex breaker, support Clips, lugs, or rings for insulation and  fire proofing and etc. are in vendor’s scope of supply. | Confirmed | **Please fill & stamp scope of supply table.** |  |  |
|  | Please confirm that Purchaser’s approval shall in no way be construed as relieving Vendor of any of his obligation, responsibilities or liabilities under the CONTRACT and/or applicable Codes and Standards. | Confirmed | **Closed** |  |  |
|  | 1-Vendor shall submit Reference list for Vessels/columns with same design data and material (including your previous experiences in IRAN (if any)).  2-Please submit (as a separate file) your previous experience list (which have been finished (if any) for design & manufacturing of pressure vessels according to ASME Sec. VIII Div.1. If you have no finished experience in this respect please indicate in this TCL that Vendor has no previous experience for design & manufacturing of Vessels/columns according to ASME Sec. VIII Div.1. | Confirmed. Please refer to the attached reference lists. | **Closed** |  |  |
|  | In case of order, Purchaser would not review documents sent by Vendor before receiving Vendor Print Index and Schedule. Vendor Print Index and Schedule (VPIS) shall be prepared as first document after PO. All documents shall be issued after getting approval of this mentioned document. | Confirmed | **Closed** |  |  |
|  | In case of order, Vendor should provide her quality control plan (VQCP) based on requirements specified on PMR and its attachments and also Vendor’s experiences and send for approval. Purchaser’s ITP and relevant specifications attached to PMR are minimum requirement and Vendor should consider them as a base and provide comprehensive Quality Control Plan. | Confirmed | **Closed** |  |  |
|  | Providing Required Facilities for Inspection and Test shall be in Vendor’s Scope of work. | Confirmed | **Closed** |  |  |
|  | All NDT including radiographic, ultrasonic, magnetic particle or liquid penetrate examinations shall be performed before and after Post Weld Heat Treatment of the vessel. This will be performed according to code and specification.  Inspection & Test Plan for the equipment with consideration of all inspection and test points and sequences shall be prepared by Vendor as per relative project procedure, mentioned codes and standards on PMR.  Please confirm. | RT test will be performed. | All NDT including radiographic, ultrasonic, magnetic particle or liquid penetrate examinations shall be performed before and after Post Weld Heat Treatment of the vessel. This will be performed according to code and specification.  Inspection & Test Plan for the equipment with consideration of all inspection and test points and sequences shall be prepared by Vendor as per relative project procedure, mentioned codes and standards on PMR.  Please confirm. |  |  |
|  | PWHT, PFHT shall be performed by vendor where required according to relevant codes, standards and specifications even though it has not been specified in data sheets. | PWHT is confirmed, please clarify the PFHT. | **Pending to vendor reply:**  **PFHT is post forming heat treatment and will be done after head plate forming due to elongation.** |  |  |
|  | Hardness test on sample and production shall be done after PWHT with purchaser inspection witness as per project welding specification with witness level on both PQR and production. Please confirm. | Confirmed | **Closed** |  |  |
|  | All WPS, PQR, WPQT and NDT map shall be prepared before pre-inspections meeting. No welding shall be commenced until complete welding documents (specially welding map, NDE map, WPS, PQR) have been received and approved by purchaser. | Confirmed | **Closed** |  |  |
|  | No fabrication shall be commenced until complete calculations and shop drawings have been received and approved or Approved as Noted (with minor comments) by purchaser. | Confirmed | **Closed** |  |  |
|  | Fabrication details should be performed according to relevant approved fabrication procedure. | Confirmed | **Closed** |  |  |
|  | Following items shall be considered (supplied) and included in the bid documentation:  • Spare parts for commissioning and start-up; a qualified and complete list based on  PROJECT SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1).  • Spare parts for two years operation; a qualified and complete list based on PROJECT  SPARE PART SUPPLY PROCEDURE (Doc. No. E&D-QC-SP-1).  • Capital spare parts (as option / if any) | * Confirmed * Confirmed * N/A | **Please revise spare part list based on Doc. No. E&D-QC-SP-1.** |  |  |
|  | Please confirm.  Commissioning and start-up spare parts shall be listed in a separate SPIR form (Att. #5 of MR If requested). | Confirmed | **Please revise Spare part list as per submitted comment.** |  |  |
|  | Vendor shall consider all required consumable materials for site welding, inspection, tests and etc. of equipment, piping, structures and etc. Please confirm. | Confirmed | **Closed** |  |  |
|  | All materials shall be new and un-corroded. Please confirm. | Confirmed | **Closed** |  |  |
|  | Vendor shall guarantee that the materials shall still meet all mechanical properties after all fabrication heat treatments foreseen and repairs to the materials. Also, Vendor shall guarantee the mechanical design and suitability of all used material and shall be legally responsible for mechanical design and stability/integrity of the equipment. | Confirmed | **Closed** |  |  |
|  | Shop assembly of removable internals supplied by vessel vendor is in vendor’s scope. Please confirm. | Confirmed | **Closed** |  |  |
|  | Trial Assembly of all removable Internals (If supplied by Vendor) is in vessel vendor’s scope of work. Please confirm. | Confirmed | **Closed** |  |  |
|  | All devices required for transport and lifting are in vendor scope of work/supply. Please confirm. | Confirmed | **Please reflect in the stamped Scope of Work & Supply table which specified in MR.** |  |  |
|  | For all pressure parts and those required special consideration (such as compliance with NACE) as well as for supports, the material certificate should be in accordance with EN 10204, 3.1. Besides, the material shall be in compliance with Specification For Material Requirements in Sour service Document No. BK-GNRAL-PEDCO-000-PI-SP-0008.  Material certificate for non-pressure parts shall be in accordance with EN 10204, 2.2.  Please confirm. | Confirmed | **Closed** |  |  |
|  | All raw materials including support saddle/skirt/lugs/legs shall have Original mill certificate as per EN 10204 3.1. and shall include:   1. Impact test (as per ASME code and purchaser requirements) 2. Supplementary UT test as per SA 578 level B or C (required for CS thickness above and equal to 30mm)   Non-standard forging shall be examined by UT at mill. | Confirmed | **Closed** |  |  |
|  | Raw materials supplied for Wet H2S service shall be in strict accordance with NACE standard MR0103, latest edition shall be followed. Please confirm.  In case of conflict IN -43 shall be governed. | Confirmed | **Closed** |  |  |
|  | Please be informed that all of specified weights/thicknesses in equipment data sheets (if any) are preliminary. Considering that the contract will be lump sum (based on vendor’s proposed weight at bid stage), vendor shall estimate the weight of equipment based on his calculation at this stage so please recheck and revise your proposal.  Note: If after contract vendor realizes that increasing the vessel thickness is required to meet the applicable code and specifications; it shall be in vendor scope without any cost impact. | Confirmed. Please refer to the attached technical offer-Rev03. | **It seems minimum requirement for Shell and Head Thickness is not followed in the vendor offer.**  **Please revise the main offer and send preliminary calculation and NATIVE (PV-Elite) files to be checked.** |  |  |
|  | Any change of thickness due to lifting calculation that causes increase of the vessels weight shall be noted. Lifting effects on body thicknesses shall be considered by vendor Without Any Cost Impact. (Combined lug stresses respect to maximum allowable in lifting joint to body shall not be more than 90% allowable stress) Please confirm. | Confirmed | **Closed** |  |  |
|  | N2 purging preservation with following conditions shall be considered in vendor’s scope of work & supply (it shall be considered in vendor’s base price not as optional):  1-All opening shall be sealed with a suitable metal cover and gasket. Vessels shall be filled with nitrogen gas at a pressure of 0.5 kg/cm2(g).  2-The equipment shall have a temporary gauge to determine purge pressure.  3-Vendor shall submit N2 filling procedure for purchaser/contractor approval at detail stage.  4-All the required ancillaries such as metal covers, bolts & nuts, gaskets and pressure gauge shall be provided by vendor.  Please confirm. | Confirmed | **Closed** |  |  |
|  | Support ring welded to shell for demister and liquid distributor shall be considered in vendor’s scope. Please confirm. | Confirmed | **Closed** |  |  |
|  | 1-Supply of all internals (& their supports) (except Packing & Trays) shall be considered in vendor’s scope.  In this respect please note that followings shall be considered in vendor’s scope of work & supply:  1-Distributors and their support  2-Mist eliminator/Coalescer/Demister with grids and/or support beam as per requirement in data sheet and specifications  3-Internal baffles and their supports & clips  4-Vortex breaker  5-Internal pipes and elbow with flange and their supports & clips  6-Spray Nozzle and their clips and supports  7-Circular baffle / deflector  8-Support for grids (Where required)  9-Removable internal pipes incl. Half Pipes, Feed Diffusers, Special distributor’s pipes with gaskets and bolts and nuts  10-Internal Bolt & Nuts (Except subject to those internals which are not in Vendor’s scope of supply) Please note that all above items shall be considered in vendor’s base price (not optional or separate price). Please confirm.  In this regard process guarantee of demisters are in vendor’s scope of work. | Confirmed | **Closed** |  |  |
|  | External supports & attachments, clips for piping (wherever required) shall be supplied by Vendor. | Confirmed | **Closed** |  |  |
|  | The cost of all repairs, subsequent inspection and electrodes or paint (if required at site) shall be the responsibility of the vendor. Please confirm. | Confirmed | **Closed** |  |  |
|  | When stress relieving is required, whole equipment in one piece without removable internals shall be located in the Furnace. All surfaces of flanges shall be protected by vendor due to prevent of damage. Use of direct flame is not approved. | Confirmed | **Closed** |  |  |
|  | Any clash as per project specification between seam welds, nozzle openings, nozzle reinforcement pads, insulation rings, stiffening rings, pipe support clips, lifting devices and relevant pads, ladder and platform lugs/pads and any internal and external attachment shall be checked by vendor. Any unreported clash will not be accepted. Please confirm. | Confirmed | **Closed** |  |  |
|  | 1-Design of ladders & platforms (calc. & drawings) shall be considered in vendor’s scope of work. The platform and ladder shall be designed in accordance with relevant project specification and relevant standards. Grating shall be hot dip galvanized.  2-Supply of ladder and platform shall be quoted in vendor proposal. Please confirm. | Confirmed | **Closed** |  |  |
|  | Internal ladder rung and hand grip are in vendor scope of supply and rung bars shall be selected compatible with MDMT. | Confirmed | **Closed** |  |  |
|  | Local stress analysis of shells under external loads from piping system and attachments (platforms, pipe supports, davit, and lifting lug) shall be included in strength calculation. And also, nozzle load shall be considered according to Allowable Nozzle (as per BK-GNRAL-PEDCO-000-ME-SP-0001, appendix N). Please note that wherever WRC is not applicable FEA shall be done to evaluate local stresses. The original file (native file) of all analysis including all input data and results should be provided by Vendor. Please confirm. | Confirmed | **Closed** |  |  |
|  | All static and dynamic loads on foundations/Steel Structures shall be specified by Vendor. | Confirmed | **Closed** |  |  |
|  | All Native files of drawings & calculations (like PV Elite, CodeCalc; FEA; NozzlePro; Auto-CAD DWG,..) shall be provided by Vendor at detail stage. | The mentioned documents would be provided after PO. | **Preliminary Native files for calculation to be provided before P.O.** |  |  |
|  | Anchor bolt data (Size, number, B.C.D., material,…) and final loading data including erection, operating and hydro tests shear and moment due to wind and earthquake shall be provided by vendor 1 month after purchase order. Please confirm. | Confirmed | **Closed** |  |  |
|  | Blind flange with gaskets, caps, bolts & nuts, temporary saddles for hydro test & shipment shall be included vendor’s scope of supply. | Confirmed | **Please reflect in your main offer.** |  |  |
|  | All gaskets to be used for hydrostatic test shall be same as operating case. | Confirmed | **Closed** |  |  |
|  | Project standard drawing for Anchor Bolts, Doc. No. BK-GNRAL-PEDCO-000-ST-DW-0002 attached to PMR shall be considered to design of anchor bolts.  In addition to data mentioned in BK-GNRAL-PEDCO-000-ST-DW-0002 please also note that followings can be used by vendor for anchor bolt in the design of equipment:  1-Material ST-37 with allowable stress for tension = 100 MPa and Allowable stress for shear =70 MPa.  2-Material SA-193-B7 with allowable stress for tension = 284.4 MPa, Allowable stress for shear =146.5 MPa and min. yield strength = 723.9 MPa  Please confirm. | Confirmed | **Closed** |  |  |
|  | For nozzle necks made by plate full radiography shall be considered. Please confirm. | Confirmed | **Closed** |  |  |
|  | Lifting lugs (or trunnion), tailing lug shall be analyzed by Vendor with a safety factor 2. | Confirmed | **Closed** |  |  |
|  | Bolt tightening torque for manhole and other blinded nozzles shall be calculated and applied by vendor. The required torque shall be specified on vendor drawings and submitted for purchaser approval at detail stage. Please confirm | Confirmed | **Closed** |  |  |
|  | Shipping calculation, hydro test stability calculation and relevant drawings for all equipment shall be considered in vendor’s scope and submitted for purchaser’s review at detail stage. Please confirm | Confirmed | **Closed** |  |  |
|  | Top Davit (If required) shall be designed and supplied by vendor. Please confirm. | Confirmed | **Closed** |  |  |
|  | Bolts with dia. >=1 ½” (M36) shall have hardened washers under all nuts. | Confirmed | **Closed** |  |  |
|  | Stiffener rings for external pressure (where required based on code and calculation) shall be considered in vendor’s scope. Please confirm. | Confirmed | **Closed** |  |  |
|  | Vendor shall add vessels’ sketch with relevant dimension (TL. To TL. & ID & Min. Thickness of shell & head) to his offer. This sketch is preliminary and shall be proposed at bid stage. Please confirm. | The mentioned sketch would be provided after PO, but the dimensions are available in the Technical offer. | **Closed** |  |  |
|  | S.S. Name plates shall be fitted to all machines and equipment, according to project standard DWG. | Confirmed. | **Closed** |  |  |
| ***PROCESS*** | | | |  |  |
|  | V-2102 A/B/C:  TL-TL Shall be considered 3000 mm | Confirmed. Please refer to the attached technical offer-Rev03. | **Closed** |  |  |
|  | V-2107:  Design pressure shall be considered 3.5 Barg | Confirmed. Please refer to the attached technical offer-Rev03. | **Closed** |  |  |
| ***MECHANIC*** | | | |  |  |
|  | Following documents shall be submitted;  1.Sub-vendor list  2.Deviation list (project deviation format shall be signed and attached)  3.Quality plan  4.Pressure vessels estimated weight  5.Delivery plan  6.Reference list | Confirmed. | **Pending to vendor reply:**  **1. Please provide sub-vendor list.**  **2.Please sign and attach project deviation format**  **4. Please recheck Weights and Thickness in stamped data sheet and Offer.** |  |  |
|  | Breakdown price of following items shall be included in the proposal, as well as total price.  1) Material and Fabrication for each Section Separately  2) Pre-commissioning & commissioning spare parts (E&D-QC-SP-1)  3) 2 years operational spare parts (E&D-QC-SP-1)  4) Packing & transportation  5) Other fee (if any) | Confirmed. | **Pending to vendor reply:**  **Spare parts shall be considered based on E&D-QC-SP-1** |  |  |
|  | Vendor to confirm the project specification with Ref. BK-GNRAL-PEDCO-000-ME-SP-0001 is also considered for design of pressure vessels in addition to ASME Sec. VIII Div.1. Also IPS-G-ME-150 shall be considered. | Confirmed. | **Closed** |  |  |
|  | A summary table of pressure vessels including items No, size, thickness, and weights is needed in vendor proposal. | Please refer to the attached technical offer. | **Pending to vendor reply:**  **Please revise thickness and weights** |  |  |
|  | Vendor should consider all Mechanical data sheet notes and implement them on their designs and data sheets. Besides Mechanical data sheets should be stamped and filled by Vendor. | Confirmed. | **Pending to vendor reply:**  **Please revise stamped and filled data sheets.** |  |  |
|  | Hydrostatic test shall be in accordance with the requirements of ASME code Sec. VIII Div.1. Please confirm. | Confirmed. | **Closed** |  |  |
|  | TI/PI and vent and drain nozzle sizes shall be specified in relevant data sheet. | Confirmed. | **Closed** |  |  |
|  | Access Platform and Ladders for access to platforms and platform’s gratings are in vendor scope of supply. | Confirmed. | **Closed** |  |  |
|  | For gasket material and relevant flange specification of blinded flanges, vendor shall follow Piping material specification. | Confirmed. | **Closed** |  |  |
|  | All plates used in sour service shall be examined by ultrasonic test for lamination, please confirm compliance. | Confirmed. | **Closed** |  |  |
|  | Assembly and installation of internals (demisters, …) which are in vessels manufacturer scope of supply are by him please confirm. | Confirmed. | **Closed** |  |  |
|  | Providing Transportation and Installation procedure is in vendor’s scope of work. Please confirm. | Confirmed. | **Closed** |  |  |
|  | Please find the comments in proposal as attached. | Confirmed. Please refer to the attached technical offer-Rev03. | **Pending to vendor reply:**  **Please find the comments on proposal as attached.** |  |  |
| ***PIPING & MATERIAL*** | | | |  |  |
|  | Bolt & Nut | Material for bolts & nut shall be specified as per datasheets.  TJC: Confirmed. | **Shall be reflected in your offer.** |  |  |
|  | PWHT | PWHT for equipment shall be as datasheets.  TJC: Confirmed | **Shall be reflected in your offer.** |  |  |
|  | Removable Internals | Removable internal parts shall be as S.S.316.  TJC: Confirmed | **Shall be reflected in your offer.** |  |  |
|  | Nozzle orientation | Nozzle orientation will be finalized later. Please confirm that the orientation of nozzles has no effect on the price and the vendor's claim will not be accepted.  TJC:Confirmed | **Closed** |  |  |
| ***INSTRUMENT & CONTROL*** | | | |  |  |
|  |  |  |  |  |  |
| ***SAFETY*** | | | |  |  |
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| ***ELECTRICAL*** | | | |  |  |
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| ***STRUCTURE*** | | | |  |  |
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