



INVITATION TO TENDER

Ref.: OS/22-23/2443/DC/04/004

Date: 22.04.2022

Sub: Fabrication of SS Degassing Contactor against S.O. no. 2443 inside the premises of BHEL-HPVP, Visakhapatnam

Dear Sir,

Sealed tenders are invited for the subject work in **two-part bid** system from Vendors who are experienced in fabrication of similar jobs and fulfil the eligibility criteria as specified below in clause-1. Scope of work and techno-commercial terms and conditions are as follows:

1. ELIGIBILITY CRITERIA:

- 1.1 Bidders must have an experience in execution of similar jobs i.e. Columns/Pressure Vessels for process industries in the past 7 Years as on 31.03.2022. Bidders shall enclose Work Order, Work Completion Certificate, Inspection Reports and all other relevant documents in support of their experience in execution of similar job for at least one project.
- 1.2 Bidders shall also have to enclose the documents of Registration of Firm/ Factory License/ Certificate of Incorporation, EPF, ESI, PAN, GSTIN, Udyog Aadhar Memorandum/ Udyam Registration (if registered with MSME) etc.
- 1.3 The works executed in own name of the individual/ firm of the tenderer will only be considered for eligibility criteria.

2. LOCATION OF WORK SPOT:

- 2.1 The fabrication work is to be carried out inside the premises of BHEL-HPVP, Visakhapatnam.

3. SCOPE OF WORK: Detailed scope of the fabrication work will be as follows:

Details of the Vessel to be fabricated are as follows:

SS Degassing Contactor - Tag No. 088-C-001: 1 No. @ 26 MT

It may be noted that the weight indicated above is tentative and may vary on both sides due to revision in the drawings, if any.

- 3.1 Complete fabrication of the SS Degassing Contactor which consists of Shell, Top & Bottom Dished Ends, Skirt, Internals & External attachments, SS internal Steam Coil Arrangement etc., which includes Rolling, Assembly, Fit-up, Welding, NDT, Hydro-test, Pickling & Passivation, Nitrogen filling, Stage wise & Final Inspection etc., as per the approved drawings, QAP / ITP, WPS, Procedures, Specifications & Standards and loading of the vessel onto the trailer. It includes the following activities but not limited to the same:

3.1.1 Main Shell including Skirt, Top & Bottom Dished Ends, Nozzle Assemblies:

- 3.1.1.1 Collection and transportation of all the Shell plates, Skirt segments (to & fro transportation for pressing of petals in HPVP shop), Formed Dished ends, Raw materials like Plates (full / off-cuts), Pipes & Tubes, Round Bars, Structural items, BOCs like Fittings, Nozzles, Flanges, Fasteners, Gaskets etc., as per GMS from BHEL-HPVP shop/ stores to fabrication yard including unloading at site.
- 3.1.1.2 Rolling of shell segments of the Vessel as per drawings & approved QAP. **Marking, cutting & Edge Preparation of all Shell plates for formation of Shell segments shall be done by BHEL-HPVP.**

- 3.1.1.3 Profile of the rolled segments shall be maintained by temporary spiders / profile plates. Raw materials for the same will be Free Issue by BHEL-HPVP.
- 3.1.1.4 100% DP test on the Weld edges, chipped back L-seam & C-seam welds, Full weld of Shell to Shell, Shell to Top & Bottom Dished ends and Skirt sections as per approved QAP & NDE procedure.
- 3.1.1.5 Assembly, Fit-up, welding, NDT of L-seams of Shell sections as per drawings, approved QAP / ITP, WPS & NDE procedure along with Production Test Coupons.
- 3.1.1.6 Assembly, Fit-up, welding, NDT of C-seams of Shell to Shell, Shell to Top & Bottom Dished ends as per drawings, approved QAP / ITP, WPS & NDE procedure.
- 3.1.1.7 Dished ends will be supplied by BHEL-HPVP in Formed condition. Height marking, extra height cutting, edge preparation of Top & Bottom Dished ends as per drawings & approved QAP / ITP.
- 3.1.1.8 Marking, cutting & Edge Preparation of the Skirt petals as per applicable drawings and handing over of the petals to HPVP shop for pressing.
- 3.1.1.9 Collection & transportation of Pressed Skirt petals from HPVP shop to fabrication yard.
- 3.1.1.10 Assembly, Fit-up, Welding, NDT of L-seams & C-seams of Skirt sections as per drawings, approved QAP, WPS & NDE procedure.
- 3.1.1.11 100% RT of L-seam Welds, C-seam Welds and Production Test Coupons of Shell to Shell, Shell to Top & Bottom Dished ends and Skirt sections as per approved QAP, Drawings & NDE procedure.
- 3.1.1.12 Fabrication of Nozzle Sub-assemblies involving Fit-up & Welding of C-seams of Pipes, Elbows, Flanges, Nozzles including DPT of Weld Edges, chipped back C-seam and RT on C-seam & L-seam welds of Rolled nozzles as per approved drawings, QAP & NDE procedure.
- 3.1.1.13 Marking & opening of Nozzles and Access / Man way openings on Shell & Dished ends as per approved drawings & QAP.
- 3.1.1.14 Fit-up, Assembly, Welding & NDT of nozzles on shell and dished ends as per drawings, approved QAP / ITP, WPS & NDE procedure.
- 3.1.1.15 100% UT for nozzle to shell and nozzle to pipe welds as per approved QAP & NDE procedure
- 3.1.1.16 Fabrication of RF pads including Rolling / Pressing, Assembly & Welding with the Shell / Dished ends and Pneumatic Test as per approved drawings, QAP & NDE Procedure.
- 3.1.1.17 Assembly, Fit-up, Welding, NDT of Steam Coil to Coil, Coil to nozzle hook-up, Coil supporting arrangement to vessel as per drawings, approved QAP, WPS & NDE procedure.
- 3.1.1.18 Offering the job for stage wise inspection and obtaining stage wise inspection clearance, Final Inspection clearance from HPVP (QC) / TPIA / EIL as per approved QAP.
- 3.1.1.19 All NDT activities like DPT, MPT, RT, UT, etc., shall be carried out as per approved QAP/ drawings by NDT personnel qualified by BHEL as per BHEL Procedure No. BHEL: NDE: WP01.
- 3.1.1.20 NDT agency engaged by fabrication contractors shall have to ensure that their NDE personnel are qualified by BHEL in advance before starting of the job.
- 3.1.1.21 Handing over of Production Test Coupons for PWHT / SR along with the Column.
- 3.1.1.22 Production Test Coupons after RT to be tested as per approved QAP / Procedures.

3.1.2 Internals & External Attachments:

- 3.1.2.1 Collection and transportation of Raw materials like Plates (full / off-cuts), Pipes & Tubes, Round Bars, Structural items etc., as per GMS from BHEL-HPVP shop/ stores to fabrication yard including unloading at site.
 - 3.1.2.2 Fabrication, Marking, cutting, Assembly, Welding and NDT of External & Internal attachments like Vortex breaker, Cleats, Supports, Manway / Pipe Davits, Manhole doors, Stiffener rings, Platform and Pipe supports, Lifting lugs/Trunions, Ladder rungs, Earthing Lugs, Hand grip, Instrument Tappings, RF Pads etc., as per approved drawings, WPS, QAP & NDE Procedures.
- 3.1.3** 100% UT on Pressure retaining welds as per approved QAP & NDE procedure.
- 3.1.4** Spot PT on all the internal & external welds as per approved QAP & NDE procedure.
- 3.1.5** PMI check of materials & Welds, Final Dimensional inspection as per approved QAP & NDE procedure.
- 3.1.6** **Hydro-testing shall be carried out using clean water having a chloride ion concentration not over 25 ppm. The required water has to be arranged by the Vendor through tankers at their cost and also laying**

of necessary piping for filling. The Test report of the water sample tested at NABL approved laboratory shall be submitted to BHEL before Hydro-test.

- 3.1.7 Hydro-testing of Vessel, Nozzle jacket chamber & Steam Coil at Test pressure specified in the drawing followed by Draining, Drying & inside Cleaning.
- 3.1.8 Arranging of all the accessories required for the Hydro-test like Filling Pump, Pressurizing Pump, Calibrated Pressure Gauges including fabrication of Stems for Fixing of Pressure Gauges, Non-Return Valves etc.
- 3.1.9 Pickling & Passivation of Shell, dished ends, Nozzles & weldments etc., including cleaning & drying as per standards, approved procedure & QAP after Hydro-testing of vessel. **An approved specialized agency shall be engaged by the Vendor for the Pickling & Passivation job. Specialized agency shall be identified in advance and credentials of agency & procedure for Pickling & Passivation to be submitted to BHEL for approval. After according of approval only by BHEL, the agency is to be engaged for Pickling & Passivation job.**
- 3.1.10 Nitrogen filling is to be carried out in the vessel as per drawing and approved QAP. Nitrogen shall be made available at one point by BHEL-HPVP as Free Issue. The filling of Nitrogen by laying of necessary piping, valves, manifolds, gauges etc., shall be arranged by the Vendor.
- 3.1.11 All the nozzle openings shall be closed with suitable steel blind covers/blind flanges supplied by BHEL.
- 3.1.12 Letter painting of Dispatch particulars in a prescribed / specified format on the column.
- 3.1.13 Vendor to provide all the assistance to Transportation contractor for loading of the vessel on the Trailer like placing & fixing steel / wooden saddles, stools, fixing of temporary supports, if required, on the trailer etc.

3.2 Work Instruction/ Procedures to be followed during fabrication:

- 3.2.1 Welding is to be carried out by qualified ASME welders only. Vendor shall arrange for Qualification of Welders at their own cost. However, Test Coupons shall be provided by BHEL as free issue.
- 3.2.2 All consumables like Electrodes & Filler wires, Gases, Grinding wheels etc., required for fabrication are in the scope of the Vendor. The electrodes / filler wire shall be of BHEL / EIL approved makes only and the vendor shall submit the Batch Test Certificates to BHEL for verification before using on the job.
- 3.2.3 Experienced Site-in-charge and Qualified Engineers & Supervisors shall be deployed for proper co-ordination of the job.
- 3.2.4 Vendors should deploy Experienced & Qualified QC personnel for carrying out the inspection activities in coordination with BHEL QC inspector / TPIA / EIL. **Non-deployment will attract penalty @ rate decided by BHEL and same will be deducted in RA Bills.**
- 3.2.5 Vendors should deploy Qualified NDT personnel (Level III / Level II) at site for carrying out the NDT inspection activities in coordination with BHEL QC –NDT / TPIA / EIL. Vendors shall have to engage sufficient man power and resources for fabrication to meet HPVP delivery schedules. **Non-deployment will attract penalty @rate decided by BHEL and same will be deducted in RA Bills.**
- 3.2.6 Vendor shall deploy sufficient no. of calibrated Welding machines, Main Ovens & Portable Ovens required for baking of electrodes, other machinery at site. All relevant documents shall also be made available for verification & approval by BHEL - HPVP (QC) / TPIA.
- 3.2.7 Vendor shall deploy crane suitable up to 20 MT capacity for handling of the raw materials, shell segments required during the fabrication. **However, for heavy components other than which can't be handled by 20 MT crane BHEL will be deploying one no. of 75 MT Crawler crane with Operator for handling of shell sections. Diesel required for the operation of BHEL cranes will be Free Issue by BHEL. However, transportation of the same from HPVP stores to the work location has to be arranged by Vendor.**
- 3.2.8 Sufficient No. of Rollers & Idlers required for fabrication of Vessel have to be arranged by the vendor. **Non-deployment in specified time will attract penalty @rate decided by BHEL and same will be deducted in RA Bills.**

- 3.2.9 Required tools & tackles like Measuring instruments like Tape, Fillet & Butt Weld Gauges, Plumb bobs with magnets, Thermal Chalks / Pyrometer etc., shall be calibrated and valid calibration certificates must be presented, if required.
- 3.2.10 All the Scaffolding materials like Pipes, Clamps, Jallies etc., for temporary platform works required during the complete course of the fabrication are to be arranged by the Vendor.
- 3.2.11 Any modification work due to revision of drawings during fabrication is to be carried out by the vendor without any extra cost.
- 3.2.12 No extra rates are applicable for the additional joints to be made in Plates / Rolled sections.
- 3.2.13 Equipment details shall be hard stamped by encircling with paint and stencilled in a specific format with details of Project name, Customer No., Work Order No., PGMA No., Weight etc., for identification and dispatch as per the instructions of the outsourcing department. Fixing of Name plate, punching as per the details given in the drawings and rub-off.
- 3.2.14 Submission of economic cutting plans for the plate materials and approval shall be obtained from BHEL-HPVP before taking up the same. Wherever fabrication is done without proper approved cutting plans, any loss of materials arising due to the same will be recovered as per BHEL recovery rates.
- 3.2.15 Vendors shall have to return the excess / balance materials including off-cuts and total scrap available with the vendors exclusive of process allowance & invisible wastage to HPVP Stores after material reconciliation but before submission of their final bill. In case the same are not returned by the vendor, Recovery shall be made as per BHEL Rates / MSTC rates plus applicable taxes, prevailing at the time of processing of the final bills.
- 3.2.16 Though not mentioned specifically, any other activity which is required for completion of the work is deemed to be included in the scope of work of vendor.

4. BHEL SCOPE: BHEL – HPVP shall provide the following as free issue:

- 4.1 Drawings, GMS, QAP, WPS, Painting Schedule, applicable Procedures, Standards & Specifications.
- 4.2 Raw materials like full / off-cuts Plates other than shell plates, Pipes & Tubes, Round Bars, Structural items etc., and BOCs like Pipe Fittings, Nozzles, Flanges, Fasteners, Gaskets etc., as per GMS from HPVP stores. Transportation of these materials from BHEL-HPVP stores/shops to Fabrication yard inside HPVP premises is in vendor's scope.
- 4.3 Marking, Cutting & Edge preparation of all the shell plates for formation of Shell segments as per drawings & approved QAP. However, Transportation of these shell plates from HPVP shop to fabrication yard is in vendor's scope.
- 4.4 Pressing of Petals of Skirt sections as per drawing shall be carried out in HPVP shop. However, Marking, cutting & Edge Preparation of the Skirt petals and To & Fro transportation of Petals for pressing in HPVP is in vendor's scope.
- 4.5 Blind Flanges / Blind covers, Gaskets and Fasteners required for Hydro-test.
- 4.6 75 MT crane along with operator will be provided by BHEL free of charge for fabrication. Maintenance of the crane including spares shall also be in the scope of BHEL. **However, Riggers required for handling the job shall be provided by the vendor.** Diesel required for the operation of BHEL crane will be Free Issue by BHEL.
- 4.7 Area required for fabrication, site office and Stores will be provided free of charge.
- 4.8 Power shall be provided free of charge at one point but further distribution to the desired location is in vendor's scope.
- 4.9 Vendor's scope shall include arranging & laying of cables, arranging Distribution Boards with suitable capacity Switch Fuse units as incomer, all outgoing with necessary safe trips like MCB, ELCB etc., as per the industrial safety norms and their installation, all outgoing cables from Distribution Board, termination at the distribution board, Working Area Lighting.

5. INSPECTION:

- 5.1 Inspection shall be carried out by M/s. BHEL–HPVP, Vizag / BHEL Authorized Inspection Agency (TPIA) / EIL / Customer as per approved QAP. Contractor shall have to offer for Stage wise and Final inspection as per approved QAP and obtain necessary stage wise & final clearances before proceeding for further operations.
- 5.2 Fabrication Vendor shall be solely responsible for preparation and submission of all Inspection Reports & documents duly certified by Inspection Authority along with the finished equipments.
- 5.3 All the documentation related to inspection clearance of M/s. BHEL/TPIA/EIL/Customer, Generation of Inspection Reports, Preparation of Final Documents as per BHEL standard formats etc., are included in the scope of vendor and scanned copy as well as hard copy of the same is to be submitted to BHEL-QA.

6. DELIVERY:

- 6.1 Complete Vessel along with inspection documents and all other certificates are to be handed over to HPVP **within 10 weeks from the date of issue of First consignment of free issue materials or 4 weeks from the date of issue of Last consignment of materials, whichever is later.**

Note: a) **Time schedule is very stringent and Vendor has to deliver the job as per Customer requirement and schedule which will be meticulously monitored by BHEL/ EIL/ Customer. All necessary steps to reduce the cycle time for the individual sub-activities and main activities will be mutually discussed and Vendor has to mobilize additional resources as per time to time requirement to achieve the same.**

- b) In case the delivery period offered by the vendor is more than the tender delivery, Price quoted by the bidder shall be loaded for additional period @1/2 % per week or part thereof for the purpose of evaluation of Bidder Status.

7. SITE MOBILISATION:

- 7.1 Successful bidders shall have to complete site mobilization within 7 days from the date of receipt of order or from the date of intimation for the same by BHEL whichever is later.

8. PRICE:

- 8.1 The price shall be quoted strictly as per the Schedule of Rates enclosed at Annexure – I for the detailed scope of work and the quoted price shall be inclusive of all applicable taxes & duties except GST.
- 8.2 The prices shall be fixed & firm without any escalation during the entire period of contract and till completion of the work.
- 8.3 GST shall be reimbursable to the vendor as detailed in Clause - 10 and as per Annexure – GST.
- 8.4 Income tax will be deducted at applicable rates from RA & Final bills.

9. PAYMENT TERMS:

- 9.1 Out of 100%, 90% payment will be made against RA Bills and Balance 10 % payment in Final Bill. Payment shall be made against RA Bills for **90% of the order value** for the following stages of supply and fabrication of the equipment:
- 9.1.1) After Mechanical Completion including Internal Steam Coil arrangement,
Internal & External attachments - 60%
- 9.1.2) After completion of Hydro-Testing, Pickling & Passivation,
Loading of finished equipment on trailer - 30%
- 9.2 Balance 10% payment shall be made after completion of the job in all respects including material reconciliation and handing over of the balance materials & returnable items, if any and submission of total documentation to BHEL (QC/QA).
- 9.3 The weight indicated in the tender is tentative and may be subject to increase or decrease after completion of detailed engineering. However, payment shall be made for the actual weights executed as per approved engineering drawings and documents with due certification by BHEL-HPVP site in-charge and QC.
- This clause shall be read in conjunction with the clause 18.0 of Annexure – III i.e., General Terms & Conditions.

10. GOODS & SERVICES TAX (GST):

- 10.1 Bidders shall make a note of the following points of GST before submission of their offer:
- a) Vendors shall have to mention their GSTIN no. (15 Digits) in their Technical Bid. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
 - b) Semi-finished goods are to be delivered by the Vendors in BHEL, HPVP premises within a maximum period of one year from the date of issue of the material, failing which the whole transaction will be considered as Supply & Sale and GST is required to be paid along with interest (calculated @ SBI Base Rate + 6%) along with penalty, if any, from the date of Challan on the whole value of materials. Hence vendors shall have to ensure that materials issued to them are returned within 365 days.
 - c) After fabrication, the vendors shall have to deliver the Semi - finished Goods by fulfilling the following formalities:
 - i) GST invoice should be raised by the vendors by paying GST on job work charges at applicable rates and by incorporating the HPVP GSTIN no. in the invoice for availing the reimbursement of GST from HPVP.
 - ii) The vendor shall also have to enter in their GST Return -1 (GSTR-1) the details of invoice raised for payment of GST so as to enable HPVP to avail input credit.

11. REVERSE AUCTION:

- 11.1 BHEL shall be resorting to Reverse Auction (RA) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Business Rules for Reverse Auction are given at Annexure – V and Guidelines for Reverse Auction are available on our website, www.bhel.com → supplier registration → Guidelines for Reverse Auction 2021, before submission of their offer.
- 11.2 Sealed envelope / Electronic Price bids of all the techno-commercially qualified bidders shall be opened and the same shall be considered as initial bids of the bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 11.3 BHEL will inform bidders the details of service provider who will provide business rules, all necessary training and assistance before commencement of online bidding. The bidders participating in the Reverse Auction shall have to necessarily submit '**Process Compliance Form**' (PCF) to the designated Service Provider.
- 11.4 Bidders are advised to read the 'Business Rules' (Annexure – V) indicating details of RA event carefully, before reverse auction event.

12. General Terms & Conditions, whichever applicable, shall be as per Annexure – III enclosed.

13. RISK PURCHASE:

In case the contractor fails to execute the work within the scheduled time or due to any other reasons, BHEL - HPVP reserves the right to get the same completed through some other party at the risk & cost of the contractor and any additional expenditure incurred due to the same shall be charged to the contractor.

14. VALIDITY OF OFFER:

The offer shall be valid for a period of **3 months** from the date of Reverse Auction.

15. GENERAL:

- 15.1 The bidders shall study the Tender documents, Drawings, Quality Documents and all other relevant documents in detail for understanding the scope of work and the processes involved before submission of offer. Bidders shall get clarifications, if any, from concerned officials on the scope of work or any other details of the tender document, over phone between 09:00 AM and 04:30 PM on any working day or through e-mail.
- 15.2 Drawings, QAP, WPS, other reference documents etc., shall be sent to vendor's e-mail address on e-mail request by the bidder.

- 15.3 **Conditional / Partial Price Bids** and any other deviations to the tender terms & conditions are not acceptable and BHEL reserves the right to reject such offers without further correspondence. Bidders shall confirm their acceptance to all the terms & conditions of the tender enquiry in the Techno-commercial Bids and any deviations mentioned in the Price Bids shall not be considered and such offers are liable for rejection.
- 15.4 BHEL reserves the right to modify or cancel the tender enquiry at any stage without assigning any reasons thereof.
- 15.5 The General Terms & Conditions, if any, contradicting with the specific terms & conditions given in the tender, then specific terms & conditions shall only be considered.

16. The following documents shall form part of the tender enquiry:

- | | |
|---|------------------|
| i) Schedule of Rates | : Annexure – I |
| ii) List of Reference Drawings & Documents | : Annexure – II |
| iii) General Terms & Conditions | : Annexure – III |
| iv) Acceptance to tender terms & conditions | : Annexure – IV |
| v) Business Rules for Reverse Auction | : Annexure – V |
| vi) GST Compliance for Indigenous Suppliers | : Annexure – GST |
| vii) Drawings, QAP etc. | |

17. **TENDER SUBMISSION (through E – Mail only):**

- 17.1 Techno-commercial bids along with the tender document duly signed by the bidder on all pages and a covering letter on Company's Letter Head addressed to DGM (Outsourcing), BHEL –HPVP, Visakhapatnam shall be sent through an e-mail to technicalbid-hpvp@bhel.in
- 17.2 **Tentative List of Man Power, Machinery, Tools & Tackles to be engaged by the vendor shall also to be attached to the Techno-Commercial Bid.**
- 17.3 Price bid (Annexure – I) shall be sent separately through e-mail to another e-mail ID pricebid-hpvp@bhel.in
- 17.4 Offers completed in all respects along with the supporting documents shall be sent through the above e-mails only **latest by 14.00 Hrs. on 02.05.2022** duly mentioning the Name of Work, Tender Ref. No. & Date and Technical Bid / Price Bid in the subject of the e-mail.

Note: Do not mark CC and BCC while submitting your offer as the system is designed to reject such mails having more than one recipient. Max. file size of the attachment shall be 20 MB only. In case the file size is more, bidder can submit their offer through multiple mails within the due date and time.

Bidders shall ensure correctness of the e-mail addresses while submitting their offer. There shall be no other e-mail address at the receiving end while submission of the above bids otherwise the system will reject such mails. Bidder shall be solely responsible for non-receiving of such mails at the above mentioned e-mail addresses and no communication in this regard will be entertained.

17.5 **TENDERS RECEIVED AFTER THE DUE DATE & TIME ARE NOT ACCEPTABLE.**

17.6 **OFFERS SENT IN ANY OTHER FORM WILL BE TREATED AS INVALID AND WILL BE SUMMARILY REJECTED.**

18. **TENDER OPENING:**

- 18.1 Techno-commercial Bids will be opened at **14.00 Hrs. on 02.05.2022**. The bidders may depute their representatives at the time of opening of Techno-commercial bids.
- 18.2 After evaluation of the Techno-commercial Bids, intimation regarding date & procedure of conducting reverse auction shall be given by the service provider to all the eligible techno-commercially qualified bidders through an e-mail in advance at an appropriate time.

For Bharat Heavy Electricals Limited,

D. N. Murthy
22/04/2022
D. N. MURTHY
Dy. Manager (OS)

Bharat Heavy Electricals Ltd.
HPVP, Visakhapatnam-530 010

SCHEDULE OF RATES

Ref : OS/22-23/2443/DC/04/004

Date: 22.04.2022

Sub : Fabrication of SS Degassing Contactor against S.O. no. 2443 inside the premises of BHEL-HPVP, Visakhapatnam

Sl. No.	S.O. No.	Description of Work	Unit	Qty.	Unit Rate (₹)	Total Amount (₹)
		Fabrication of SS Degassing Contactor (Vessel Tag No. 088-C-001: approx. weight of 26 MT) inside the premises of BHEL-HPVP, Visakhapatnam which consists of Shell, Top & Bottom Dished Ends, Skirt, Internals & External attachments, SS Steam Coil arrangement etc., including Rolling, Assembly, Fit-up, Welding, NDT, Hydro-test, Pickling & Passivation, Stage wise & Final Inspection etc., as per the approved drawings, QAP / ITP, WPS, Procedures, Specifications & Standards and loading of the vessel onto the trailer. The detailed scope of work shall be as mentioned in the tender document. (All Electrodes & Filler wires required for fabrication is in vendor's scope)				
1	2443	Fabrication of SS Degassing Contactor (Vessel Tag No. 088-C-001)	MT	26		
Total Amount in words:						

Notes :

- 1) **L1 Status** will be evaluated based on the total quoted value.
- 2) The quoted price shall be inclusive of all applicable taxes & duties except GST. Income Tax shall be deducted at applicable rates from RA & Final Bills and GST shall be reimbursable to the vendor as per applicable guidelines.
- 3) The prices shall be fixed & firm without any escalation during the entire period of contract and till completion of work.
- 4) The quantity and weights indicated above are approximate and may vary on both sides subject to revision or addition or deletion of drawings or as per project requirement during execution. However, payment shall be made for the actual weights as per the applicable drawings / BOM.
- 5) The bidders are advised to go through all the drawings & documents before quoting the tender.
- 6) The evaluation currency for this tender shall be **INR**.
- 7) Tenderer should quote the amount in figures & words. It may be noted that corrections, overwriting etc. are not allowed. If there is a discrepancy between amount in figures & words, the amount in words shall prevail unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail. If there is an error in the total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and total shall be corrected accordingly.
In case of mismatch between rate and amount in figures, rate in figures shall be taken into consideration for further evaluation and processing.

Signature of the Bidder with Stamp

LIST OF REFERENCE DRAWINGS & DOCUMENTS

Sub : Fabrication of SS Degassing Contactor against S.O. no. 2443 inside the premises of BHEL-HPVP, Visakhapatnam

Sl. No.	S.O. No.	PGMA	Eqpt. Name	Description of Drawings / Documents	Drawing / Document No.	Rev. No.	No. of Sheets
01	2443	CL-010	SS Degassing Contactor (Vessel Tag No. 088-C-001)	Assembly detail of Degassing Contactor	1-CL-010-U0215	00	02
02				Orientation details of Degassing Contactor	2-CL-010-U0050	00	01
03				General Notes of Degassing Contactor	1-CL-010-U0219	00	01
04				Dished Ends of Degassing Contactor	3-CL-010-U0229	A	01
05				QAP	CQP 2521 Dtd. 30.09.2021	00	11

Note : Drawings & Documents indicated above are purely tentative and may be subject to revisions due to incorporation of comments of the approving authority. Hence, the approved drawings and documents issued to the vendor after ordering shall only be followed for execution & inspection of the job.

GENERAL TERMS & CONDITIONS**1. TECHNICAL DELIVERY CONDITIONS:**

The work should conform to the technical data given in our drawings, GMS, Shipping List Specifications, QAP, WPS etc.

2. PARTY'S SCOPE:

The scope of the party shall be as follows: -

- a) All welding equipments, baking oven, tools, jigs and fixtures, measuring instruments duly calibrated, handling facilities, testing facilities etc.
- b) All materials other than those mentioned under "Free Issue Materials", which are required for completion of the work.
- c) All consumables such as electrodes, gases, grinding wheels etc.

Note: Electrodes of specification mentioned in the drawings / WPS and of BHEL approved brands only shall be used and MTCs of the same shall be submitted to BHEL for verification before use.

3. REVISION OF DRAWINGS:

There may be minor changes in the drawings during execution. In such a case, party should accommodate the same without any extra claim.

4. WELDING QUALIFICATION: Qualification of required number of Welders is party's responsibility at their cost.**5. X-RAY:**

All welding shall be of X-ray quality where specified on drawings. Inspection would specify the quantum of X-ray based on drawings / code requirement. Party should strictly follow the WPS and QAP issued by BHEL during welding. Getting the welds radiographed and getting them cleared by inspection is the responsibility of the party.

6. RECTIFICATIONS / REJECTIONS:

Any rectification due to defective work, if required, shall be done by the party free of charge with a suitable technology approved before hand by BHEL in writing. The cost of material, if any used for rectification work / rejection work, will be estimated by BHEL and the same shall be debited to party's account. In case any rectification / rework is to be carried out due to defective material supplied by BHEL, the replacement material and consumables will be supplied by BHEL free of Cost.

7. SECURITY DEPOSIT:

Vendors shall have to submit a Bank Guarantee for **10% of the order value in case of HPVP ADM site or 25% of the material cost in case of Vendor works** towards Security Deposit and safe custody of free issue materials within 15 days from the date of intimation by Outsourcing dept. The BG shall be valid for the entire contract period with a claim period of 12 months. This Bank Guarantee shall be released to the contractor after completion of work and on acceptance of the same by BHEL.

Bidder agrees to submit performance security required for execution of the contract within the time period mentioned above. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT/contract, from the bills along with due interest.

8. PERFORMANCE BANK GUARANTEE:

Vendors shall have to submit Performance Bank Guarantee (with claim period of 12 months) for 10% of the order value covering for the defects liability period. If PBG is not submitted, 10% of the order value shall be deducted towards PBG from the final bill and shall be refundable after performance guarantee period, if no defects are found during this period.

9. RAW MATERIALS ISSUE:

Raw materials shall be issued with appropriate processing allowance and invisible wastage over the theoretical requirement of raw materials (**Plates, Sheets, Sections and Pipes**).

10. TRANSFER / RETURN OF LEFT OVER MATERIALS:

Party should maintain proper records for receipt & use of all free issue materials. The left over materials & scrap as per the material accounting statement shall be returned to HPVP stores along with finished job. Material Transfer Vouchers (MTV) from one order to another or from one vendor to another and Material Return Vouchers should be submitted immediately after transfer / return. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation.

11. MATERIAL RECONCILIATION:

Orders issued to the vendors have to be completed in all respects including Material Accounting within a maximum of **180 days** from the **date of issue of the first material** from BHEL - HPVP stores.

Maximum of 0.5 % on the requirement of materials (**Plates, Sections and Pipes**) is admitted towards **process allowance and invisible wastage**.

Scrap quantity is permissible up to a **maximum of 1% on Structural (Beams, Channels, Angles, Rods, Pipes etc.), 2% on Sheets, 3% for Plates** on the theoretical requirement of materials.

If wastage and scrap is beyond the above limits, it should be fully justified with cutting diagrams etc. which are to be approved in advance by BHEL. **Otherwise, the cost of raw materials beyond approved limits will be recovered from the contractor as per BHEL recovery rates including applicable taxes & duties.**

Material reconciliation including return of balance materials, off-cuts is to be completed within 20 days from the date of completion of the order. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL-HPVP along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation,

Repeated occurrence of inordinate delays in returning and settling the material accounting will entail BHEL the right to terminate the contract forthwith or impose a temporary suspension on further loading at the discretion of BHEL.

12. SCRAP & OFF-CUT NORMS:

Sl. No.	Description	Scrap Size (in mm)	Off-Cut (in MM)
1.	CS/AS Sheets & Plates	Below 500 × 250	500 × 250 & above
2.	Rolled sections Rod, angles etc. (other than -tubes, pipes)	Below 1000	1000 & above
3.	Tubes & Pipes	Below 500	500 & above
4.	Universal column	Below 1000	1000 & Above
5.	SS Sheets & Plates	Below 500 × 250	500 × 250 & above
6.	SS Structural, Rods, Tubes, Pipes	Below 250	250 & above
7.	Non – ferrous: sheets & plates, rods & tubes	Below 500 × 250 (S & PL), Below 250 (Rods & Tubes)	500 × 250 & above, 250 & above
8.	Big size Scrap	(2500 & above) × (150 to 249)	-

13. INSPECTION:

Party shall contact our Quality Control Dept. for stages of inspection before commencement of job and should strictly follow the stages of inspection as per QAP.

14. WORKMANSHIP GUARANTEE:

The vendors should give workmanship guarantee for fabricated items for a period of 18 months from the date of last delivery of the order. Any defects due to incomplete work, faulty workmanship found in the fabricated items after delivery during the defects liability period shall be rectified / replaced by the vendor free of cost. Otherwise, the expenditure incurred towards the same will be recovered from the pending bills of vendors.

15. WORK PROGRESS:

The fabricator shall furnish a weekly report on the progress of work along with the status of availability of free issue materials and requirement of further materials, if any.

Outsourcing dept. personnel will visit vendor's works from time to time to assess and review the work progress. Free access shall be provided to BHEL or its inspection agency at all reasonable times of the day / night.

In case the progress is not satisfactory or supplies are delayed abnormally beyond the contractual delivery date, BHEL-HPVP, Visakhapatnam reserves the right to cancel the order in part or full or get the balance job in as is where is condition completed elsewhere by another agency at the risk and cost of Fabricator. The value of the work carried out by the party will be assessed by BHEL and the same shall be final. No compensation will be given to the fabricator in case of cancellation of order or diversion of balance job even if the jobs have been processed partly.

16. DELIVERY:

Finished items should be handed over to BHEL-HPVP on party's delivery challans along with Job completion certificate / Final Inspection Report from inspection agency / HPVP-QC department.

17. PENALTY:

If delivery exceeds the stipulated delivery schedule, penalty 1/2 % of the total value of order per week or part there of subject to a maximum of 10% on the total value of the order will be levied. However, time taken for the following will not be considered as delay on the part of the Sub-Contractor.

- 1) Intermediate operations, if any, carried out by BHEL.
- 2) Waiting time for BHEL / Third party Inspection beyond a normal time of 3 days.

18. PAYMENT TERMS:

Payment shall be made against RA Bills within 45 days from the date of submission of Bill.

90% payment will be made after handing over of the finished equipments along with all inspection documents to HPVP shops / Logistics dept. / ADM site, duly inspected & cleared by Inspection authority. Balance 10% payment shall be made along with the Final Bill against completion of total order in all respects including documentation.

Vendors shall have to submit the bills in the formats specified by HPVP-Outsourcing dept. and the bills submitted in the specified format along with necessary supporting documents are only admitted for processing. The following documents shall be submitted along with the Final Bill: -

1. No Claim Certificate from the contractor
2. No Dues Certificate from BHEL
3. Work Completion Certificate from BHEL
4. Material Reconciliation Statement submitted by the Contractor and certified by concerned authority of BHEL (if applicable)
5. Workmanship Guarantee certificate from the contractor

19. SECRECY:

All the documents of BHEL inclusive of Drawings, GMS and Standards made available to the fabricator should be kept in strict confidence and under no circumstance be made available to others or allow others to make use of them. Such documents shall be returned to BHEL on demand after completion of the job. This secrecy clause is binding on the employees of the fabricators also. Violation of the same may lead to suspension of business with the vendor and necessary legal action.

20. SUB-LETTING:

In general, sub-letting of jobs will not be permitted. But in special circumstances, this may be allowed. In such case, the party should obtain written approval from BHEL-HPVP, Visakhapatnam before sub-letting.

21. FACTORY RULES AND REGULATIONS:

Party shall abide by all the rules and statutory regulations in force from time to time as per factories act. It shall be party's responsibility to ensure the safety of their workmen and fulfilling the ESI, PF and other relevant statutory regulations.

22. SAFETY:

- a) Contractor shall adhere to safe construction practices, guard against hazardous & unsafe working conditions and shall comply with the safety rules of BHEL and local authorities. He shall maintain First Aid facilities for all his employees and labour. Contractor's responsibility includes supply of welder kit, all safety items such as safety belts, white and colour glasses, goggles, safety helmets, safety shoes etc.
- b) *Contractor and his employees shall follow all fire & safety, security regulations of BHEL.*

23. HOUSE KEEPING:

During execution of work, the contractor at all times keep the working place and storage area clean and free from accumulation of waste materials, rubbish etc.,

24. ACCIDENT / DAMAGE / CONDUCT ETC.:

Contractor will be held responsible for any disorderly conduct / misconduct, indiscipline, theft, smoking etc., on the part of his men. He will ensure summarily eviction of such men from his premises failing which BHEL would remove them from the factory on his responsibility. Any damage to and or loss of equipment, machinery, building etc., to BHEL or BHEL employees, visitors or other contractors resulting from his own or any of his men's negligence shall be liable to be made good by him. Contractor shall be solely responsible for any accident in which you or your men or your equipment may be involved during the execution of contract on account of any reason what so ever.

25. TERMINATION OF CONTRACT:

In the event of any failure on the part of the contractor, BHEL reserves the right to terminate the contract by giving a notice of 2 weeks for any of the following lapses and contractual violations: -

- a) Failure to make labour payments in time as per the rules
- b) Failure to progress the job according to the agreed schedule
- c) Failure to mobilize adequate man power, tools & tackles and consumables in time
- d) Failure to adhere to Quality Standards of BHEL
- e) Refused to co-operate with other agencies working in the same area
- f) Failure to resolve labour disputes like strikes etc., within 7 days of occurrence
- g) Failure to comply with statutory regulations applicable at BHEL

BHEL shall also be free to intervene and take necessary remedial measures. All costs incurred with interest and overheads shall be recovered from contractor by such foreclosing or off-loading any part of the contract work.

26. DISPUTES:

Head of BHEL- HPVP Unit will be the final authority for any disputes arising out of this contract. The disputes / arbitration / settlement of contractual or legal issues shall be under the Jurisdiction of Visakhapatnam Court.

27. For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of Contract / PO / WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.

28. The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

Signature of the Bidder with Stamp

Acceptance to Tender Terms & Conditions

I / We hereby confirm that the Tender documents, Drawings, Quality documents etc. have been studied in detail and we have fully understood the scope of work.

I / We accept to all the Terms and Conditions of the Tender Enquiry and the prices quoted are in accordance with the same.

I / We give our acceptance to participate in reverse auction for this tender.

Tender documents duly signed on all the pages by the Owner / authorized representative of the bidder are attached herewith.

Signature of the Bidder with Stamp

BUSINESS RULES FOR REVERSE AUCTION (RA)

This has reference to tender no. **OS/22-23/2443/DC/04/004 dated 22.04.2022**. BHEL shall finalize the Rates for **Fabrication of Steel Structure (Bolted and Welded type) with free issue materials inside premises of BHEL-HPVP, Visakhapatnam against S.O. No. 2439, 2441 & 7872** through Reverse Auction mode. BHEL has made arrangement with an authorized Service provider (details will be shared before reverse auction) for conducting RA. Bidders should go through the instructions given below and submit acceptance of the same.

The technical & commercial terms are as per (a) BHEL Tender Enquiry No. **OS/22-23/2443/DC/04/004 dated 22.04.2022**, (b) Bidders' technical & commercial bid (in case of two-part bid) and (c) subsequent correspondences between BHEL and the bidders, if any.

1. Procedure of Reverse Auctioning:

- i) Price bids of all techno-commercially qualified bidders shall be opened.
- ii) **Reverse Auction:** The 'bid decrement' will be decided by BHEL.
- iii) The lowest bidder in sealed envelope price bid shall be shown as current L1 automatically by the system and no acceptance of that price is required. System shall have the provision to indicate this bid as current L1.
- iv) Bidders by offering a minimum bid decrement or the multiples thereof can displace a standing lowest bid and become "L1" and this continues as an iterative process. However, no bidder shall be allowed to lower its bid below the current L1 by more than 5 decrements at one go.
- v) After the completion of the reverse auction, the Closing Price shall be available for further processing.
- vi) Wherever the evaluation is done on total cost basis, after Reverse Auction, prices of individual line items shall be reduced on pro-rata basis.

2. Schedule for reverse auction: The Reverse Auction schedule will be intimated to all the eligible techno-commercially qualified bidders at a later stage.**3. Auction extension time:** If a bidder places a bid in the last {...} minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another {...} minutes, for the entire auction (i.e. for all the items in the auction), from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last {...} minutes and if that bid gets accepted as the lowest bid. If the bid does not get accepted as the lowest bid, the auto-extension will not take place even if that bid might have come in the last {...} minutes. In case, there is no bid in the last {...} minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, bidders are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc. The above process will continue till completion of Reverse Auction.

Complaints/ Grievances, if any, regarding denial of service or any related issue should be given in writing thru e-mail/ fax to M/s. {Service provider} with a copy to BHEL within 15 minutes prior to initial closing time of Reverse Auction.

4. Bid price: The Bidder has to quote the {...} Price inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, taxes, duties, freight and insurance as specified in tender document including loading (if indicated by BHEL due to deviations in technical/ commercial terms) for the Items specified. Details are as shown in Excel Sheet for calculation of total cost to BHEL (To be specified by Unit as per NIT conditions).**5. Bidding currency and unit of measurement:** Bidding will be conducted in *Indian Rupees per Unit* of the material as per the specifications mentioned in the tender.

In case of foreign currency bids, exchange rate (TT selling rate of State Bank of India) as on scheduled date of tender opening (Part-I bid) shall be considered for conversion in Indian Rupees. If the relevant day happens to be a Bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.

6. **Validity of bids:** Price shall be valid for 3 months from the date of reverse auction. These shall not be subjected to any change whatsoever.
7. **Lowest bid of a bidder:** In case the bidder submits more than one bid, the lowest bid at the end of Reverse Auction will be considered as the bidder's final offer to execute the work.
8. Unique user IDs shall be used by bidders during bidding process. All bids made from the Login ID given to the bidders will be deemed to have been made by the bidders/ bidders' company.
9. **Post auction procedure:** BHEL will proceed with the Lowest Bid in the Reverse Auction for further processing.
10. Any commercial/ technical loading shall be separately intimated to respective bidders prior to RA. The excel sheet provided in this regard shall cover all these aspects. Commercial/ technical loading if any, shall be added by the respective bidder in its price during Reverse Auction. Modalities of loading & de-loading shall be separately intimated to the bidders. The responsibility for correctness of total cost to BHEL shall lie with the bidders.
11. Reverse auction shall be conducted by BHEL (through M/s {Service Provider}), on pre-specified date, while the bidders shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the RA process if a bidder is not able to bid and requests for extension of time by FAX/ email/ phone then time extension of additional 15 minutes will be given by the service provider provided such requests come before 5 minutes of auction closing time. However, only one such request per bidder can be entertained.

In order to ward-off contingent situation of connectivity failure bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse auction cannot be the cause for not participating in the reverse auction. On account of this, the time for the auction cannot be extended and neither BHEL nor M/s. {Service provider} is responsible for such eventualities.

12. **Proxy bids:** Proxy bidding feature is a pro-bidder feature to safe guard the bidder's interest of any internet failure or to avoid last minute rush. The proxy feature allows bidders to place an automated bid in the system directly in an auction and bid without having to enter a new amount each time a competing bidder submits a new offer. The bid amount that a bidder enters is the minimum that the bidder is willing to offer. Here the software bids on behalf of the bidder. This obviates the need for the bidder participating in the bidding process until the proxy bid amount is decrementally reached by other bidders. When proxy bid amount is reached, the bidder (who has submitted the proxy bid) has an option to start participating in the bidding process.

The proxy amount is the minimum amount that the bidder is willing to offer. During the course of bidding, the bidder cannot delete or change the amount of a proxy bid.

Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing bidder bids, regardless of the fact whether the competing bids are submitted as proxy or standard bids. However, it may please be noted that if a manual bid and proxy bid are submitted at the same instant manual bid will be recognized as the L1 at that instant.

In case of more than one proxy bid, the system shall bid till it crosses the threshold value of 'each lowest proxy bid' and thereafter allow the competition to decide the final L1 price.

Proxy bids are fed into the system directly by the respective bidders. As such this information is privy only to the respective bidder(s).

13. Bidders are advised to get fully trained and clear all their doubts such as refreshing of Screen, quantity being auctioned, tender value being auctioned etc. from M/s. {Service provider}.

14. M/s. {Service provider}, shall arrange to demonstrate/ train the bidder or bidder's nominated person(s), without any cost to bidders. M/s. {Service provider}, shall also explain the bidders, all the business rules related to the Reverse Auction. Bidders are required to submit their acceptance to the terms/ conditions/ modalities before participating in the Reverse Auction in the process compliance form as enclosed. Without this, the bidder will not be eligible to participate in the event.
15. Successful bidder shall be required to submit the final prices (L1) in prescribed format (Annexure – VI) for price breakup, quoted during the Reverse Auction, duly signed and stamped as token of acceptance without any new condition (other than those already agreed to before start of auction), after the completion of auction to M/s. {Service provider} besides BHEL within two working days of Auction without fail.
16. Any variation between the final bid value and that in the confirmatory signed price breakup document will be considered as tampering the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings (as available on www.bhel.com).
17. Bidders' bid will be taken as an offer to execute the work/ supplies the item as per enquiry no. **OS/22-23/2443/DC/04/004 dated 22.04.2022**. Bids once made by the bidder, cannot be cancelled/ withdrawn and bidder shall be bound to execute the work as mentioned above at bidder's final bid price. Should bidder back out and not execute the contract as per the rates quoted, BHEL shall take action as per extant guidelines for suspension of business dealings (as available on www.bhel.com).
18. Bidders shall be able to view the following on their screen along with the necessary fields during Reverse Auction:
 - a. Leading (Running Lowest) Bid in the Auction (only total price of package)
 - b. Bid Placed by the bidder
 - c. Start Price
 - d. Decrement value
 - e. Rank of their own bid during bidding as well as at the close of auction.
19. BHEL's decision on award of contract shall be final and binding on all the Bidders.
20. BHEL reserves the right to extend, reschedule or cancel the Reverse Auction process at any time, before ordering, without assigning any reason, with intimation to bidders.
21. BHEL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause. In such cases, the decision of BHEL shall be binding on the bidders.
22. Other terms and conditions shall be as per bidder's techno-commercial offers and other correspondences, if any, till date.
23. If there is any clash between this business document and the FAQ available, if any, in the website of M/s. {Service provider}, the terms & conditions given in this business document will supersede the information contained in the FAQs. Any changes made by BHEL/ service provider (due to unforeseen contingencies) after the first posting shall be deemed to have been accepted if the bidder continues to access the portal after that time.
24. Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines for suspension of business dealings (as available on www.bhel.com), shall be initiated by BHEL.

Signature of the Bidder with Stamp

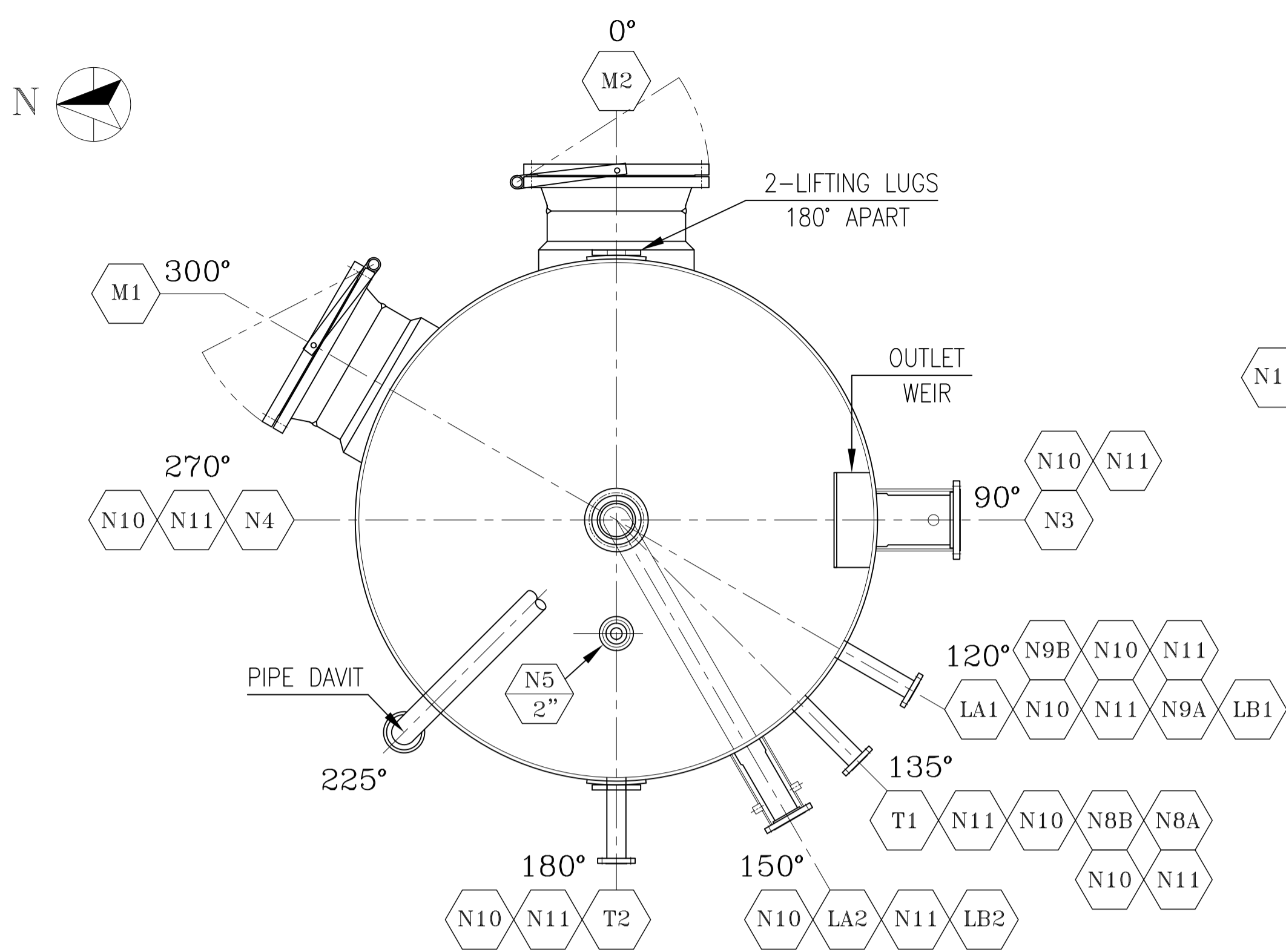
PROCEDURE FOR GST PAYMENT

1. In Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GSTIN which should be clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
2. Supplier shall mention their GSTIN in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
4. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
5. All documents like Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment where ever applicable. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.
6. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
7. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.
8. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.
9. This is to inform that GST portion of invoice, shall be released only upon Vendor declaring such invoice in his GSTR-1 and receipt of goods and Tax invoice by BHEL and Confirmation of payment of GST thereon by vendor on GSTN portal. Alternatively, BG of appropriate value may be obtained from vendor which shall be valid At least one month after the confirmation of date of payment of GST by vendor on GSTN portal and receipt of Tax invoice and receipt of goods, whichever is later. Above is subject to receipt of goods/service and tax invoice thereof along with vendor declaring invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.
10. That in case vendor delays Declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from vendor/contractor along with interest levied/ leviable on BHEL.

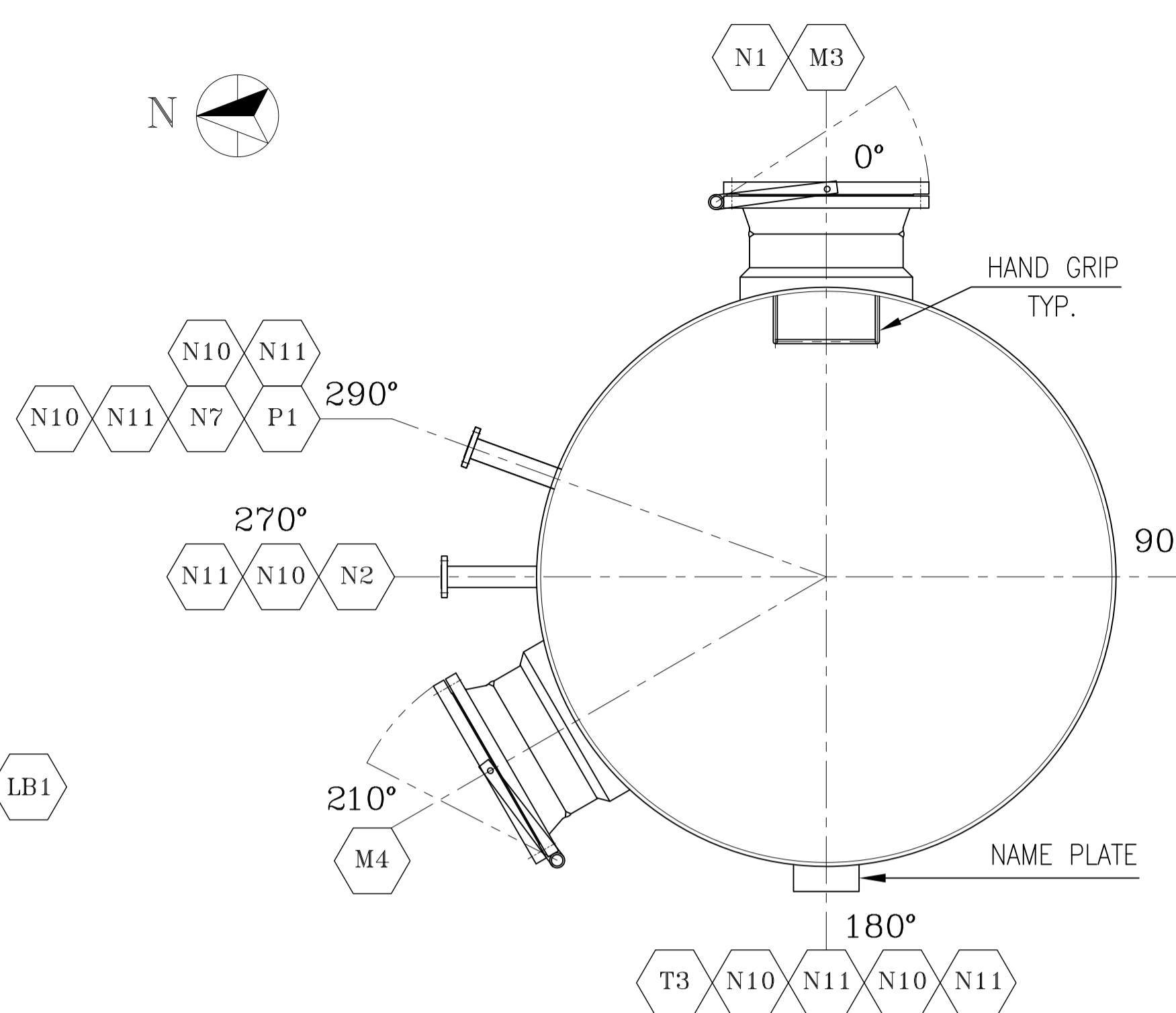
Note : The above will be followed strictly for processing vendor payments to ensure GST Compliance.

Signature of the Bidder with Stamp

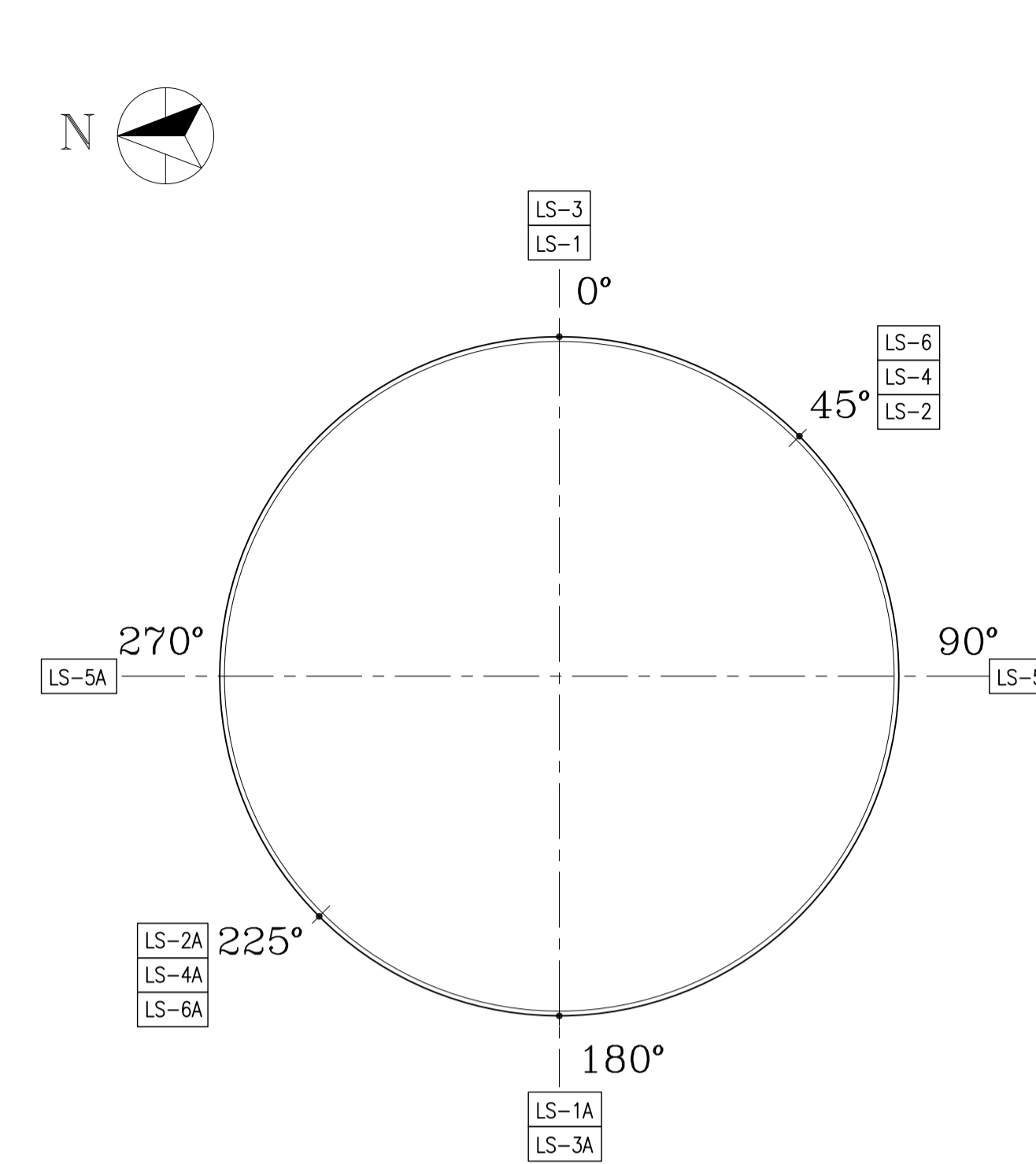
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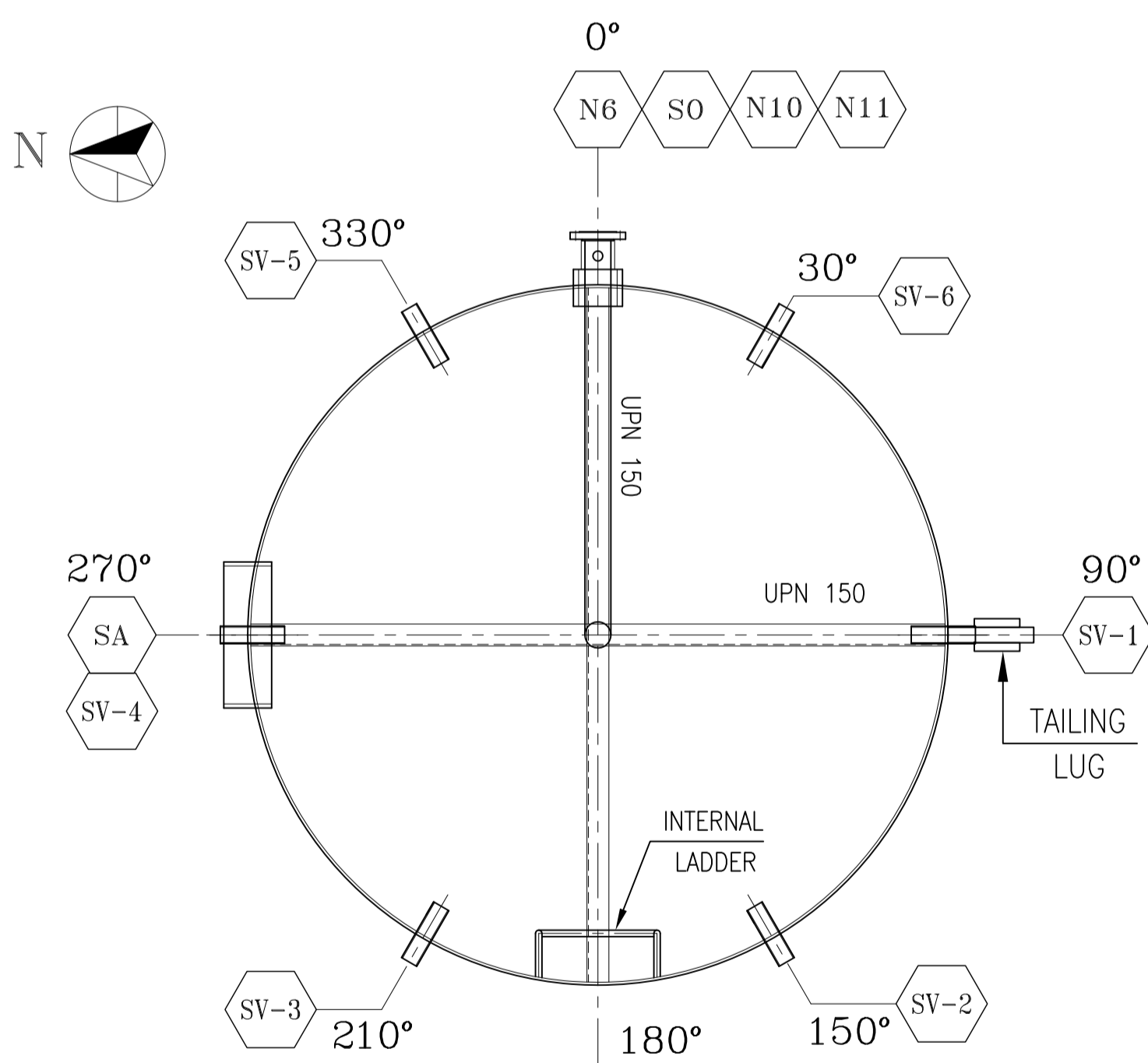
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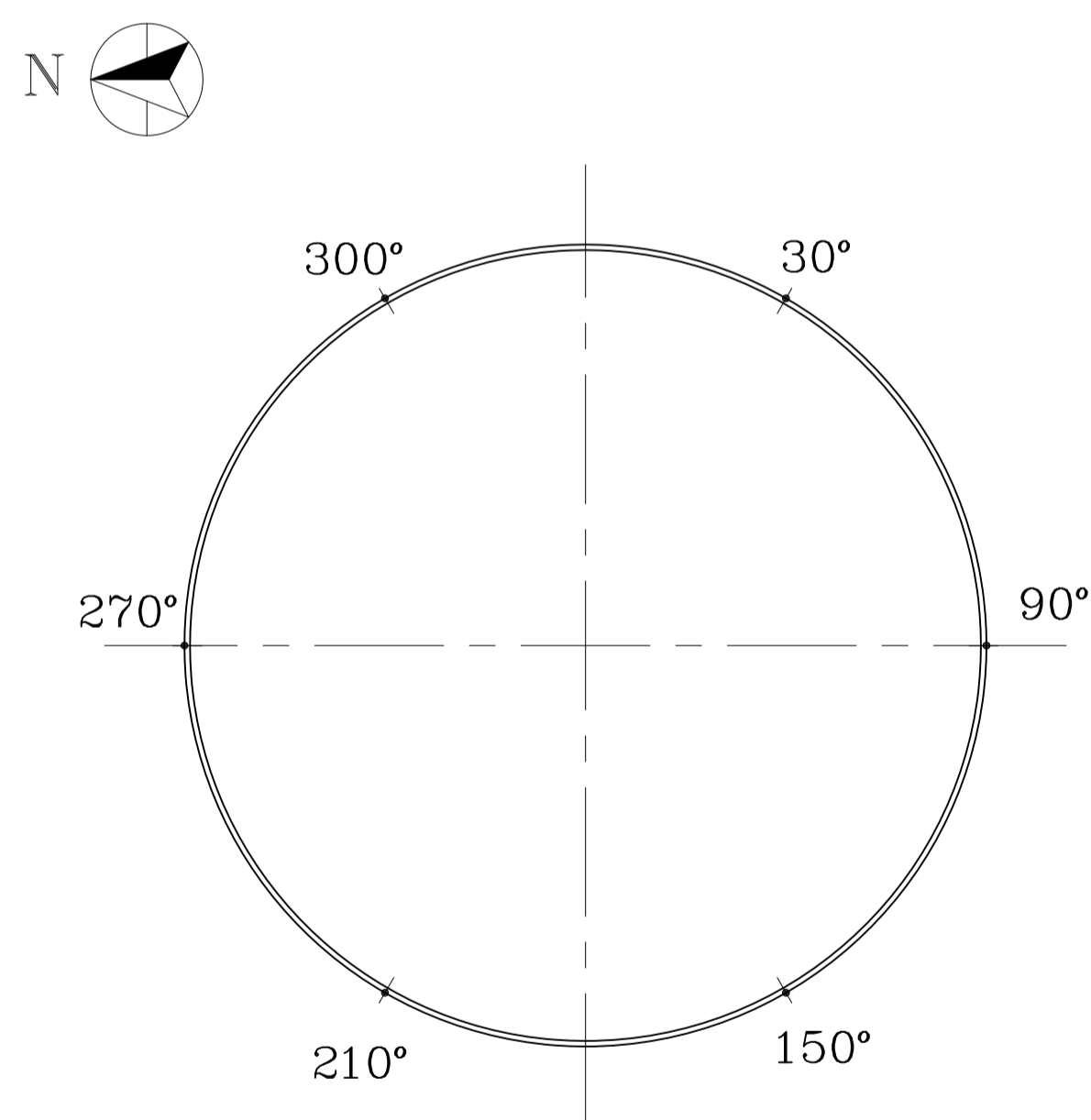
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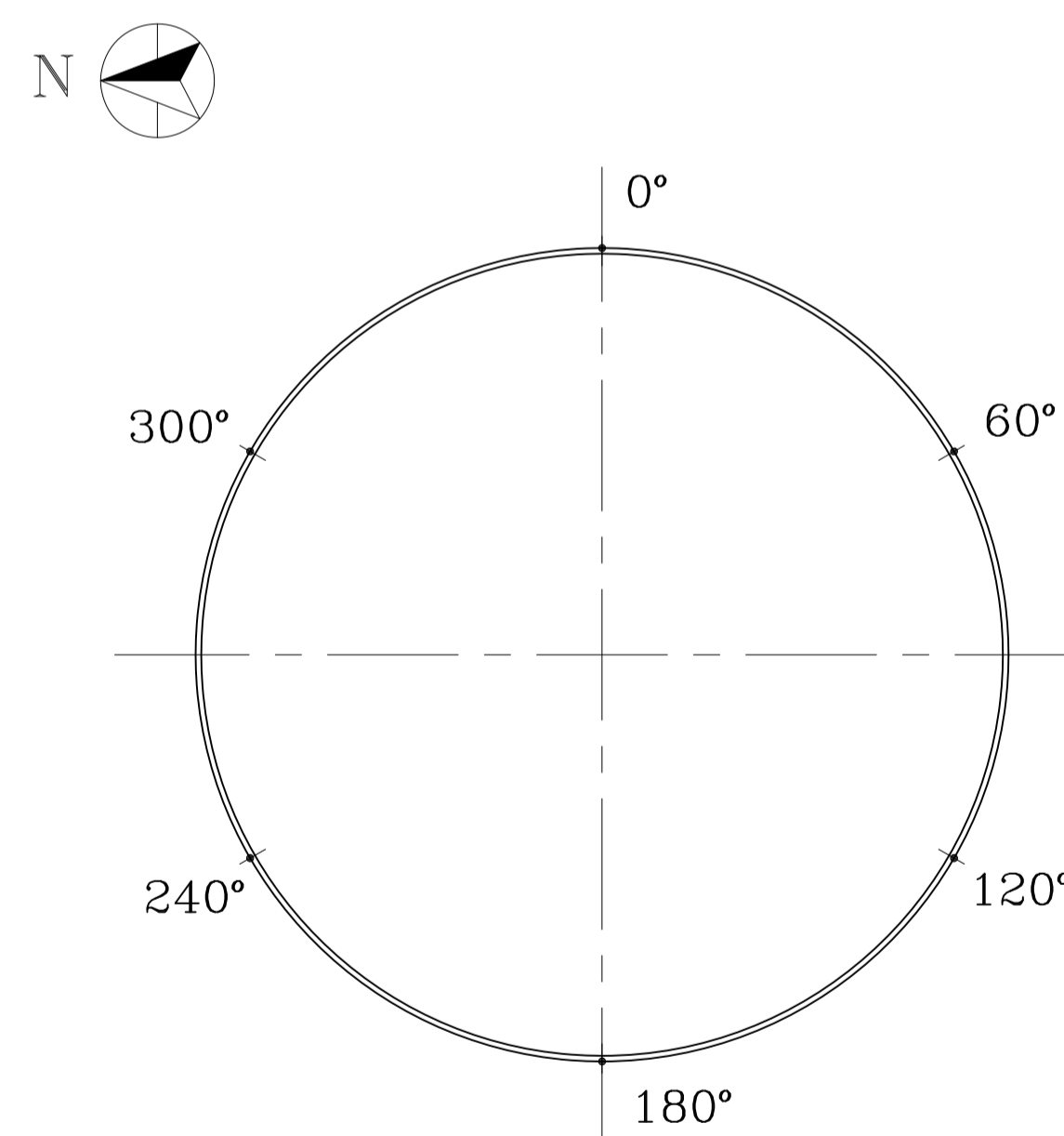
L-SEAM ORIENTATION (SHELL)



SKIRT ORIENTATION



L-SEAM ORIENTATION SKIRT SECTION-II & IV



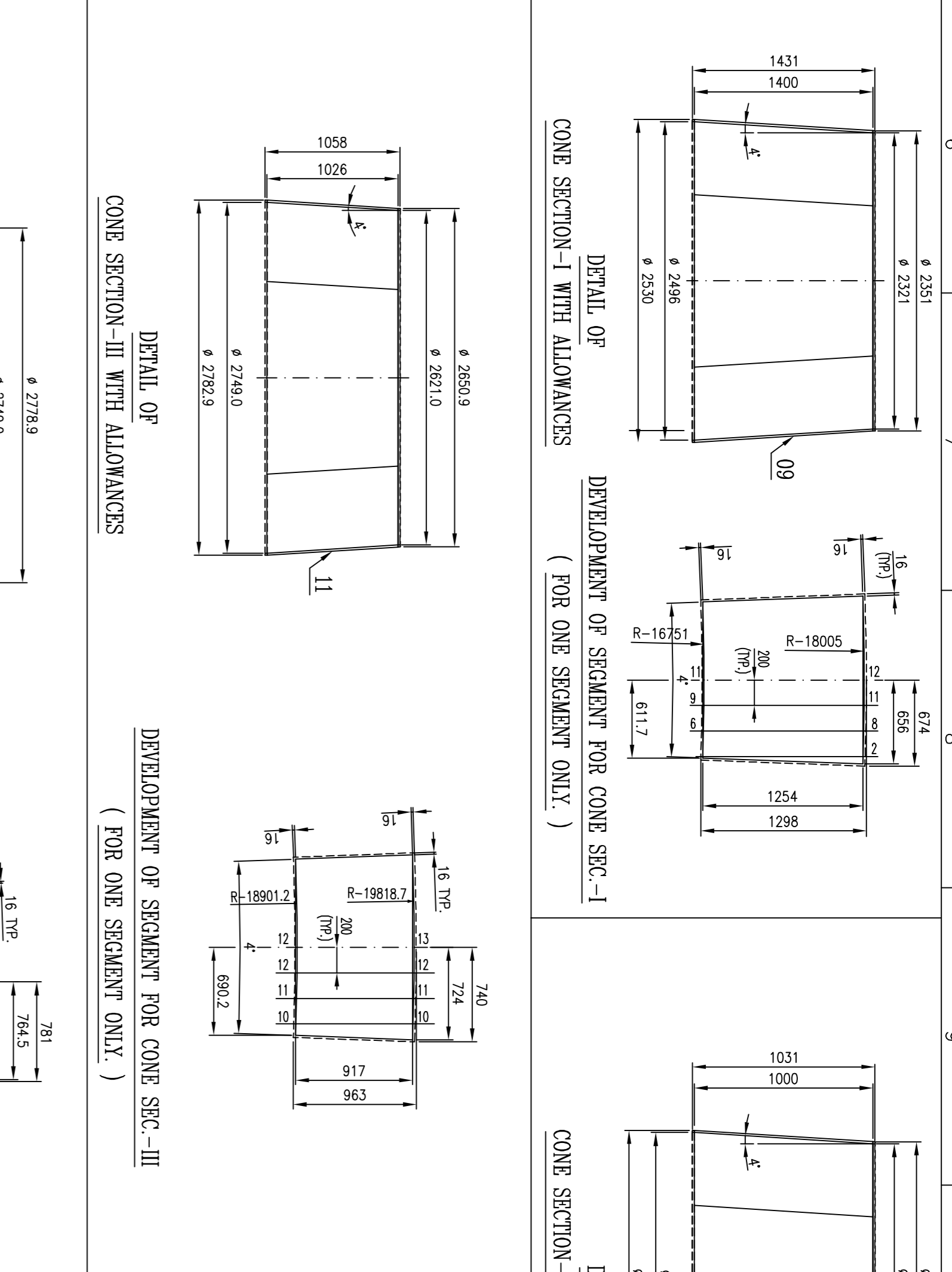
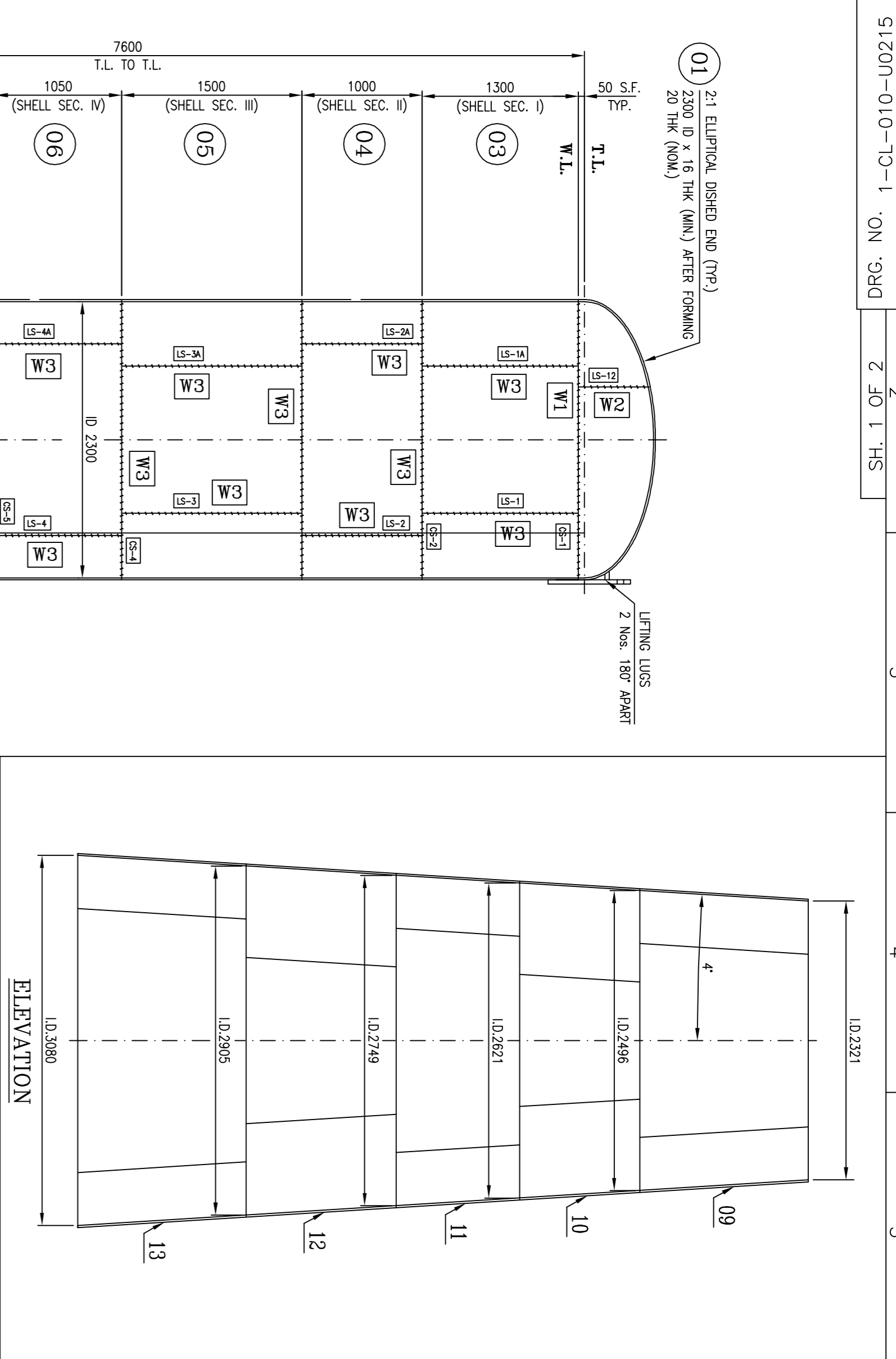
L-SEAM ORIENTATION SKIRT SECTION-I, III & V

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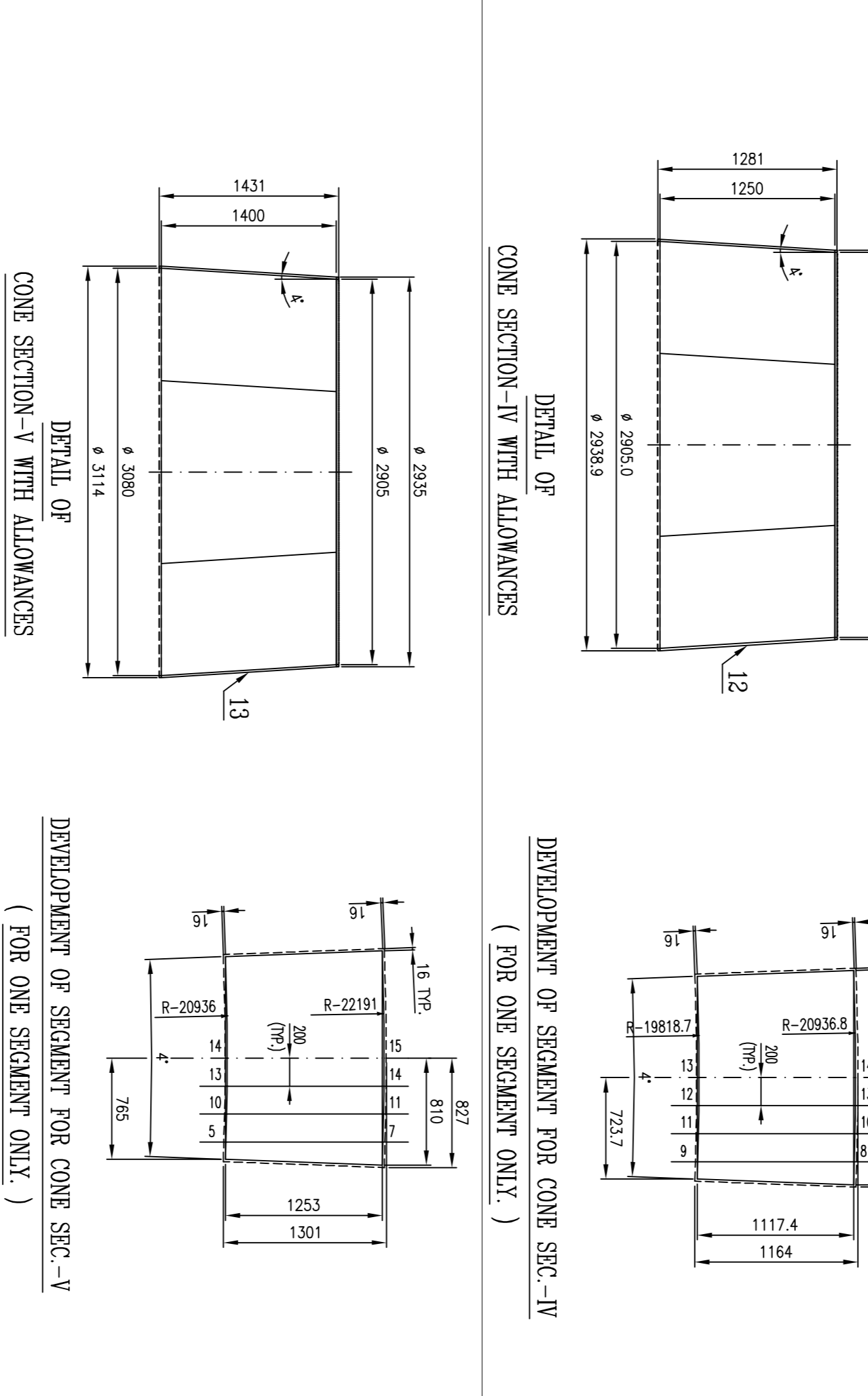
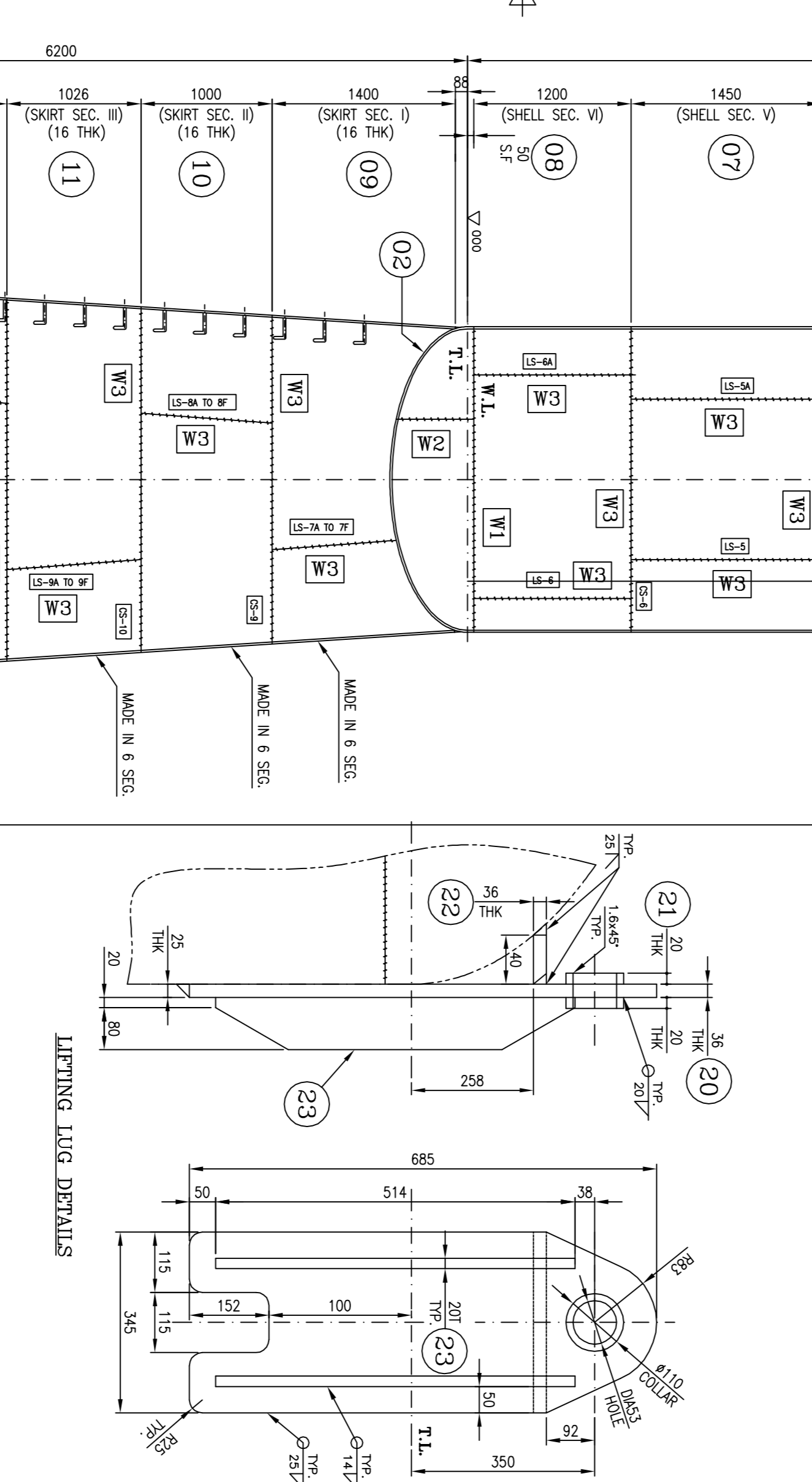
INVENTORY NO. SIGN. AND DATE REF. DRG. NO. COMPUTER FILE NAME

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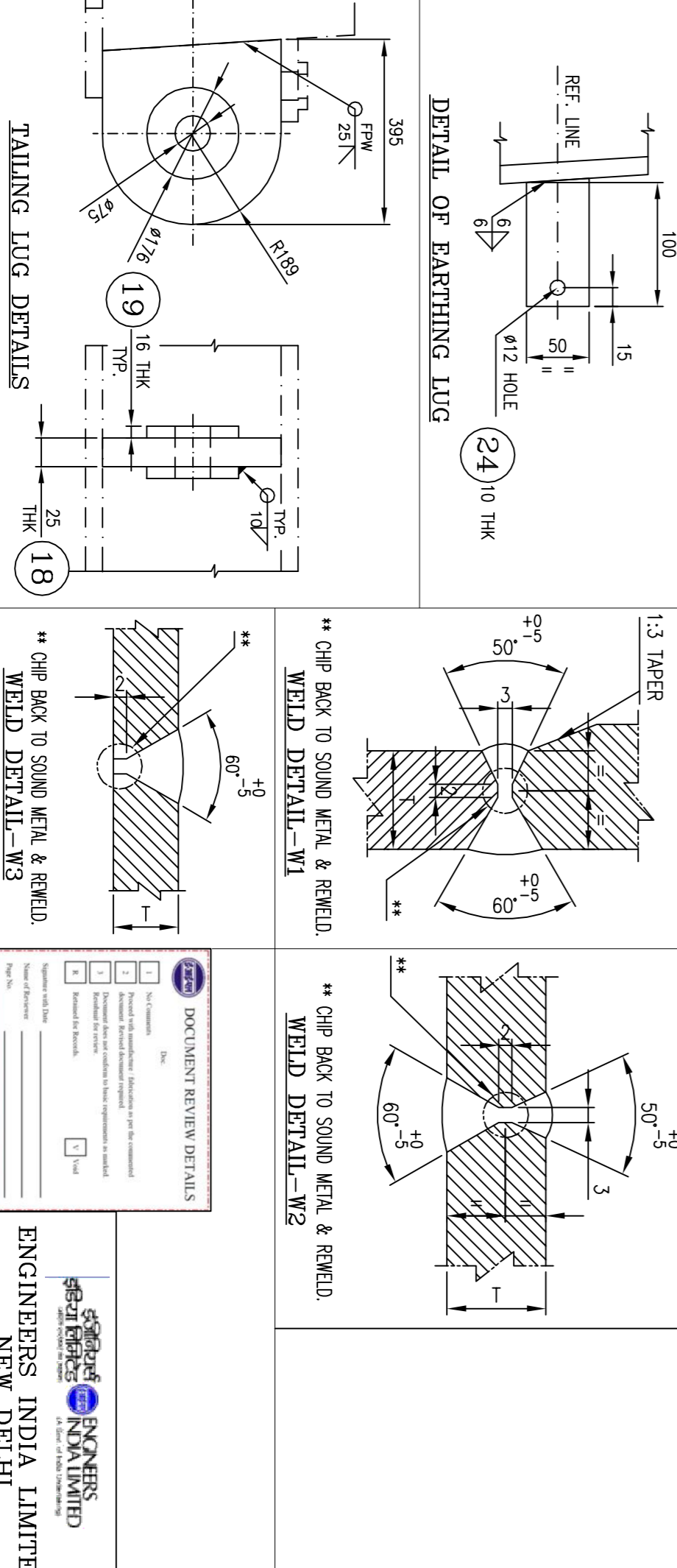
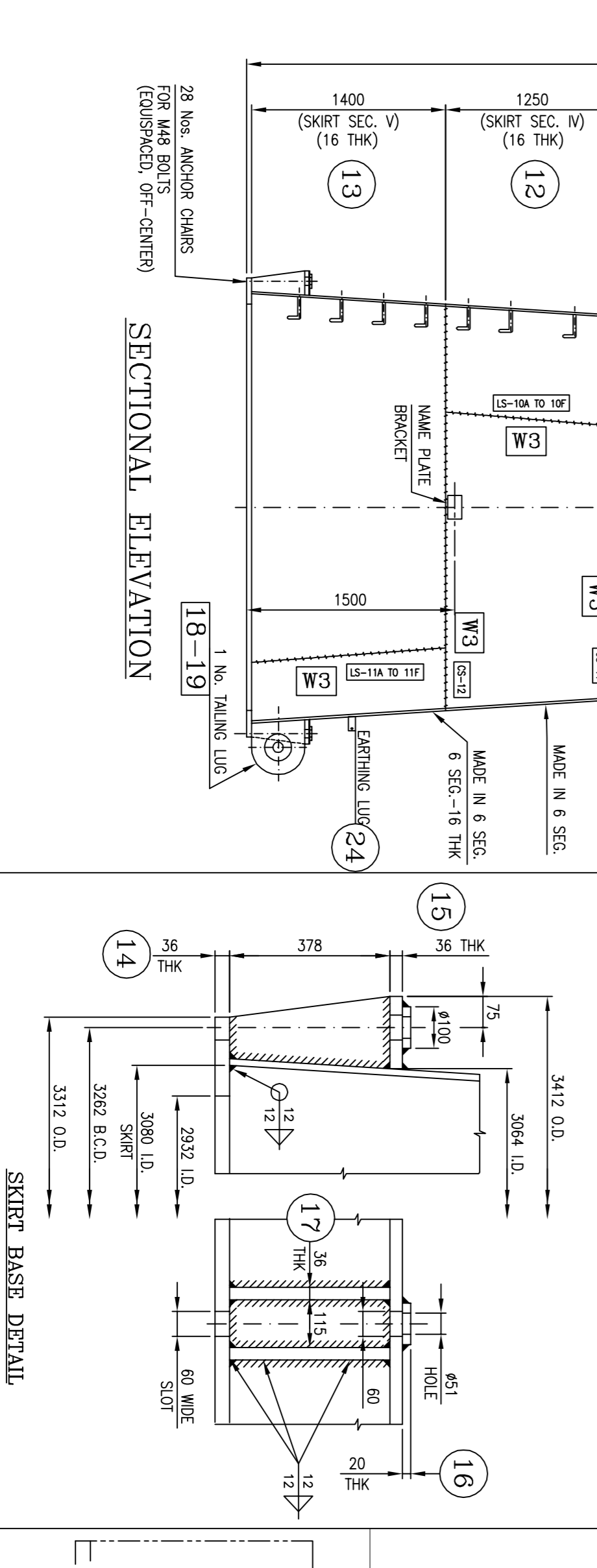
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CLIENT		INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT PARADIP, ORISSA	
CONSULTANT		TECHNIP INDIA LIMITED	
PROJECT		525 TPD STANDBY SRU PROJECT IOCL PARADIP REFINERY, ODISHA, INDIA	
DEPT. HPVP CODE	UNTOI. DIMS. GR. C/M/F	SCALE	WEIGHT (KG)
		1:10	-N.A.-
TITLE	CARD CODE	REF. TO ASSY. DRG.	ITEM NO. OF ITEMS
ORIENTATION DETAILS OF DEGASSING CONTACTOR	N.A.	BHEL DRG. NO. 2-CL-010-U0050 CUST. DRG. NO. 080557C-26899053-PVE-A1103-006	088-C-001 1 No.
		NO. OF SHIT. 1	REV. 00



NO.	DESCRIPTION	QTY	UNIT	WEIGHT
25	NAME PLATE BRACKET	3	KG	16.546
24	EARTHING LUG	1	KG	0.5
23	PLATE	8.0	KG	0.005
22	SUPPORT PLATE	9.3	KG	0.006
21	COLLAR PLATE	0.6	KG	0.005
20	LIFTING LUG	85	KG	0.006
19	COLLAR PLATE	2.3	KG	0.001
18	RAINING LUG	30	KG	0.000
17	GUSSETS	17	KG	0.006
16	WASHERS	56	KG	0.005
15	TOP PLATE	28	KG	0.006
14	BRACE PLATE	530	KG	0.006
13	SKIRT SECTION-IV	226	KG	0.001
12	SKIRT SECTION-III	233	KG	0.001
11	SKIRT SECTION-II	183	KG	0.001
10	SKIRT SECTION-I	170	KG	0.001
09	SKIRT SECTION-I	6	KG	0.001
08	SKIRT SECTION-IV	1165	KG	0.001
07	SKIRT SECTION-IV	1351	KG	0.001
06	SKIRT SECTION-IV	978	KG	0.001
05	SKIRT SECTION-IV	1397	KG	0.001
04	SKIRT SECTION-II	931	KG	0.001
03	SKIRT SECTION-I	1210	KG	0.001
02	TOP SHEET DISHED END	992	KG	0.005
01	20 THK (NON.) x ID. 2300	992	KG	0.005



NO.	DESCRIPTION	QTY	UNIT	WEIGHT
15	LIFTING LUG	1	KG	0.005
14	SKIRT SECTION-IV	226	KG	0.001
13	SKIRT SECTION-III	233	KG	0.001
12	SKIRT SECTION-II	183	KG	0.001
11	SKIRT SECTION-I	170	KG	0.001
10	SKIRT SECTION-I	6	KG	0.001
09	SKIRT SECTION-IV	1165	KG	0.001
08	SKIRT SECTION-IV	1351	KG	0.001
07	SKIRT SECTION-IV	978	KG	0.001
06	SKIRT SECTION-IV	1397	KG	0.001
05	SKIRT SECTION-II	931	KG	0.001
04	SKIRT SECTION-I	1210	KG	0.001
03	SKIRT SECTION-I	992	KG	0.005
02	TOP SHEET DISHED END	992	KG	0.005
01	20 THK (NON.) x ID. 2300	992	KG	0.005



NO.	DESCRIPTION	QTY	UNIT	WEIGHT
18	TAILING LUG	1	KG	0.005
17	SKIRT SECTION-IV	226	KG	0.001
16	SKIRT SECTION-III	233	KG	0.001
15	SKIRT SECTION-II	183	KG	0.001
14	SKIRT SECTION-I	170	KG	0.001
13	SKIRT SECTION-I	6	KG	0.001
12	SKIRT SECTION-IV	1165	KG	0.001
11	SKIRT SECTION-IV	1351	KG	0.001
10	SKIRT SECTION-IV	978	KG	0.001
09	SKIRT SECTION-IV	1397	KG	0.001
08	SKIRT SECTION-II	931	KG	0.001
07	SKIRT SECTION-I	1210	KG	0.001
06	SKIRT SECTION-I	992	KG	0.005
05	SKIRT SECTION-I	992	KG	0.005

REV.	DATE	CHD/APPD	ZONE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

INVENTORY NO	SIGN. AND DATE	REF. DRG. NO.	COMPUTER FILE NAME

DEPT.	UNTD. DMS.	SCALE	WEIGHT (KG) REF. TO ASSY. DRG.
CHD/APPD	CHD/APPD	1:10	-N.A.-

TITLE	CARD CODE	BHEL DRG. NO.	NO. OF SHEETS
ASSEMBLY DETAIL OF DEGRASSING CONTRACTOR 088-C-001	088552-C-2889953-PAE-A103-001	1-CL-010-U0215	2

CLIENT	INDIAN OIL CORPORATION LIMITED
PROJECT	PARADIP REFINERY PROJECT
CONSULTANT	TECHNIP INDIA LIMITED

DOCUMENT CATEGORY	DOCUMENT REVIEW STATUS (BY CLIENT)
(USE 'X' MARK)	
APPROVAL	
REVIEW	
INFORMATION	

PROJECT	525 TPD STANDBY SRU PROJECT
CLIENT	IOCL PARADIP REFINERY, ODISHA, INDIA
CONSULTANT	INDIAN OIL CORPORATION LIMITED

DATE	NO. OF SHEETS
11.01.21	1

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY

SECTIONAL ELEVATION

SKIRT BASE DETAIL

TAILING LUG DETAILS

LIFTING LUG DETAILS

DETAIL OF CONE SECTION-I WITH ALLOWANCES

DETAIL OF CONE SECTION-IV WITH ALLOWANCES

DEVELOPMENT OF SEGMENT FOR CONE SEC-IV (FOR ONE SEGMENT ONLY.)

DETAIL OF CONE SECTION-III WITH ALLOWANCES

DEVELOPMENT OF SEGMENT FOR CONE SEC-III (FOR ONE SEGMENT ONLY.)

DETAIL OF CONE SECTION-I WITH ALLOWANCES

DEVELOPMENT OF SEGMENT FOR CONE SEC-I (FOR ONE SEGMENT ONLY.)

DETAIL OF CONE SECTION-II WITH ALLOWANCES

DEVELOPMENT OF SEGMENT FOR CONE SEC-II (FOR ONE SEGMENT ONLY.)



TOTAL WEIGHT= 16.546 KGS.








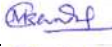
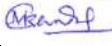
ENGINEERS INDIA LIMITED
NEW DELHI

BHARAT HEAVY ELECTRICALS LTD.
HYDRABAD

INDIAN OIL CORPORATION LIMITED
PARADIP REFINERY PROJECT
PARADIP, ODISHA

DOCUMENT CATEGORY	DOCUMENT REVIEW STATUS (BY CLIENT)
(USE "X" MARK) <input type="checkbox"/> INFORMATION <input checked="" type="checkbox"/> APPROVAL <input type="checkbox"/> REVIEW	<div style="border: 1px solid black; padding: 5px; width: fit-content;">  CONTRACTOR DOCUMENT REVIEW <input type="checkbox"/> 1 - NOT APPROVED/ RESUBMIT <input checked="" type="checkbox"/> 2 - REVIEWED / APPROVED WITH COMMENTS <input type="checkbox"/> 3 - REVIEWED/ APPROVED (NO COMMENTS) <small>THIS REVIEW / APPROVAL DOES NOT ABSOLVE THE SUPPLIER / CONTRACTOR OF THEIR CONTRACTUAL OBLIGATIONS / RESPONSIBILITIES</small> </div> <div style="text-align: right; margin-top: 10px;">  <p>Kajamoinudeen MS 2022.02.16 19:35:55 +05'30'</p> </div>

Ensure all the requirements given in 080557C-000-ITP-0510-001 are complied.

0	30.09.21	ISSUED FOR APPROVAL	P. Gopi Kishore	Amiya Krishna Mandal	
REV	DATE	DETAILS OF REVISION	PREPARED	CHECKED	APPROVED
CLIENT	 IndianOil	INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT PARADIP ODISHA			
CONSULTANT			TECHNIP ENERGIES		
PROJECT	525 TPD STANDBY SRU PROJECT IOCL PARADIP REFINERY, ODISHA, INDIA				
ESC					
	BHEL VISAKHAPATNAM	NAME	SIGN		
		DRN	P. Gopi Kishore		
		CHD	A.K Mandal		
DEPT. QUALITY	CODE	APPD	A.K Mandal		
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company		TITLE: Quality Assurance Plan for Degassing Contactor (Item No. 088-C-001)			
		BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001			REV
		CUST. DRG/ DOC NO. 080557C-26899053-PVE-B1002-001			00
		SHT NO. 01	NO. OF SHT. 12		



MANUFACTURER'S
NAME & ADDRESS
BHEL-
VISAKHAPATNAM
OR APPROVED SUB-
CONTRACTORS

QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR

Item: **Degassing Contactor**
(Item No. 088-C-001)

QAP No: CQP 2521 Rev 0
Date: 30.09.2021

Project: 525 TPD Stand by SRU Project.
IOCL Paradip Refinery, Odisha.

Page 1 of 11

Customer: M/s IOCL, Paradip
Customer PO: T720U00023 Dt.19-03-2021
BHEL, Vizag Sale Order No: 2443
BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001
CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001

Code of Construction: ASME Section VIII Div.1, Edition 2019

Sl. No.	Item Description	Tag / Item Number
1.	Degassing Contactor	088-C-001

P. Gopi Kishore/Mgr/QA/BHEL


A.K. Mandal/AGM/Q & BE /BHEL

Prepared By

Reviewed By


Approved by Technip

Approved by EIL

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR		Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-268	
	Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.	Page 2 of 11	Include "PMC" and "Owner" scope also.


SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		
1.0	Design & Drawings approval	ASME Sec VIII Div.1 Ed 2019, MDS	Approved Drawings & Calculations	ASME Sec VIII Div.1 Ed 2019	Approved Drawings	-	H	H	
2.0	Inspection & Test Plan	ASME Sec VIII Div.1 Ed 2019 & Approved Drawings, PR	Documents & inspection stages	ASME Sec VIII Div.1 Ed 2019 & Approved Drg & PR	QAP/ITP	-	H	H	
3.0	Review of Procedures								
3.1	All Manufacturing, Test procedures (NDE, Surface Preparation & Painting, Hydro static test , Forming & Heat Treatment etc., as applicable)	ASME SEC.V, ASME Sec IX & Sec VIII Div.1 1 Ed 2019, PR, APPROVED DRAWING, PR Specifications.	Compliance to ASME CODES & PR	ASME SEC.V, ASME Sec IX & Sec VIII Div.1 1 Ed 2019, PR, APPROVED DRAWING	Procedures	-	H	R	
3.2	Welding Process	WPS/PQR/WPQ	Compliance to ASME CODES & PR.	ASME SEC.V, ASME Sec IX & Sec VIII Div.1 1 Ed 2019, PR, APPROVED DRAWING	WPS/PQR/ WPQ	-	H	R / W	R-for existing; W-for New.

ADD
 PMI procedure
 Pickling and
 Passivation
 Procedure

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 3 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		


ADD
Pre-Inspection Meeting - Hold for TPIA

4.0	Raw materials								
4.1	Plates, Pipes, Fasteners, Forgings & Fittings at sourcing locations	Approved Drawings & Purchase Order, PR	As per PR and ASME Sec IIA Ed 2019	As per PR and ASME Sec IIA Ed 2019	Test Certificates	-	H	R	
4.2	Raw materials after receipt								
4.2.1	Plates for shells, PTC and dished ends, All parts welded to Pr parts + All process wetted parts	Approved Drawings & Purchase Order, PR	As per PR and ASME Sec IIA Ed 2019	As per PR and ASME Sec IIA Ed 2019	Test Certificates	-	H	H	
4.2.2	Nozzles, forgings, pipes & flanges, and Fittings.	Approved Drawings & Purchase Order	As per TDC and ASME Sec IIA Ed 2019 & PR	As per TDC and ASME Sec IIA Ed 2019 & PR	Test Certificates	-	H	H	
4.2.3	Non-Pressure parts	Approved Drawings & Purchase Order	As per material specification	As per material specification	Test Certificates	-	H	R	
4.2.4	Welding consumables	Purchase Order	As per ASME Sec IIC Ed 2019 & PR	As per ASME Sec IIC Ed 2019 & PR	Test Certificates	-	H	R	
4.2.5	Fasteners and Gaskets	Approved Drawings & Purchase Order	As per TDC and ASME Sec IIA Ed 2019	As per TDC and ASME Sec IIA Ed 2019	Test Certificates	-	H	R	
4.2.6	Base Ring Template (as applicable)	Approved Drawings & Purchase Order	As per TDC and ASME Sec IIA Ed 2019	As per TDC and ASME Sec IIA Ed 2019	Test Certificates	P	H	R	IRN by TPIA based on review of internal QC Records.

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 4 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

5.0	Fabrication of Dished ends								
5.1	Transfer of marking and heat number	As per Material test certificates	Heat no and material specification	Approved drawing	-	P	H	R	
5.2	Plate Marking, Cutting, Weld Edge Preparation	Drawing	Dimensions	Drawing	Inspection Report	P	H	R	
5.3	DPT of Weld Edges & Fit Up Clearance for L-seam	Drawing	Detection of flaws & Offset	Approved PT Procedure	Inspection Report	P	H	RW	
5.2	Welding of L-seam along with PTC	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	W	
5.4	100 % PT on chipped back L-seam weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	RW	
5.5	Weld Visual Inspection before RT	ASME Sec VIII Div. 1	Weld Visual	Approved drawing	Inspection Report	P	H	RW	
5.6	100 % RT of completed L-Seam weld	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	
5.7	Forming of dished end	Approved Drawings, ASME Sec VIII Div. 1	Visual & Dimensional, Template check	Approved Drawings	Dimension Report	P	H	-	
5.8	Heat Treatment (along with PTC) as applicable	ASME Sec VIII Div. 1 & Drawing	Time & Temperature	Approved heat treatment procedure	HT Chart / Report	P	H	R	


Check this step as the material involved is Stainless Steel

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR		Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021	
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001	
Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 5 of 5		DOC NO. : 080557C-26899053-PVE-B1002-001	

Delete this note as the drawing do not show crown and petal construction

SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE CRITERIA	INSPECTION POINTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		


5.9	100 % PT of knuckle area inside & outside including welds and WEP (Note-2)	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
5.10	100% RT of completed L-Seam weld	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	
5.11	Visual & Final Dimensions including Dished end minimum thickness, profile, roundness, ovality checking with Template etc.,	Approved Drawing ASME Sec VIII Div. 1	Dimensions	Approved Drawing	Dimension Report	P	H	W \$	\$ Trial Assembly and fit up in case of crown & petal construction.
6.0	Fabrication of Main shell along with PTC as applicable								
6.1	Plate Marking, Cutting, Weld Edge Preparation	Drawing	Dimensions	Drawing	Inspection Report	P	H	R	
6.2	Shell rolling	Drawing	Dimensions	Drawing	IR	P	H	R	
6.3	DPT of Weld Edges & Fit Up Clearance for L-seam	Drawing	Detection of flaws & Offset	Approved PT Procedure	Inspection Report	P	H	RW	
6.4	Welding of L-Seam along with PTC	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	W	
6.5	100 % PT chipped back LS weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
6.6	Weld Visual Inspection before RT	ASME Sec VIII Div. 1	Weld Visual	Approved drawing	Inspection Report	P	H	RW	
6.7	100 % DPT of full Weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	RW	
6.8	RT of completed LS weld	Approved drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001			
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 6 of 11		


SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

7.0	Shell to Shell to Circular seam fabrication								
7.1	Weld edge preparation	Drawing	Dimensions	Drawing	IR	P	H	R	
7.2	DPT of Weld Edges & Fit Up Clearance for C-seam	Drawing	Detection of flaws & Offset	Approved PT Procedure	Inspection Report	P	H	RW	
7.3	Welding of C-Seam	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	R	
7.4	100 % PT chipped back CS weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
7.5	Weld Visual Inspection before RT	ASME Sec VIII Div. 1	Weld Visual	Approved drawing	Insp. Report	P	H	RW	
7.6	100 % DPT of full Weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	RW	
7.7	RT of completed CS weld	Approved drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	
8.0	Shell to Dished end circular seam fabrication								
8.1	Weld edge preparation	Drawing	Dimensions	Drawing	IR	P	H	R	
8.2	DPT of Weld Edges & Fit Up Clearance for C-seam	Drawing	Detection of flaws & Offset	Approved PT Procedure	Inspection Report	P	H	RW	
8.3	Welding of C-Seam	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	R	
8.4	100 % PT chipped back CS weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
8.5	Weld Visual Inspection before RT	ASME Sec VIII Div. 1	Weld Visual	Approved drawing	Insp. Report	P	H	RW	
8.6	100 % DPT of full Weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	RW	
8.7	RT of completed CS weld	Approved drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	


No CS welding involved as this vessel is SS construction

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 7 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		


9.0	Fabrication of Nozzle Assemblies								
9.1	Fit up & welding of C-seams of pipes/ elbows/ flanges / nozzle neck, internal pipes	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	R	Functional test for Davit.
9.2	RT of completed CS weld & L-seam of rolled nozzles	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	
10.0	Nozzle to shell/dished end fabrication								
10.1	Marking and openings of nozzles on shells	Approved Drawings	Location and orientation	Approved Drawings	-	P	H	R	
10.2	PT on gas cut edges	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
10.3	Fit up & welding of nozzles on shells or dished ends	Approved Drawings	Offset & weld geometry	Approved drawing & WPS	Fit up report	P	H	RW	
10.4	Pneumatic test on RF Pads	Approved Drawing	Detection of leakage	Approved Drawing	Approved Drawing	P	H	RW	
10.5	100 % PT on chipped back CS weld	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	R	
10.6	100 % UT for nozzle to shells and nozzle to pipe	Approved Drawings	Detection of flaws	Approved UT Procedure	UT Report	P	H	RW	

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 8 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

11.0	Steam Coil fabrication								
11.1	Assembly and Welding of coil to coil joints	Approved Drawings	Location, Dimension and orientation	Approved Drawings	Inspection Report	P	H	RW	
11.2	RT of coil to coil joints	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films & Report	P	H	R	
11.3	Hydro testing of coil assembly followed by drying & cleaning as applicable	Approved Drawings	No pressure drop or leakage	Inspection Report	Inspection Report	P	H	H	
11.4	Assembly and Welding of coil to nozzle hook-up joint.	Approved Drawings	Location & Dimensions	Inspection Report	Inspection Report	P	H	RW	
11.5	RT of coil to nozzle hook-up joint.	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films & Report	P	H	R	
11.6	Assembly and Welding of coil supporting arrangement to Vessel weld joints	Approved Drawings	Location, Dimension and orientation	Approved Drawings	Inspection Report	P	H	RW	
11.7	NDE of coil supporting arrangement to Vessel weld joints	Approved Drawings	Detection of flaws	Approved NDE Procedure	NDE Report	P	H	R	

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 9 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

Skirt fabrication, assembly and Final Inspection									
12.0									
12.1	Fit up & welding of Skirt Segments/sections	Approved Drawings	Dimensions & weld geometry	Approved drawing & WPS	Fit up report	P	H	RW	
12.2	RT of C-seam & L-seam	Approved Drawings	Detection of flaws	Approved RT Procedure	RT Films	P	H	R	
12.3	100 % PT of welds (including root and final welds as applicable)	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	RW	
12.4	Dimensional inspection of Skirt	Approved Drawings	Dimensions	Approved Drawings	Report	P	H	W	
12.5	Marking of Internal and external cleats, supports	Approved Drawings	Dimensions	Approved Drawings	Report	P	H	RW	
13.0	Pneumatic test on RF Pads	Approved Drawing	Detection of leakage	Approved Drawing	Approved Drawing	P	H	RW	
14.0	Visual & Final dimensional inspection after welding of Skirt with Vessel	Approved Drawings	Dimensions, orientations	Approved Drawings	Dimensional report	P	H	H	
14.1	Internals inside the column	Approved Drawings	Dimension, Orientation	Approved Drawings	Dimensional report	P	H	H#	# TPIA to give clearance after checking welding / bolting of Demister/Grid, Support Rings, Gratings, Support beams / members etc.

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR		Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001			
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 10 of 11	


SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

15.0	Testing of test coupons (PTC)	ASME Sec VIII Div. 1Ed 2019	Hardness	ASME Sec VIII Div. 1Ed 2019	Test Reports	P	H	R	
16.0	100% UT on pressure retaining weld	Approved Drawings	Detection of flaws	Approved UT Procedures	UT Report	P	H	W	
17.0	Spot PT on internal & external welds.	Approved Drawings	Detection of flaws	Approved PT Procedure	PT Report	P	H	W	
18.0	Final dimensional inspection	Approved Drawings	Dimensions, orientations	Approved Drawings	Dimensional report	P	H	H	
19.0	Shop Hydro test & Draining, drying, inside cleaning.	Approved Drawings	No pressure drop or leaks	Approved hydro test procedure; draining & drying procedure	Test report	P	H	H	
20.0	Pickling & passivation and further cleaning and drying	Approved Drawings	Visual examination	Approved Drawings & PR	Report	P	H	RW	
21.0	Issue of IRN (including spares as applicable) & clearance for dispatch	Approved drawings	All stages as per this approved ITP	-	Release Note	-	-	H	
22.0	Manufacturer's Data Report & Final documentation	Approved drawings & this ITP	Completeness	Approved drawings & this ITP	Reports	-	H	H	QAP sign off by TPIA

Nitrogen Preservation

ADD Hydrostatic test for Nozzle Jacket chamber - Hold for TPIA

ADD PMI of Materials and Welds - W for TPIA

	MANUFACTURER'S NAME & ADDRESS BHEL-VISAKHAPATNAM OR APPROVED SUB-CONTRACTORS	QUALITY ASSURANCE PLAN FOR DEGASSING CONTACTOR			Customer: M/s IOCL, Paradip Customer PO: T720U00023 Dt.19-03-2021 BHEL, Vizag Sale Order No: 2443 BHEL/EIL DRG/DOC NO.: 2443--QC -DCI-001 CUST. DRG/ DOC NO. : 080557C-26899053-PVE-B1002-001				
		Item: Degassing Contactor (Item No. 088-C-001)	QAP No: CQP 2521 Rev 0 Date: 30.09.2021	Project: 525 TPD Stand by SRU Project. IOCL Paradip Refinery, Odisha.		Page 11 of 11			
SL NO	ACTIVITY	REFERENCE DOCUMENT	CHARACTERISITIC TO BE VERIFIED	ACCEPTANCE NORMS	VERIFYING DOCUMENTS /RECORDS	BHEL		TPIA	Remarks
						Prod	Qua		

Notes:

- 1) Extent of RT will be in line to approved drawings.
- 2) In case, the bevel edges are made with gas cutting, the edges shall be 100 % PT tested.

Legends:

P: Perform	WPS: Welding procedure specification	DFT: Dry film thickness	LS: Longitudinal Seam welding
R: Review	WPQ; Welder performance Qualification	HT Chart: Heat Treatment chart	CS-Circular Seam welding
H: Hold	RT: Radiographic testing	PR-Purchase Requisition	
W: Witness	UT: Ultrasonic testing	Prod: Production	
RW: Random Witness	PT: Dye penetrant testing	Qua: Quality	
IR-Inspection Report	MPT: Magnetic particle testing	IRN: Inspection release note issued by TPIA	