

UN-PRICE BID

S.No	Drwg.No	Component Description	QTY in Nos	Price in (Rs./Pc)	Total Price (Rs.)
Item-1	31750501469-00	HP HEATER TUBE SHEET 9A/9B	2		
Item-2	31750501459-00	HP HEATER TUBE SHEET 8A/8B	2		
Item-3	31750102750-01	HP HEATER TUBE SHEET 7A/7B	2		
Item-4	31750501418-00	HP HEATER TUBE SHEET	1		
	31750501415-00	HP HEATER TUBE SHEET	1		
			8		

SPECIAL CONDITIONS OF CONTRACT (SCC) ENQ. NO. E9AWS00012,

DUE DATED: 08.04.2023

SI.NO	DESCRIPTION	BHEL REQUIREMENT	VENDOR'S CONFIRMATION
1	TWO-PART BID	Offer shall be submitted in two part bid system against this enquiry. Part-I shall consist of pre-qualification criteria (PQC) Techno-Commercial bid with all required documents and Price shall be fed in Part-II.	
1.a	TECHNO-COMMERCIAL BID	<p>Techno-Commercial Bid shall essentially consist of:</p> <ul style="list-style-type: none"> (i) Bidder's confirmation of BHEL drawing/Specification & technological scope. (ii) Bidder's confirmation of BHEL Quality plan. (Approved QAP provided with tender documents) (iii) Duly filled in signed and stamped Special Contract Conditions (SCC). (iv) Duly filled in signed and stamped Instructions to Bidder (ITB). (v) Duly filled in and completed in all respect ITB ANNEXURE-II (Framework Confidentiality Agreement cum Underatking) (vi) Udyam Registration Certificate for MSE vendors. (vii) Duly filled in, signed and stamped Pre-qualification criteria (PQC) alongwith supporting documents. (viii) Duly signed and stamped Un-price bid. <p>All the above documents shall be duly authenticated by signature and official seal of the company.</p> <p><u>Note:</u> Bid shall be complete in all respects including all the documents / information required for techno-commercial evaluation. Incomplete offers shall be liable for rejection.</p>	
1.b	PRICE BID	<p>Vendor shall quote Rate "Rs/Pc" for each item.</p> <p>The rate quoted shall be inclusive of conversion charges, all consumables, handling charges and dispatch of finished jobs to BHEL (HPEP) Stores. Quoted price shall be on firm basis. No revision of prices will be entertained after the tender is opened.</p>	
2	DETAILS OF JOB	Machining of HP Heater Tube Sheets as per BHEL drawings/drawing change advise (DCA) and technological scope/Quality plan with BHEL materials & in line with NIT Terms & Conditions	
3	QUANTITY	08 Numbers (With 05 different drawings)	
4	DELIVERY	Based on readiness and priority , BHEL may issue one tubesheet or two tubesheets together. Depending on the outcome of the tender, those two tubesheets may be same size or combination of sizes. In either case, the delivery schedule shall be 45 days from the date of receipt of respective tubesheets at vendor works. Further consignment of tubesheet will be sent after a minimum time gap of 2 weeks. In no case , each consignment will contain more than 2 tubesheets. Offers with delivery period of more than 45 days will attract loading at the rate of 0.5% per week. BHEL reserves the right of not considering offers with delivery schedule beyond 70 days.	
5	SCOPE OF MATERIAL SUPPLY AND TRANSPORTATION CHARGES	Transportation of Tube Sheets from BHEL Hyd to vendor works is in BHEL Hyderabad scope and transportation of finished components (Drilled Tube Sheets) from vendor works to BHEL Hyd is in vendor scope.	

6	PAYMENT TERM	<p>100% payment will be made within 45/60/90 (MSE/Medium Enterprise/Non MSME) days from the date of receipt of finished items at our works against GR and material accountal.</p> <p>Note:</p> <p>A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made on acceptance of Material.</p> <p>B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL</p> <p>C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less.</p> <p>D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment.</p> <p>E. In case of packaged items, 10% of supply value will be retained till completion of total supplies.</p> <p>F. Bidders to comply with clause 11 on GST requirements</p>	
7	VALIDITY OF OFFER	<p>Your Offers must be kept valid for a period of 90 days from the date of part-i bid opening and in the event of our acceptance of your offer the prices finalized should remain firm for ""one year"" from the date of finalisation of tender(approval of PO note).</p>	
8	PENALTY	<p>In the event of delay in supply of goods, a penalty of 0.5% per week or part there of shall be levied on the undelivered portion subject to a maximum of 10% of the order value. Reckoning date for penalty is c-note date.</p>	
9	TOOLS	<p>Tools,gauges,jigs & fixtures and instruments will not be supplied by BHEL</p>	
10	REJECTION OF CONDITIONAL OFFERS	<p>Conditional offers if any submitted by the firms will not be acceptable.</p>	
11	MODE OF TENDER FINALIZATION	<p>“BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of 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.”</p> <p>Bidders to provide the details of the representative who will be participating in the RA. i.e. (Name, Phone No and email ID.)</p>	
12	RISK PURCHASE	<p>In case of abnormal delays (beyond the maximum late delivery period as per Penalty clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / equivalent market price at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. Nonperformance of contract attracts penal provisions inline with BHEL's Suspension of Business dealings</p>	

13	QUANTITY DISTRIBUTION	There will be no quantity distribution. Total quantity will be ordered on L1 vendor for respective items.	
14	SCRAP	There will be no scrap cost deduction at BHEL end at the time of material accountal. Thus, bidder to quote accordingly.	
15	BASIS OF TENDER EVALUATION	Tender will be evaluated on itemwise basis.	
16	FINANCIAL STANDING	Vendor to submit annual Financial Turnover during the Past 3 Years along with copy of 3 years Audited Balance Sheet.	
17	INSPECTION	Stage and final inspection shall be carried out by BHEL QC/BHEL TPIA and or Customer (as applicable).Tests & Inspection shall be in line with drawing and technological scope/approved quality plan. Vendor shall raise inspection call accordingly.	
18	DRAWINGS	a)These drawings are the property of BHEL. Copying or circulating or misuse of these drawings or parts of it by vendor is not permitted and will have to face legal consequences if found so. b)Assembly drawings shall be provided along with enquiry. However complete drawings will be given at the time of placement of order.	
19	CLARIFICATION	If any further clarification is required kindly depute your representative for discussion before submitting your offer. Contact phone no: 040-23183555 mob: 7799181180/9490758635. Mail ID: mithlesh@bhel.in , marisa@bhel.in	
20	GUARANTEE	Equipment shall be guaranteed against all manufacturing defects for a period of 24 months after supply or 18 months after commissioning whichever is later. Defects noticed shall be replaced / rectified at free of cost by the supplier.	
21	LOADING/UNLOADING FACILITIES	You must have adequate material handling facilities for safe unloading of raw materials/loading of finished products.	
22	INSPECTION	The goods will be cleared for dispatch on provisional basis. On receipt of the goods at our BHEL shop/site, the goods shall be subjected to inspection. And any defects noticed during assembly, testing or use , not withstanding the same may have been passed, certified and paid for – is to be rectified by the subcontractor, in whole or in part, as the case may require, at their own cost. In the event of his failure to do so with in reasonable period, BHEL will rectify or remove and re-execute the work at the risk & cost of subcontractor. The cost of rework or rejection, and any cost of freight incidental to such work will be to the subcontractor's account. Thus, Our acceptability of the goods shall be final.	
23	CONSEQUENCES OF REJECTION	In the event of any rejection arising due to the workmanship or due to mishandling of assemblies or components or any kind of damage which renders the assemblies unfit for use, the cost of each assembly shall be recovered along with taxes & duties as per BHEL norms from the bank guarantee being furnished by vendor.	
24	RIGHT OF CANCELLATION/QTY REDUCTION	BHEL shall have the right to cancel the contract wholly or in part by reducing the number of item quantity in case it is obliged to do so on account of any decline, diminution, curtailment or stoppage of business.	

25	CONSEQUENCE OF FAILURE TO EXECUTE THE ORDER	After placing PO, in case vendor fails to execute the order due to reasons attributable to vendor, it is vendor's obligation to return the raw material to BHEL, failing which BHEL will bring back material as per transport contract and the amount will be taken/deducted from available bills of vendor. Further action will be initiated on vendor for non performance of contract as per BHEL norms.	
26	PACKING	For any loss or damages arising out of improper packing and dispatch, the vendor will be held responsible	
27	TAXES & DUTIES	Applicable taxes and duties to be mentioned in the offer.	
28	BANK GUARANTEE	For material valuing upto Rs. 50,000/- per SCO no BG is required. For material valuing more than Rs. 50,000/- per SCO , 10% of the material value shall be provided as BG specific to enquiry with sufficient validity minimum six months or any other financial instrument as specified by BHEL without which PO will not be released.	
29	DISCRETION OF ACCEPTANCE	BHEL reserves right to accept or reject any tender or a portion thereof without assigning any reason whatsoever. BHEL has the right to refloat or short-close the Tender if L1 price is not the lowest acceptable price, or for other reasons.	
30	MSE CLAUSE	"MSE suppliers can avail the intended benefits only if they submit along with the offer, Udyam Registration Certificate. Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through E-Procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted Officer."	
31	INDEMNITY	Subcontractors shall indemnify BHEL against the following: (A)All claims for injury or damage caused by the sub contractor's negligence or the negligence of subcontractor's employees or arising from any defect in the goods supplied or on the work carried out by the subcontractor's. (B)All claims for injury to the subcontractor employees or agents employed whilst on BHEL premises.	
32	GENERAL	Any change in the address/reduction in qualified workplaces/ownership of the subcontractor's unit during the operation of the contract will have to be made only after getting the specific written approval from BHEL. Any deviation found later will be dealt with as deemed fit, including cancellation of registration.	
33	ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP	If any work has been executed with unsound, imperfect or bad workmanship or with materials of inferior quality, the Sub-contractor shall on demand in writing from BHEL specifying the work, material/articles complained of, notwithstanding that the same may have been passed, certified and paid for, forthwith, rectify the work so specified in whole or in part as the case may require, at their own cost and in the event of his failure to do so within reasonable period, BHEL will rectify or remove and re-execute the work at the risk and cost of the Sub-contractor.	

34	CONFLICT OF INTEREST	<p>A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder, found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <p>a) they have controlling partner (s) in common; or b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or c) they have the same legal representative/agent for purposes of this bid; or d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; or f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following: 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal; or g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.</p>	
<p>Note: The above terms and conditions are applicable for this tender. All the remaining terms and conditions are as per ITB.</p>			

VENDOR'S SIGNATURE WITH COMPANY SEAL



(Attachment to Enquiry No. E9AWS00012 Due on Date 08.04.2023 for submission by 11.00 hrs to open from 14.00 hrs.)		
INSTRUCTIONS TO BIDDER (ITB)		
NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".		
Sl. No.	DETAILED TERMS & CONDITIONS	BIDDER RESPONSE (YES/NO)
1	SCOPE OF SUPPLY:	
	Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer.	
2	DEFINITIONS	
A	'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.	
B	'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder.	
C	'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB.	
D	'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order.	
E	'Goods/Material' shall include Works and Services which are incidental or consequential to supply.	
3	GENERAL INSTRUCTIONS:	
A	Mode of submission of offer shall be as indicated in SCC	Non Deviatable
B	The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.	Non Deviatable
C	Incomplete offers are liable for rejection.	Non Deviatable
D	Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations.	Non Deviatable
E	Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation.	Non Deviatable
F	Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelops shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.	Non Deviatable
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.	Non Deviatable
H	Unsolicited offers will not be considered.	Non Deviatable
4	OTHER PARTICULARS (Please indicate applicable data)	



A	Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase).		
B	Name of the Port of loading and Port of Discharge (applicable to imports).		
5	BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER:		
A	For Single Part Bids:		
	The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, Vendor Complex, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at vendor complex on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID pricebid_hyd@bhel.in only as an attachment.		Non Deviatable
B.	For two-Part Bids:		
i	<p>The offer is to be submitted in two parts viz., Techno-commercial Bid - (Part-I), with all technical specification & scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date AND Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) & due date.</p> <p>Both the above covers (Part –I & II) shall be kept in a Third cover superscribing Enquiry no. & due date.</p> <p>Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID.</p> <p>In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection.</p> <p>All techno commercial terms & conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.</p>		Non Deviatable
ii	The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted.		
iii	Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices.		Non Deviatable
C	Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date.		Non Deviatable
6	DELIVERY TERMS		
A	Indigenous Purchase		
	<p>a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination.</p> <p>b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works. i. Incase specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination. ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.</p>		
B.	Imports		
	The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea.		
7	Documentation for Payment		
A	Indigenous Purchase		



<p>Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site</p> <ol style="list-style-type: none">Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)Packing List - clearly showing number of packages, gross weight and net weight.Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC)Insurance intimation/declaration certificatePre-dispatch Inspection report /Third Party Inspection Certificates.Consignee copy of LR signed & stamped by Customer/Site representative for DD Itemse-waybillAny other documents as specified in SCC. <p>Softcopies of the above documents shall be uploaded in Pradan portal https://hpep.bhel.com/mm immediately after dispatch of the material.</p>		Non Deviatable
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B	<p>Imports</p> <p>i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery. ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (https://hpep.bhel.com/mm) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.</p> <p>iii) AWB/BL must contain the information of BHEL GST no., and PAN no.</p> <p>iv) Air Shipments: Bidder shall ensure the following</p> <p>a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC).</p> <p>b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier.</p> <p>c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings" Cargo handed over in sound condition for Air freighting". Note: Warehouse receipt will not be considered for penalty calculations.</p> <p>d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment.</p> <p>e) Following dimensions of single package may be noted.</p> <p style="padding-left: 20px;">i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63"</p> <p>ii). Maximum weight of the cargo -- 3.5 MT. If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder.</p> <p>f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support.</p> <p>v) Sea Shipments:- bidder shall ensure the following</p> <p>a). Port of discharge -- Nhavaseva/Mumbai/Chennai.</p> <p>b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS.</p> <p>c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt.</p> <p>d). If the material cannot be containerised in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder.</p> <p>e). For CIP shipments</p> <p>1. In case of FCL shipments, Detention free period must be 14 days.</p> <p>2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment.</p> <p>3. No charges for the services rendered till place of destination will be payable by BHEL. Incase liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account.</p> <p>4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill.</p> <p>5. bidder must insure the cargo for 110% of material value including the freight amount.</p> <p>(vi). Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT.</p> <p>If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under:</p> <p>1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector</p> <p>A. For FOB Sea Consignments:-</p> <p>Penalty for late submission / negotiation of documents beyond 14 days shall be as under:</p> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Sl. no</th> <th rowspan="2">Period (From Date of Bill of Lading)</th> <th colspan="3">Recoverable Charges</th> </tr> <tr> <th>LCL per week/ Break bulk cargo per day</th> <th>20FT Container</th> <th>40FT Container</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">i</td> <td style="text-align: center;">Upto 14th day</td> <td style="text-align: center;">Nil</td> <td style="text-align: center;">Nil</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td style="text-align: center;">ii</td> <td style="text-align: center;">15th day onward</td> <td style="text-align: center;">USD 10</td> <td style="text-align: center;">USD 110</td> <td style="text-align: center;">USD 200</td> </tr> </tbody> </table>	Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges			LCL per week/ Break bulk cargo per day	20FT Container	40FT Container	i	Upto 14th day	Nil	Nil	Nil	ii	15th day onward	USD 10	USD 110	USD 200	
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ii	15th day onward	USD 10	USD 110	USD 200																



	<p>B. For CIP Sea Shipments: - Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard. In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges.</p> <p>(vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis.</p> <p>(viii) Bidder shall provide package details including number of packages, gross weight, net weight etc.</p> <p>(ix) The bidder shall provide the following documents at the time of submission of offer: a) No Business Connection in India declaration issued by the bidder as per the format specified. (or) b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified. (ii) Tax Residence Certificate issued by the bidder's tax authorities. (iii) Form 10F, as attached in Annexure V, to be issued by the bidder. c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.</p>		
8	Delivery Schedule		
	<p>The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/ Hold on payment.</p>		Non Deviatable
9	Pricing Terms		
	<p>Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.</p>	Non Deviatable	execution of
10	PRICE VALIDITY :		
	<p>Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.</p>	Non Deviatable	opening
11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)		
A	<p>Indigenous Purchase</p> <p>i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer. ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer. iii) Bidder to quote the applicable taxes in the following manner: - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services. v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated. vi) Any other taxes & duties not covered anywhere above may be indicated separately.</p> <p>Taxes deducted at source: - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax.</p>		Non Deviatable



	<p>Terms & Conditions to be complied</p> <p>1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc.</p> <p>2. Reimbursement of GST amount will be made only upon completion of the following:</p> <p>i. Bidder declaring such invoice in their GSTR-1 Return/ IFF</p> <p>ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL</p> <p>iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal.</p> <p>3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices.</p> <p>4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest.</p> <p>5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/ leviable on BHEL.</p> <p>6. Under GST regime, BHEL has to discharge GST liability on LD recovered from bidders. Hence applicable GST shall also be recoverable from bidders on LD amount. For this Tax Invoice digitally signed will be issued by BHEL indicating the respective supply invoice number. The same can be downloaded from PRADAN Portal.</p> <p>7. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal.</p> <p>8. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.</p>		
B.	<p>Foreign Purchase (Imports)</p> <p>The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price.</p> <p>Taxes deducted at source:</p> <p>a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered.</p> <p>b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.</p>		Non Deviatable
12	Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.		
A	<p>Indigenous:</p> <p>a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days</p> <p>b. Medium Enterprises - 100% Direct EFT payment within 60 days</p> <p>c. Non MSME Bidders - 100% direct EFT Payment within 90 Days Note</p> <p>A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of su of complete set of documents as per PO whichever is later. Payment will be made on acceptance Material.</p> <p>B. MSEs (covered under MSME Act) need to register and renew periodically and update the same BHEL</p> <p>C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery the amount actually paid whichever is less.</p> <p>D. Adherence to the above time schedule of payment is contingent upon Bidder complying with Gprovisions and availment of Input Tax Credit by BHEL before the date of payment.</p> <p>E. In case of packaged items, 10% of supply value will be retained till completion of total supplies. F. Bidders to comply with clause 11 on GST requirements</p>	<p>mission</p> <p>of with</p> <p>late or</p> <p>IT</p>	
B	<p>Imports:</p> <p>i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a crperiod of 60 days - Cash Against Documents (CAD)</p> <p>ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with resbank charges to respective accounts and loading of 0.50%</p> <p>iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in In Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract.</p>	<p>edit</p> <p>ective</p> <p>lian</p>	



C	Conditions for both Inland & Foreign LC: a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account. b. LC will be opened 7 working days after receipt of request along with successful pre dispatch inspection completion report / material readiness intimation with Material Test Certificate (MTC), prior to the scheduled / agreed delivery date.		Non Deviatable
D	Conditions for both Indigenous & Foreign Bidders: a. In case Bidders insist for lesser Credit period, loading of 0.60% for every 15 days reduction will be applicable. b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim. c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.		Non Deviatable
E	Wherever EMD is applicable, the EMD will be paid back to unsuccessful bidders within fifteen days after award of the contract. Successful bidder's EMD will be retained till submission of Performance Bank Guarantee (PBG). Tender Fee wherever applicable is not refundable. No interest shall be payable by BHEL on earnest money or security deposit or any money due to the contractor by BHEL.		Non Deviatable
13	Penalty clause: In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC). b. Penalty applicable for delay in documentation is as per SCC. c. Date Reckoned for Penalty - Indigenous Orders with delivery terms FOR HPEP: C Note date. - Indigenous Orders (Others): Date of e-waybill. - Imports: For CIP/CIF Orders: IGM date - Imports: For FOB Orders: AWB / BL date - Imports: For FCA/Ex Work Orders: Date of acknowledgement from Freight Forwarder. d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder. e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery. Penalty amount so determined along with applicable GST (for Indigenous orders) thereon shall be recovered. Imposition, recovery or settlement of this penalty shall not affect BHEL's right to performance, compensation and termination of the order.		
14	Excess materials supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law.		Non Deviatable
15	Rejected materials , if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials.		Non Deviatable



16	<p>Guarantee / Warranty Period: Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance.</p> <p>a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.</p> <p>b. In case erection & commissioning is involved, guarantee period shall be 12 months from the date of commissioning.</p> <p>c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment.</p> <p>The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense. A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery.</p> <p>Loading for deviation: In case warranty specified in SCC is over and above the period mentioned in b & c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.</p>	Non Deviatable
17	<p>PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC)</p> <p>In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII. Further detailing on PBG as specified in SCC. The PBG shall be for the performance of the goods and shall remain binding notwithstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.</p>	Non Deviatable
<p>NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following.</p>		
18	Evaluation and Loading Criteria:	

- i) Evaluation Currency for this tender shall be "INR".
- ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC. iii) Evaluation shall be on the basis of delivered cost, i.e. "Total Cost to BHEL" w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading). iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding.

INDIGENOUS

- a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL.
- b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value.
- c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at "Total Cost to BHEL"

IMPORTS

For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. 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.

In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at "Total Cost to BHEL":

- Import duty as applicable on the date of Part-I bid opening.

- Loading will be as per the table below

	Ex Works	FOB/FC A	CIF/CFR	CIP
Foreign Inland freight and insurance	2%			
Marine freight and marine insurance	3%	3%		
Destination Port handling charges	0.50%	0.50%	0.50%	
clearing charges & inland freight and insurance	2%	2%	2%	2%

COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL"

A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation.

B. Loading for payment terms as per clause 12 of ITB

C. Loading for deviation in Warranty & PBG as per clause 16,17.

19 Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.

20 **RIGHT OF REJECTION /NON- PLACEMENT OF PO:** BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever.

21 INTEGRITY PACT

Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder's offer will be rejected.

22 Public Procurement

A Make in India

For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time.

Proforma for self-certification for minimum local content and auditor's certification is given in Annexure III.

B Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with competent authority. GOI website <https://www.mea.gov.in/> to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV.

C Startups:

For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD.

23 Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) – Indigenous Purchase

A	<p>All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents.</p>
B	<p>In tender, MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply at least 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. Out of these 25% minimum 3% shall be earmarked for MSEs owned by women and 6.25% for MSEs owned by SC/STs who submit the relevant documents.</p>
C	<p>If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.</p>
D	<p>BHEL HPEP is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per the GOI guidelines.</p>
24	<p>Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.</p>
25	<p>ISO-9001, ISO14001 & OHSMS 45001 shall be complied.</p>
26	<p>If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines.</p>
27	<p>Risk Purchase clause: In case bidder fails/delays to supply whole or part of the ordered items or supplies defective items or fails to fulfil any other terms and conditions given in Purchase Order/Contract, BHEL has the right to terminate the order/contract or withdraw balance scope of work/supply and make the purchase of such material / services from elsewhere at the risk and cost of the defaulted bidder. The bidder is liable for the additional expenditure / difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the order/contract. Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD).</p>
28	<p>Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.</p>
29	<p>All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders.</p>
30	<p>Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL.</p>
31	<p>The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: www.bhel.com</p>
32	<p>Ordering and confirmation of order</p>
	<p>The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order.</p>
33	<p>Execution</p>
	<p>The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.</p>
34	<p>Progress Report</p>
	<p>The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (https://hpep.bhel.com/mm/). Non updation will adversely affect service rating of bidder performance.</p>
35	<p>Non-disclosure Obligations</p>

	<p>Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract.</p> <p>The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification.</p> <p>All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party.</p> <p>The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer.</p> <p>In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per Annexure- II wherever applicable.</p>
36	Inspection and Testing
A	The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery.
B	<p>Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract.</p> <p>For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract. The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with for the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.</p>
37	Quality and Condition of the Deliverables
	The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials.
38	Packaging and Dispatch
	<p>The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied.</p> <p>Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (Lx B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.</p>
39	Contract variations; Increase or decrease in the scope of supply
	<p>Buyer may vary the contracted scope during execution due to exigencies of project requirement.</p> <p>If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication.</p> <p>In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.</p>
40	Rejected/Short shipments/ warranty/guarantee replacements
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.
41	Export Administration Regulations

	If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc.
42	Force Majeure
	<p>The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions.</p> <p>Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time.</p> <p>In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL.</p> <p>In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.</p>
43	Non-waiver of Defaults
	If any individual provision of the contract is invalid, the other provisions shall not be affected.
44	Settlement of Disputes
	<p>Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final.</p> <p>Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration</p> <p>The bidder shall continue to perform the contract, pending settlement of disputes(s).</p>
45	Conciliation clause
	<p>CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB</p>
46	ARBITRATION (WITH SOLE ARBITRATOR)
	<p>Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration . Sole arbitrator to be appointed by Head of the Unit - BHEL , HPEP .</p> <p>The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.</p> <p>Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English.</p> <p>The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.</p> <p>Subject to the arbitration in terms of clause 45, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.</p> <p>Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.</p>
	ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT
	<p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE 0M No 4(1)/2013DPE(GM/FTS 1835 dated 22-05-2018</p>
47	Applicable Laws and jurisdiction of Courts
	This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.
48	BHEL-Fraud prevention policy shall be adhered to.
	<p>The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention policy displayed on BHEL Website http://www.bhel.com and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.</p> <p>List of nodal officers is hosted on BHEL Hyderabad website https://hpep.bhel.com/.</p>
49	Suspected Cartel Formation



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 .

Note: Purchase officer has to fill Annexure-I while sending enquiry

(To be executed on Non- Judicial Stamp Paper for an appropriate value.
To be stamped as an agreement)

(For Suppliers on Unit's / Division's PMD) **ANNEXURE-II**

Framework Confidentiality Agreement Cum Undertaking

This Agreement made on this the _____ day of (month) _____ 20 ____ (“Effective Date”) by and between M/s. BHARAT HEAVY ELECTRICALS LIMITED, having registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as “BHEL” or “the company”).

And

M/s. _____ (address) _____
represented by authorized representative Sri _____ (herein after referred to as the “Supplier”).

The supplier and the company may, unless the context otherwise requires, hereinafter be collectively referred to as “Parties” or singly as the “Party”.

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL / its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with contract(s) (as defined hereunder) placed or to be placed upon the supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **“Contract”** means the contract entered into with a supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
 - B. **“Effective Date”** means the date of this Agreement as mentioned in the preamble of this Agreement.
 - C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
 - D. **“Technical Information”** includes Drawings, and / or Product Standards and / or Specifications and / or Corporate / Plant Specifications and / or Technological Process Sheets and / or Technical Data Sheets and / or Jigs & Fixtures and / or Pattern & Dies and / or Special Gauges and / or Tools etc. Belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Suppliers.
 - E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the supplier under or in connection with a contract.
 - F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (Whether in terms of effectiveness or in terms of efficiency or both) of the product and / or the service to be provided by the Supplier under a Contract.
2. This Agreement shall come into force / deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the supplier; whichever is earlier.
3. **Agreement deemed to be incorporated in each contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contract has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.
4. **Ownership:**
- 4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.
 - 4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of BHEL or that of the concerned entity from whom BHEL has

obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the supplier any license or right of use of such patent, copyright or design or any other intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the contract and / or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

4.3 Neither party is obligated by or under this Agreement to purchase from or provide to the other party any service or product and that any such purchase / sale of any product and / or service by one party to the other party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.

4.4 The Supplier is / has been made well aware and acknowledges that the Technical Information being / which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.

4.5 The supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors /suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the supplier or its employees or sub-contractors / suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.

4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights / title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings / documents or other materials connected with such

Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvements in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the supplier.

5. Use and Non – Disclosure:

5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.

5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and / or service to any third party, without the prior written consent of the Company.

5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is / was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.

5.5 This Supplier undertakes and agrees not to make copies or extracts of and not to disclose to other any or all of the Technical Information in its possession, except as follows:

- (a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and nondisclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.
- (b) With the prior written consent of Company, the supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
- (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the supplier intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The Obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was / is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

- 7. The Obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of _____ years from the date when the complete Technical Information has been returned in portions on different dates, the period of _____ years will be reckoned from the date when the last portion of the Technical Information has

been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of _____ years.

8. Warranties & Undertakings:

- a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.
- b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material / documents belonging to him / it or to any other third party.
- c) The Supplier further undertakes that he / it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and / or equipment of the Company, made available to him / it, and undertakes that he / it shall hold the same as a trustee, in capacity of custodian thereof and use / utilise the same solely for the purpose of executing the contract awarded by the Company.
- d) The Supplier further undertakes that he / it shall return all the equipment and / or Technical Information as far as practicable in the same condition in which the same was made available to him / it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope of work or contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and / or Technical Information / improvement thereof. In case any such equipment and / or Technical Information or thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or improvement thereto shall continue to be governed by this Agreement.
- e) The Supplier undertakes to indemnify the Company for all the direct, indirect and / or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and / or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then

existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the forgoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 9 (f) hereinabove, the Company shall have a right to withhold, recover and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him / it by any department / office / unit/ division of the said Company.

10. Arbitration & Conciliation:

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration. Sole arbitrator to be appointed by Head of the Unit - BHEL, HPEP.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause.

The seat of arbitration shall be Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English.

The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.

Subject to the arbitration in terms of clause 46 of ITB (clause 27 of ATC GeM), the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a

professional manner except where the Contract has been terminated by either Party in terms of this Contract.

ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No 4(1)/2013DPE(GM/FTS 1835 dated 22-05-2018

CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB

11. Governing Law & Jurisdiction:

This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.

SIGNATURE WITNESSES

Name:

Address:

2

Name:

Address:

(On Company Letter Head)

FORM NO. 10F

[See sub-rule (1) of rule 21AB]

Information to be provided under sub-section (5) of section 90 or sub-section (5) of section 90A of the Income-tax Act, 1961

I..... son/daughter of Mr in the capacity of.....
(Designation) do provide the following information, relevant to the previous year **202122**
in case of for the purposes of sub-section (5) of section 90/section
90A:-

Sl.No.	Nature of information	Details
(i)	Status (individual; company, firm etc.) of the assessee	Company
(ii)	Permanent Account Number (PAN) of the assessee if allotted	
(iii)	Nationality (in the case of an individual) or Country or specified territory of incorporation or registration (in the case of others)

(iv)	Assessee's tax identification number in the country or specified territory of residence and if there is no such number, then, a unique number on the basis of which the person is identified by the Government of the country or the specified territory of which the assessee claims to be a resident
(v)	Period for which the residential status as mentioned in the certificate referred to in sub-section (4) of section 90 or sub-section (4) of section 90A is applicable	<u>2022-23</u>
(vi)	Address of the assessee in the country or territory outside India during the period for which the certificate, mentioned in (v) above, is applicable

I have obtained a certificate to in sub-section (4) of section 90 of sub-section (4) of section 90A from the Government of..... (name of country or specified territory outside India)

Signature:.....

Name:.....

Address:.....

Email ID:.....

Contact Number.....

Permanent Account Number:.....

Verification

I..... do hereby declare that to the best of my knowledge and belief what is stated above is correct complete and is truly stated. Verified today the..... day of.....

In case the M/s Bharat Heavy Electricals Limited, HPEP, Ramachandrapuram, Hyderabad is declared as an assessee in default due to any misstatement or incorrect declaration, we indemnify M/s Bharat Heavy Electricals Limited from any ensuing consequences thereunder.

Signature of the person providing the information

Place:.....

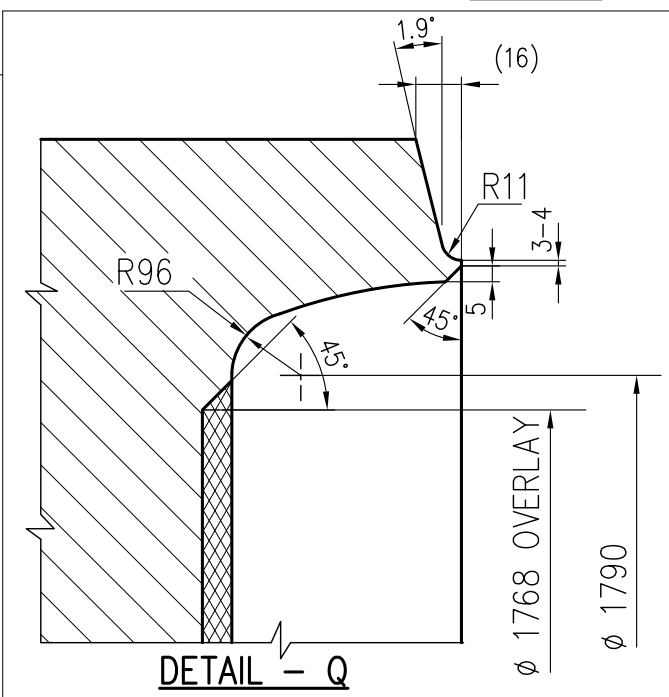
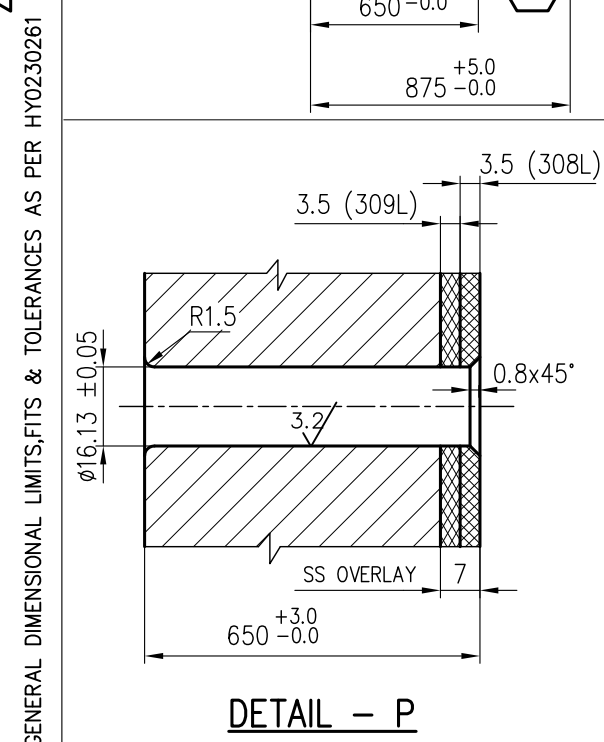
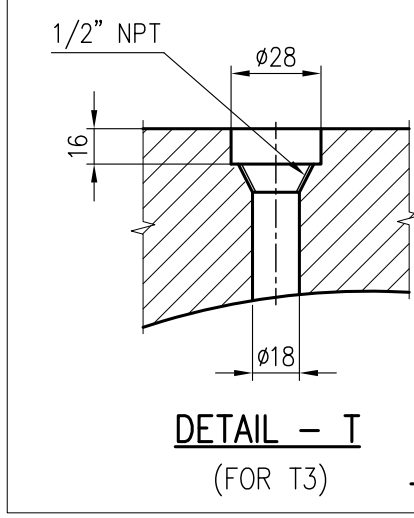
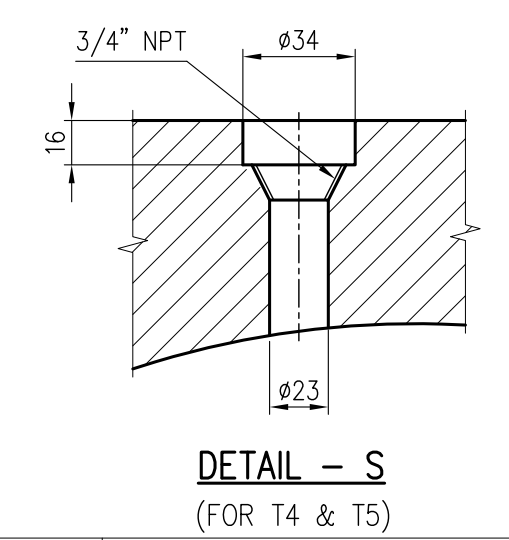
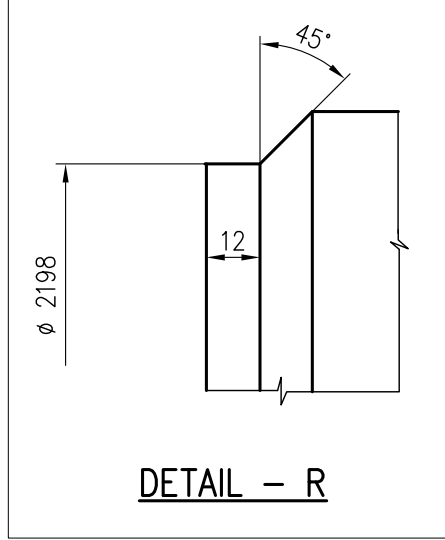
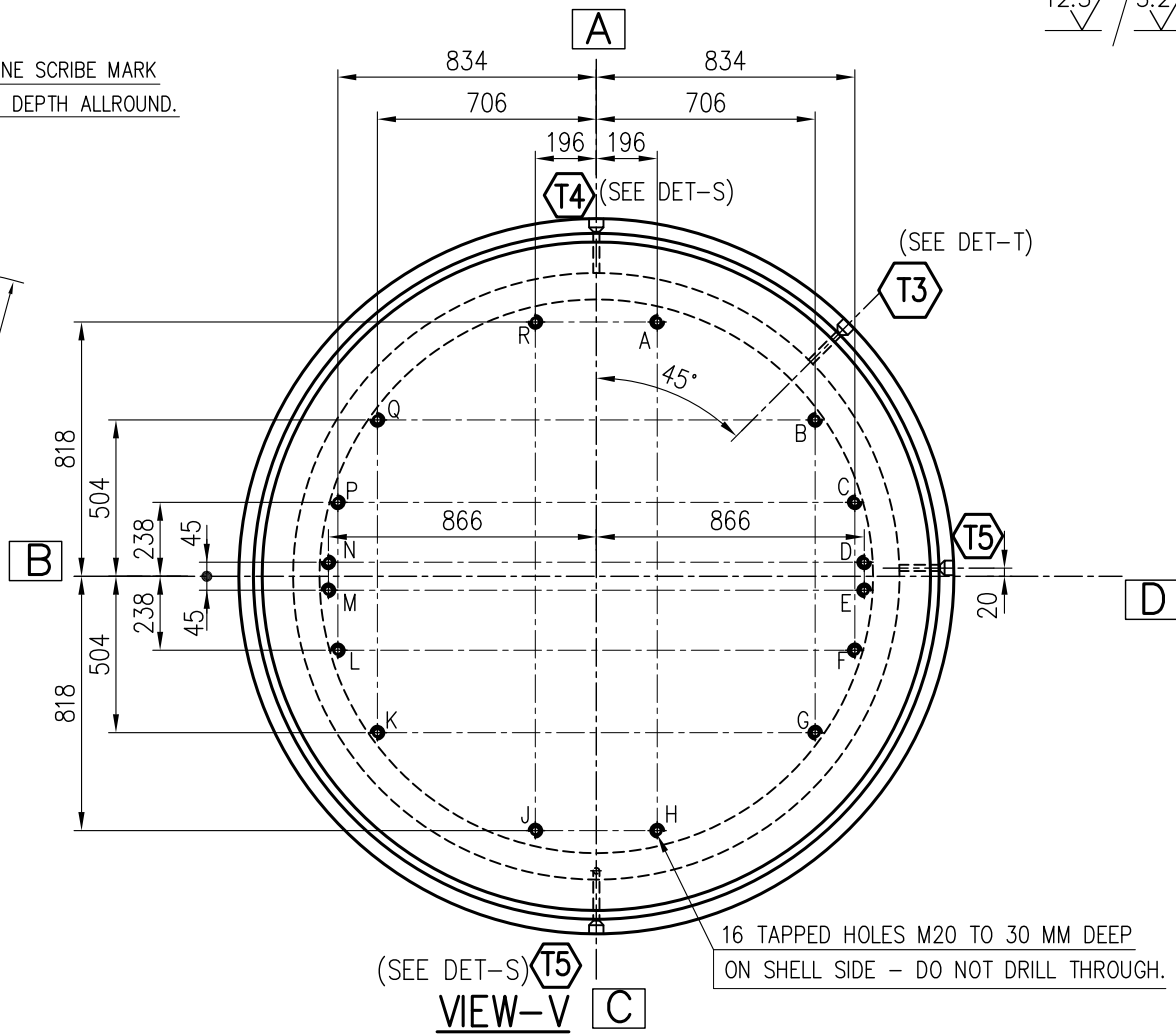
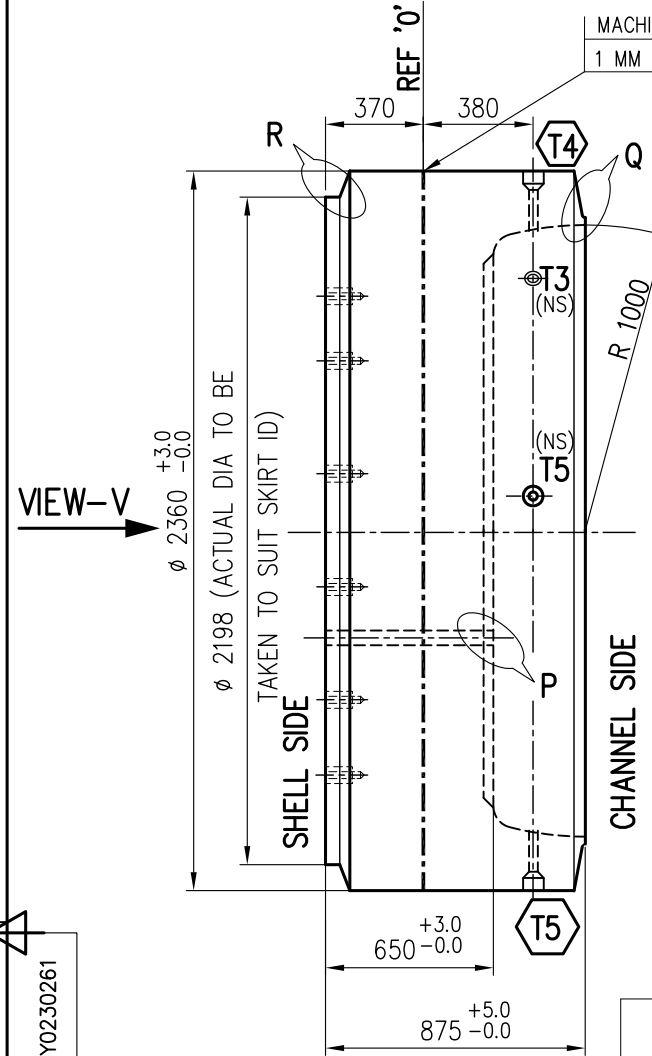
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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

DRG. NO. 3-175-05-01415

MACHINE SCRIBE MARK
1 MM DEPTH ALLROUND.



NOTES: -

- 1, FOR STAINLESS STEEL OVER LAY FOLLOW WELD DETAIL. W/1 AFTER OVER LAY U.T. REQUIRED. ACCEPTANCE STD HE71046.
- 2, FOR TUBE LAYOUT REF. DRG. No. 3-175-01-02237.
- 3, FOR WELD SYMBOLS & PROCEDURES SEE DRG.No.3-175-01-00544.
- 4, M.T. REQUIRED FOR WELD EDGE PREPN. DETAIL Q & R.
- 5, P.W.H.T AFTER OVERLAY REQUIRED. PWHT TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING
- 6, FOR UNSPECIFIED TOLERANCES REFER PRODUCT STD HE71036.

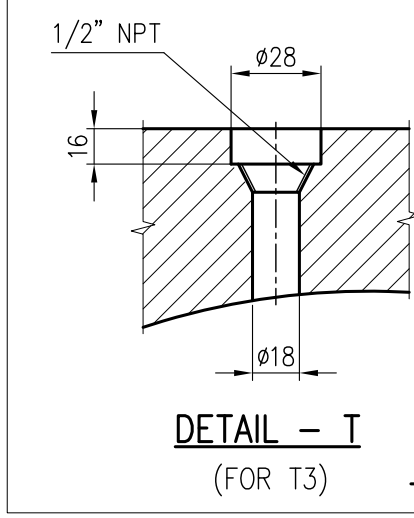
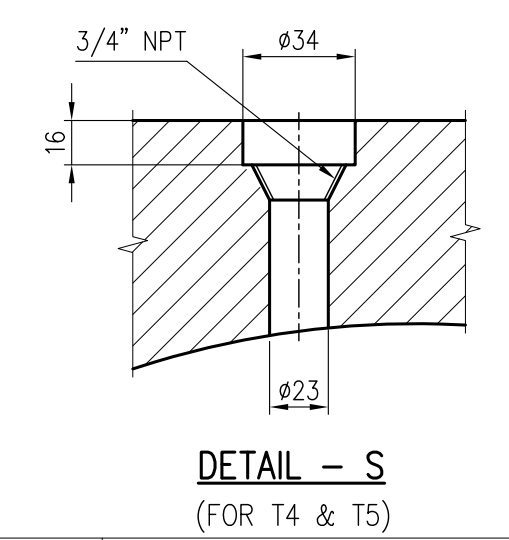
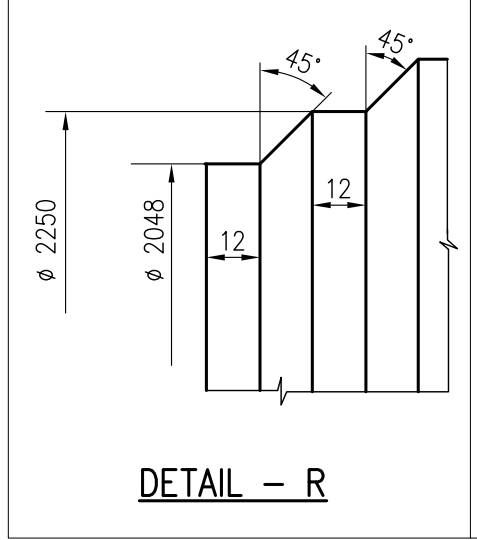
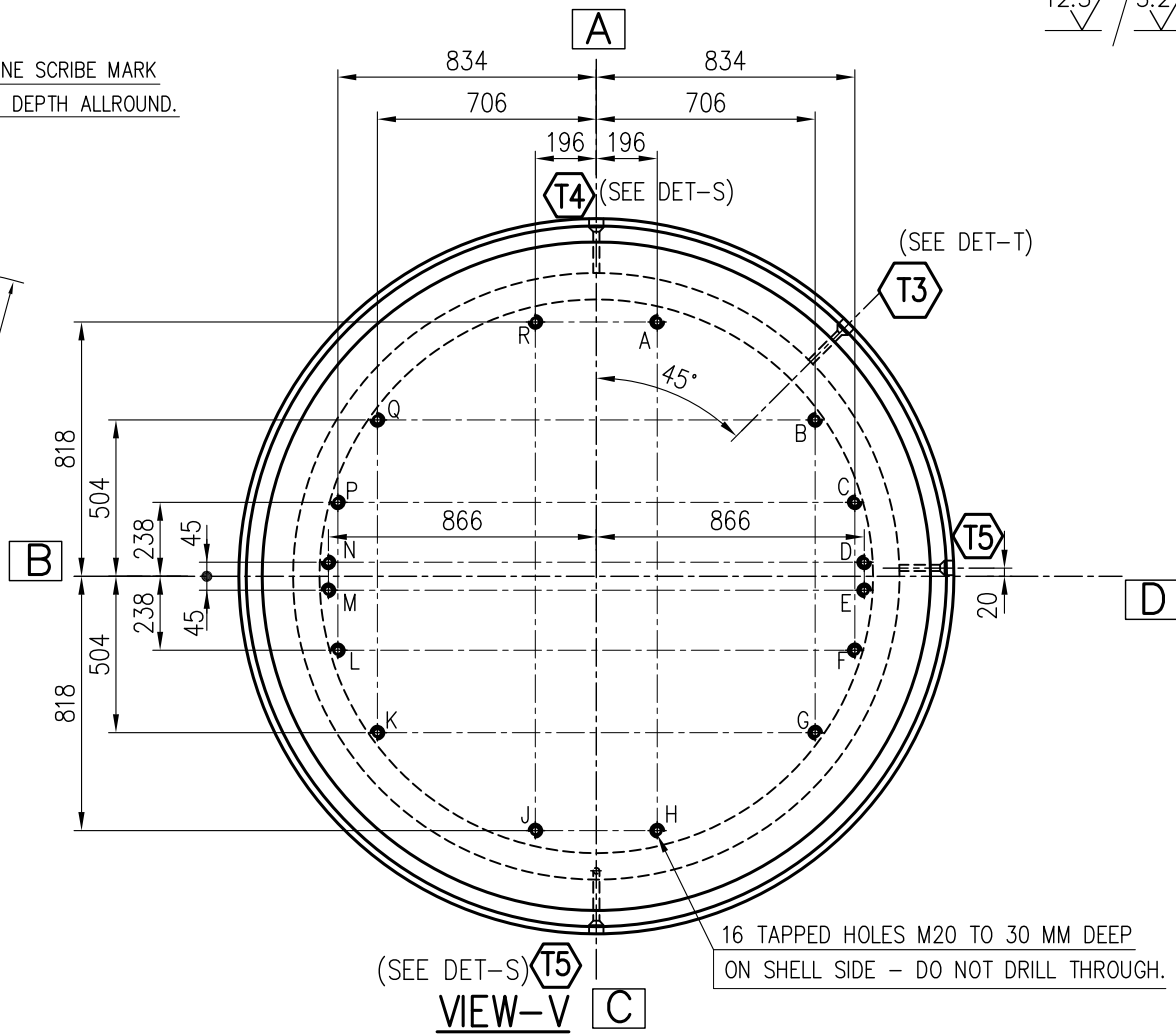
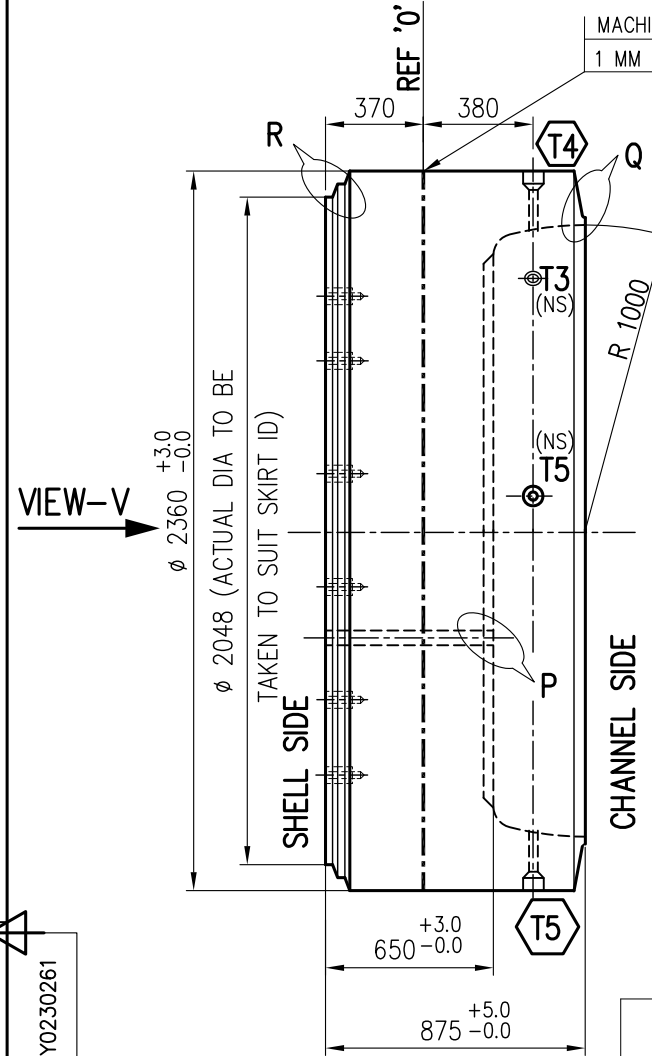
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		660 MW UDANGUDI			
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN.	SAPTARSHI	SIGN.	S.B.
		CHD.	A.K. SAHOO	SIGN.	A.K.S.
		APPD.	K.KISHORE KUMAR	SIGN.	K.K.K.
DEPT. H.E.D	UNTOL. DIMS. GR. /M/F	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
CODE 405		N.T.S	NA	-NA-	-NA-
TITLE TUBE SHEET (FOR HPH-8)			CARD CODE	DRAWING NO. 3-175-05-01415	REV. 00
		SHT. No 01	NO. OF SHT. 01		

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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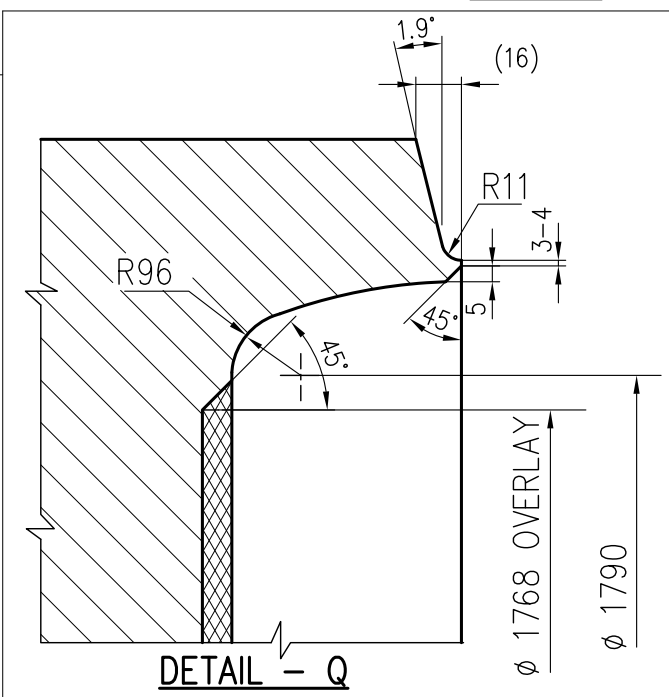
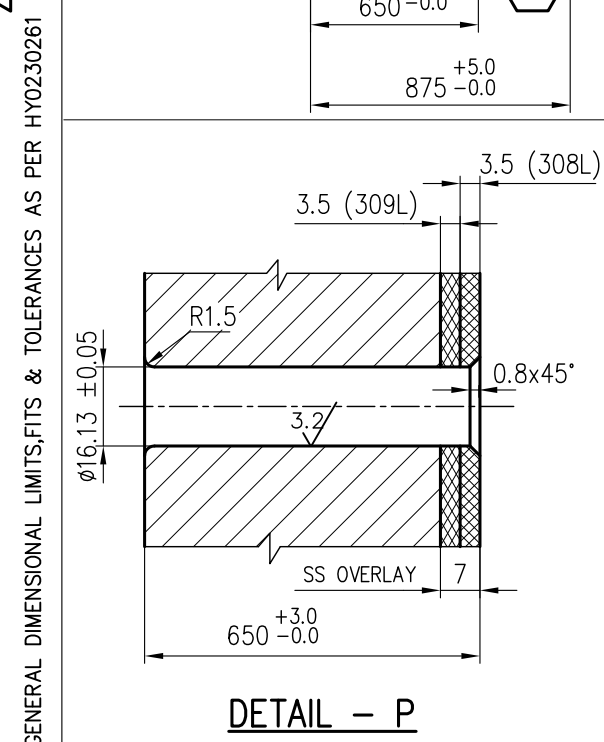
DRG. NO. 3-175-05-01418




16 TAPPED HOLES M20 TO 30 MM DEEP ON SHELL SIDE - DO NOT DRILL THROUGH.

NOTES: -

1. FOR STAINLESS STEEL OVER LAY FOLLOW WELD DETAIL. W/1 AFTER OVER LAY U.T. REQUIRED. ACCEPTANCE STD HE71046.
2. FOR TUBE LAYOUT REF. DRG. No. 3-175-01-02237.
3. FOR WELD SYMBOLS & PROCEDURES SEE DRG.No.3-175-01-00544.
4. M.T. REQUIRED FOR WELD EDGE PREPN. DETAIL Q & R.
5. P.W.H.T AFTER OVERLAY REQUIRED. PWHT TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING
6. FOR UNSPECIFIED TOLERANCES REFER PRODUCT STD HE71036.



TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		660 MW UDANGUDI			
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN.	SAPTARSHI	SIGN.	S.B.
		CHD.	A.K. SAHOO	SIGN.	A.K.S.
		APPD.	K.KISHORE KUMAR	SIGN.	K.K.K.
DATE	11.01.2021	NO. OF VAR.			
DATE	11.01.2021	NO. OF VAR.			
DATE	11.01.2021	NO. OF VAR.			
DEPT. H.E.D	UNTOL. DIMS. GR. /M/F	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
CODE 405		N.T.S	NA	-NA-	-NA-
TITLE		CARD CODE	DRAWING NO.		REV.
TUBE SHEET (FOR HPH-9)			3-175-05-01418		00
		SHT. No	NO. OF SHT.		
		01	01		

		TECHNOLOGICAL PROCESS NOT FOR PROCESS SHEET PRINT			Production Order	Date
Plant: P006		Equipment No: HEH2520			101909251	02.02.2021
Type		WBS Element		Customer / Project Name		Part No
		P-1032256000-17511		2x660 MW TANGEDCO UDANGUDI STPP STA		17511003
Drawing No.-Var		E.Rev.	T.Rev	Material No.		Name Of The Part
31750501415-00		00	00	31750501415-00		TUBESHEET HPH8 HUB THK 180
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,500.000	YES

BOM Details

Pos.No	IC	Material Code			P.No	Remarks				
Matl.Spec	SPK	Qty	MU	Size 1	Size 2	Size 3	Formula Key	MPcs	St.	
0010	L	HE9718584560			17511004	MA by QC, CIB verifi by customer				
HE51155-NA		1.000	EA	0.000	0.000	0.000		0.000	ST06	
Material Description : TUBESHEET FORGING					Reservation :	Item : 0001		Picklist:1000637708		
					0013698224					

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature		
PRT Cat	PRT No.			PRT Description						
Sub Operation Text										
0010	DE9863	P006	QM01	0.000	0.000	0.000	0.000			
TUBE LAYOUT DRG.NO.3-17501-02237/Rev 00 Lifting lug drawing : 4-17501-03123										
Verification & correlation of material with TC & attestation of material & Review of TCs and Transfer of material attestation marks. Inspection by QC,CIB and verification by CUSTOMER.										
0020	DG4242	P006	ZP01	60.000	960.000	960.000	1,020.000			
REFER SIDE VIEW AND DET.-Q. Clamp with open end up wards. True the surface which is to be over laid and Turn Ø 1768/7 mm depth for OVERLAY with 45° chamfer.										
0030	DH9863	P006	QM01	0.000	0.000	0.000	0.000			
1. Carryout PT examination on surface to be overlaid 2. Measure the height " H " at different points. Inspection by QC and verification by CUSTOMER.										
0110	DH9523	P006	ZP01	30.000	0.000	120.000	150.000			
1.Clamp the tube sheet for overlay on manipulator and clamp preheating fixtures. Clean the surface to be over laid. 2.DURING OVERLAY at next operation ,dress up by cleaning (grind ,if necessary) after each layer. REFER DRG.NO.3-17501-00544 FOR WELD DETAILS AND WPS.										
0120	DH2884	P006	ZP01	60.000	5,682.000	5,682.000	5,742.000			
STRIP OVERLAY (DETAIL - W/1) BASIC LAYER :- USE 309 L STRIP SUBSEQUENT LAYER :- USE 308 L STRIP NOTE: Total thick of overlay should be 11 mm minimum										
0130	DH9863	P006	QM01	0.000	0.000	0.000	0.000			
Inspection of overlay surface. Check the thickness of overlay w.r.t height " H " at different points. Inspection by QC.										
Chkd. By		Dt.	ECR/ Rev No		Dt.	Pro.Plnr		Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR		06.12.2022	00			KN		WA	1	6



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2520

101909251

02.02.2021

Type	Work Order / PGMA	Customer	Part No
	P-1032256000-17511/ 17511	2x660 MW TANGEDCO UDANGUDI STPP STA	17511003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501415-00	00	00	31750501415-00	TUBESHEET HPH8 HUB THK 180		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,500.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

0140	DG4242	P006	ZP01	60.000	480.000	480.000	540.000	
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Clamp ,face over laid surface in flush with tube sheet surface. (i.e ,inside flat surface)

Reverse

Face to clean

0150	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
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PT examination of over laid surface after machining.

Inspection by QC and verification by CUSTOMER.

0160	DM8576	P006	QM01	0.000	0.000	0.000	0.000	
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U.T of over laid surface and over laid thickness.

Acceptance STD. HE 71046.

Inspection by QC,CIB and verification by CUSTOMER.

0170	DH9523	P006	ZP01	30.000	0.000	60.000	90.000	
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Refer drg no: 4-17501-03123

Prepare and fit one aux. lifting lug pad and lifting lug on tube sheet periphery as shown in the drawing.Tack weld during fit-up

0173	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Inspection of fit-up by QC.

0180	DH2852	P006	ZP01	15.000	300.000	300.000	315.000	
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Preheat and weld the aux. pad to tube sheet and lug to pad as shown in the drawing.

Pad to tube sheet by L20--1180

Lug to pad by 1/2V25+ L15--300

0185	DH9421	P006	ZP01	0.000	0.000	0.000	0.000	
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Back grind the lug to pad weld joint to sound metal.

0186	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Conduct DP.

Inspection by QC.

0187	DH2852	P006	ZP01	15.000	180.000	180.000	195.000	
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Welding of lug to pad by 1/2V30+L15--300

Clean the welds.

0188	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Conduct DP.

Inspection by QC.

0189	DA9995	P006	ZP99	0.000	0.000	0.000	0.000	
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Udangudi-1 HPH Tubesheet drilling

SCOPE OF WORK

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	2	6



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2520

101909251

02.02.2021

Type	Work Order / PGMA	Customer	Part No
	P-1032256000-17511/ 17511	2x660 MW TANGEDCO UDANGUDI STPP STA	17511003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501415-00	00	00	31750501415-00	TUBESHEET HPH8 HUB THK 180		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,500.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

Note:- This scope of work is for Tube sheet drilling of Udangudi-1 HP Heater

Tube layout drg.no. :,3-17501-02237 Rev.00 Common drg. for all HP Heaters of Udangudi-1.

Tube sheet drg.no. :,3-17505-01415 Rev.00 -- HP Heater -8.

1.,,Tube sheet shall be loaded on vendors who were having the deep hole drilling machine facility. Drilling depth 660 mm minimum and crane capacity of 30T.

2.,,A certificate to be produced along with technical bid by mentioning machine specifications , make and date of manufacturing of machine and machine condition.

3.,,Tube sheet forging will be supplied with Stainless steel overlay, machining, inspections of overlaid surface, and hook welding on tube sheet for loading and unloading.

4.,,Tube sheet supplied with material attestation marks by concerned inspection agencies as per the quality plan.

5.,,Mock up piece (Drilling thk: 660 mm) - 1 no. per machine shall be made and available for our BHEL Hyd QC inspection with vendor material prior to start of tube holes drilling on actual job. Two clusters of 7 holes each length of 660 mm minimum.

6.,,Clearance for drilling of tube holes to be taken from the BHEL Hyd QC.

7.,,All notes given on Tube sheet drawing shall be followed.

8.,,Mark axis on as per drawing and punch on marking at ends for further reference.

9.,,Every marking on tube sheet shall get inspection by BHEL Hyd QC.

10.,,All Tube holes to be drilled in single setting.

11.,,Get inspection of Tube holes after every 10 cycles for finish, ovality, ligament and drift.

12.,,Tube holes finish as indicated in the drawing shall be maintained.

13.,,Tube holes shall be drilled according to tube holes layout and as per tube sheet drawing.

14.,,Drift on Tube holes will not be acceptable.

15.,,Tie rod holes to be drilled and tapped on shell side as per drawing.

16.,,T3, T4 and T5 Tapped holes on periphery shall be done as per respective details of the drawing.

17.,,Chamfering of Tube holes both on shell side and Tube side shall be done as per det.-P of drg.

18.,,Get dimensional inspection of tube holes for layout, tube hole

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	3	6



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2520

101909251

02.02.2021

Type	Work Order / PGMA	Customer	Part No
	P-1032256000-17511/ 17511	2x660 MW TANGEDCO UDANGUDI STPP STA	17511003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501415-00	00	00	31750501415-00	TUBESHEET HPH8 HUB THK 180		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,500.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

finish, ovality, ligament and drift as per quality plan.
 19.,,Tube holes shall be answered to the BHEL Hyd supplied Go-No Go gauge.
 20.,,Any deviation on the job is not acceptable.
 21.,,Easily removable rust preventive shall be applied on all machined surfaces.
 22.,,Machining of shell side step as per det.-R and tube side weld bevel as per det.-Q will be carried out at our BHEL Hyd works.
 23.,,Submit dimensional report sheet along with dispatch of Tube sheet.
 24.,,Machined Tube sheet shall be covered properly while transportation.
 BHEL Hyd will not provide any packing material.

0190	DG9414	P006	ZP04	0.000	0.000	0.000	0.000
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Mark the axes A B C D.

Refer Tube Layout Drg. : 3-17501-02237.

0200	DG4751	P006	ZP04	480.000	25,660.000	25,660.000	26,140.000
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Drill 6040 x Ø 16.13 +/- 0.05 holes from shell side.

PITCH SPACERS :- 10-88-9392

GO-NOGO GAUGE :- 30-08-60041

3 spindle hours are issued.

0210	DG9863	P006	QM01	0.000	0.000	0.000	0.000
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1.Inspection of holes after every 5 cycles.

2.Measure Skirt inside diameter and give dimension for turning the step on tube sheet.

0220	DG4242	P006	ZP01	120.000	960.000	960.000	1,080.000
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Clamp with overlay surface down wards ,turn the step (Ø 2198* mm) to dimensions given by inspector to depth 12 mm ,with bevels 45° as per DET." R ". Machine the reference line " 0 " to a depth of 1 mm. Reverse and machine the weld bevel as per Det.-Q.

TOOL FOR R11 / 1.9°: 30-11-60094

CHECKING TEMPLATE FOR R11 / 1.9°:30-08-60060

0230	DG9414	P006	ZP04	0.000	0.000	0.000	0.000
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MARK FOR

1.Tie rod holes 16 x M20 on SHELL side.

2.ON PERIPHARY : Mark 3 Holes as per Det.-S for T4 & T5.

Mark 1 Holes as per Det.-T for T3.

0240	DG9863	P006	QM01	0.000	0.000	0.000	0.000
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Inspection of marking of holes on Tube Sheet.

Inspection by QC.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	4	6

		TECHNOLOGICAL PROCESS					Production Order	Date
Plant:P006		Equipment No: HEH2520					101909251	02.02.2021
Type	Work Order / PGMA		Customer					Part No
	P-1032256000-17511/ 17511		2x660 MW TANGEDCO UDANGUDI STPP STA					17511003
Drawing No.-Var	E.Rev.	T.Rev.	Material No.		Name Of The Part			
31750501415-00	00	00	31750501415-00		TUBESHEET HPH8 HUB THK 180			
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks		
0001	1.000	1.000	EA	IS06	18,500.000			
Operation Details								
Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
0250	DG4662	P006	ZP04	30.000	2,126.000	2,126.000	2,156.000	
SHELL SIDE :								
1.Drill and tap 16 x M20 tie rod holes to depth 30 mm.								
2.Chamfer the tube holes on shell side to R1.5 Det.-P.								
TOOL FOR R 1.5 : 10-26-9166								
ON OVERLAY SIDE:								
Chamfer the tube holes to 0.8 x 45° as per Det.-P.								
TOOL FOR 0.8 x 45°: STD.								
0260	DG4821	P006	ZP04	120.000	240.000	240.000	360.000	
ON PERIPHERY. REFER Det.- S.								
1. Pre-drill & drill 3 x Ø 23 ,drill Ø for 3/4"NPT ,drill Ø 34/16 mm and tap 3/4" NPT as per Det.-S for T4 & T5.								
2. Pre-drill & drill 1 x Ø 18 ,drill Ø for 1/2"NPT ,drill Ø 28/16 mm and tap 1/2" NPT as per Det.-T for T3.								
0270	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
Final inspection including dimensional conformity ,tube hole size ,finish ,ovality ,overlay thickness uniformity.								
Inspection by QC.								
0280	DH9284	P006	ZP01	12.000	0.000	60.000	72.000	
Gas cut the aux. hook and pad welded on tube sheet.								
0285	DH9421	P006	ZQ01	0.000	0.000	0.000	0.000	
0290	DH9421	P006	QFNL	0.000	0.000	0.000	0.000	
Clean and finish grind gas cut surfaces.								
Acceptance Std. AA 0621101.								
Send to WC - 3631								
Further process with Skirt assembly in WC - 3631.								

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	5	6

Revision status of WPSes applicable for HE & Fab

S.No	WPS Number	WPS latest Revision	Description
1	WE001	04	QW-482 welding Procedure Specification
2	WE003	04	QW-482 welding Procedure Specification
3	WE004	02	WPS-WE004
4	WE005	01	WPS-WE005
5	WE006	07	Welding Procedure Specification
6	WE007	01	WPS-WE007
7	WE008	01	WPS-WE008
8	WE169	00	Welding Procedure Specification
9	WE170	00	Welding Procedure Specification
10	WE171	00	Welding Procedure Specification
11	WE172	00	Welding Procedure Specification
12	WE173	00	Welding Procedure Specification
13	WE174	00	Welding Procedure Specification
14	WE175	00	Welding Procedure Specification

SAP PRINT

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	6	6

		TECHNOLOGICAL PROCESS NOT FOR PROCESS SHEET PRINT		Production Order	Date		
Plant: P006	Equipment No: HEH2521			101911974	15.02.2021		
Type	WBS Element	Customer / Project Name			Part No		
	P-1032256100-17523	2x660 MW TANGEDCO UDANGUDI STPP STA			17523003		
Drawing No.-Var	E.Rev.	T.Rev	Material No.	Name Of The Part			
31750501418-00	00	00	31750501418-00	TUBESHEET HPH 9 HUB THK 180			
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks	MDCC
0001	1.000	1.000	EA	IS06	18,400.000		YES

BOM Details

Pos.No	IC	Material Code	P.No	Remarks					
Matl.Spec	SPK	Qty	MU	Size 1	Size 2	Size 3	Formula Key	MPcs	St.
0010	L	HE9718584560	17523004	MA by QC, CIB verifi by customer					
HE51155-NA		1.000	EA	0.000	0.000	0.000		0.000	ST06
Material Description : TUBESHEET FORGING				Reservation :	Item : 0001	Picklist:1000640404			
				0013715602					

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
0010	DE9863	P006	QM01	0.000	0.000	0.000	0.000	
TUBE LAYOUT DRG.NO.3-17501-02237/Rev 00 Lifting lug drawing : 4-17501-03123								
Verification & correlation of material with TC & attestation of material & Review of TCs and Transfer of material attestation marks. Inspection by QC,CIB and verification by CUSTOMER.								
0020	DG4242	P006	ZP01	60.000	960.000	960.000	1,020.000	
REFER SIDE VIEW AND DET.-Q. Clamp with open end up wards. True the surface which is to be over laid and Turn Ø 1768/7 mm depth for OVERLAY with 45° chamfer.								
0030	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
1. Carryout PT examination on surface to be overlaid 2. Measure the height " H " at different points. Inspection by QC and verification by CUSTOMER.								
0110	DH9523	P006	ZP01	30.000	0.000	120.000	150.000	
1.Clamp the tube sheet for overlay on manipulator and clamp preheating fixtures. Clean the surface to be over laid. 2.DURING OVERLAY at next operation ,dress up by cleaning (grind ,if necessary) after each layer. REFER DRG.NO.3-17501-00544 FOR WELD DETAILS AND WPS.								
0120	DH2884	P006	ZP01	60.000	5,682.000	5,682.000	5,742.000	
STRIP OVERLAY (DETAIL - W/1) BASIC LAYER :- USE 309 L STRIP SUBSEQUENT LAYER :- USE 308 L STRIP NOTE: Total thick of overlay should be 11 mm minimum								
0130	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
Inspection of overlay surface. Check the thickness of overlay w.r.t height " H " at different points. Inspection by QC.								
Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs	
YPR	06.12.2022	00		KN	WA	1	6	



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2521

101911974

15.02.2021

Type	Work Order / PGMA	Customer	Part No
	P-1032256100-17523/ 17523	2x660 MW TANGEDCO UDANGUDI STPP STA	17523003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501418-00	00	00	31750501418-00	TUBESHEET HPH 9 HUB THK 180		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,400.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

0140	DG4242	P006	ZP01	60.000	480.000	480.000	540.000	
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Clamp ,face over laid surface in flush with tube sheet surface. (i.e ,inside flat surface)

Reverse

Face to clean

0150	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
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PT examination of over laid surface after machining.

Inspection by QC and verification by CUSTOMER.

0160	DM8576	P006	QM01	0.000	0.000	0.000	0.000	
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U.T of over laid surface and over laid thickness.

Acceptance STD. HE 71046.

Inspection by QC,CIB and verification by CUSTOMER.

0170	DH9523	P006	ZP01	30.000	0.000	60.000	90.000	
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Refer drg no: 4-17501-03123

Prepare and fit one aux. lifting lug pad and lifting lug on tube sheet periphery as shown in the drawing.Tack weld during fit-up

0173	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Inspection of fit-up by QC.

0180	DH2852	P006	ZP01	15.000	300.000	300.000	315.000	
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Preheat and weld the aux. pad to tube sheet and lug to pad as shown in the drawing.

Pad to tube sheet by L20--1180

Lug to pad by 1/2V25+ L15--300

0185	DH9421	P006	ZP01	0.000	0.000	0.000	0.000	
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Back grind the lug to pad weld joint to sound metal.

0186	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Conduct DP.

Inspection by QC.

0187	DH2852	P006	ZP01	15.000	180.000	180.000	195.000	
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Welding of lug to pad by 1/2V30+L15--300

Clean the welds.

0188	DH9863	P006	QM01	0.000	0.000	0.000	0.000	
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Conduct DP.

Inspection by QC.

0189	DA9995	P006	ZP99	0.000	0.000	0.000	0.000	
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Udangudi HPH Tubesheet drilling

SCOPE OF WORK

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	2	6



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2521

101911974

15.02.2021

Type	Work Order / PGMA	Customer	Part No
	P-1032256100-17523/ 17523	2x660 MW TANGEDCO UDANGUDI STPP STA	17523003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501418-00	00	00	31750501418-00	TUBESHEET HPH 9 HUB THK 180		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	18,400.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

Note:- This scope of work is for Tube sheet drilling of Udangudi-1 HP Heater

Tube layout drg.no. :,3-17501-02237 Rev.00 Common drg. for all HP Heaters of Udangudi-1.

Tube sheet drg.no. :,3-17505-01418 Rev.00 -- HP Heater -9.

1.,,Tube sheet shall be loaded on vendors who were having the deep hole drilling machine facility. Drilling depth 660 mm minimum and crane capacity of 30T.

2.,,A certificate to be produced along with technical bid by mentioning machine specifications , make and date of manufacturing of machine and machine condition.

3.,,Tube sheet forging will be supplied with Stainless steel overlay, machining, inspections of overlaid surface, and hook welding on tube sheet for loading and unloading.

4.,,Tube sheet supplied with material attestation marks by concerned inspection agencies as per the quality plan.

5.,,Mock up piece (Drilling thk: 660 mm) - 1 no. per machine shall be made and available for our BHEL Hyd QC inspection with vendor material prior to start of tube holes drilling on actual job. Two clusters of 7 holes each length of 660 mm minimum.

6.,,Clearance for drilling of tube holes to be taken from the BHEL Hyd QC.

7.,,All notes given on Tube sheet drawing shall be followed.

8.,,Mark axis on as per drawing and punch on marking at ends for further reference.

9.,,Every marking on tube sheet shall get inspection by BHEL Hyd QC.

10.,,All Tube holes to be drilled in single setting.

11.,,Get inspection of Tube holes after every 10 cycles for finish, ovality, ligament and drift.

12.,,Tube holes finish as indicated in the drawing shall be maintained.

13.,,Tube holes shall be drilled according to tube holes layout and as per tube sheet drawing.

14.,,Drift on Tube holes will not be acceptable.

15.,,Tie rod holes to be drilled and tapped on shell side as per drawing.

16.,,T3, T4 and T5 Tapped holes on periphery shall be done as per respective details of the drawing.

17.,,Chamfering of Tube holes both on shell side and Tube side shall be done as per det.-P of drg.

18.,,Get dimensional inspection of tube holes for layout, tube hole

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	3	6

		TECHNOLOGICAL PROCESS					Production Order	Date
Plant:P006		Equipment No: HEH2521					101911974	15.02.2021
Type	Work Order / PGMA		Customer				Part No	
	P-1032256100-17523/ 17523		2x660 MW TANGEDCO UDANGUDI STPP STA				17523003	
Drawing No.-Var	E.Rev.	T.Rev.	Material No.		Name Of The Part			
31750501418-00	00	00	31750501418-00		TUBESHEET HPH 9 HUB THK 180			
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks		
0001	1.000	1.000	EA	IS06	18,400.000			
Operation Details								
Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
finish, ovality, ligament and drift as per quality plan. 19.,,Tube holes shall be answered to the BHEL Hyd supplied Go-No Go gauge. 20.,,Any deviation on the job is not acceptable. 21.,,Easily removable rust preventive shall be applied on all machined surfaces. 22.,,Machining of shell side step as per det.-R and tube side weld bevel as per det.-Q will be carried out at our BHEL Hyd works. 23.,,Submit dimensional report sheet along with dispatch of Tube sheet. 24.,,Machined Tube sheet shall be covered properly while transportation. BHEL Hyd will not provide any packing material.								
0190	DG9414	P006	ZP04	0.000	0.000	0.000	0.000	
Mark the axes A B C D. Refer Tube Layout Drg. : 3-17501-02237.								
0200	DG4751	P006	ZP04	480.000	25,660.000	25,660.000	26,140.000	
Drill 6040 x Ø 16.13 +/- 0.05 holes from shell side. PITCH SPACERS :- 10-88-9392 GO-NOGO GAUGE :- 30-08-60041 3 spindle hours are issued.								
0210	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
1.Inspection of holes after every 5 cycles. 2.Measure Skirt inside diameter and give dimension for turning the step on tube sheet.								
0220	DG4242	P006	ZP01	120.000	1,200.000	1,200.000	1,320.000	
Clamp with overlay surface down wards<(,<) turn the step (Ø 2048* mm) to dimensions given by inspector to depth 12 mm<(,<) step turn to dimension Ø2250** mm to a depth 12mm with bevels 45° and 45° as per DET." R ". Machine the reference line " 0 " to a depth of 1 mm. Reverse and machine the weld bevel as per Det.-Q. TOOL FOR R11 / 1.9°: 30-11-60094 CHECKING TEMPLATE FOR R11 / 1.9°:30-08-60060								
0230	DG9414	P006	ZP04	0.000	0.000	0.000	0.000	
MARK FOR 1.Tie rod holes 16 x M20 on SHELL side. 2.ON PERIPHARY : Mark 3 Holes as per Det.-S for T4 & T5. Mark 1 Holes as per Det.-T for T3.								
0240	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
Chkd. By	Dt.	ECR/ Rev No		Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00			KN	WA	4	6

		TECHNOLOGICAL PROCESS					Production Order	Date
Plant:P006		Equipment No: HEH2521					101911974	15.02.2021
Type	Work Order / PGMA		Customer					Part No
	P-1032256100-17523/ 17523		2x660 MW TANGEDCO UDANGUDI STPP STA					17523003
Drawing No.-Var	E.Rev.	T.Rev.	Material No.		Name Of The Part			
31750501418-00	00	00	31750501418-00		TUBESHEET HPH 9 HUB THK 180			
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks		
0001	1.000	1.000	EA	IS06	18,400.000			
Operation Details								
Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
Inspection of marking of holes on Tube Sheet. Inspection by QC.								
0250	DG4662	P006	ZP04	30.000	2,126.000	2,126.000	2,156.000	
SHELL SIDE : 1.Drill and tap 16 x M20 tie rod holes to depth 30 mm. 2.Chamfer the tube holes on shell side to R1.5 Det.-P. TOOL FOR R 1.5 : 10-26-9166								
ON OVERLAY SIDE: Chamfer the tube holes to 0.8 x 45° as per Det.-P. TOOL FOR 0.8 x 45°: STD.								
0260	DG4821	P006	ZP04	120.000	240.000	240.000	360.000	
ON PERIPHERY. REFER Det.- S. 1. Pre-drill & drill 3 x Ø 23 ,drill Ø for 3/4"NPT ,drill Ø 34/16 mm and tap 3/4" NPT as per Det.-S for T4 & T5. 2. Pre-drill & drill 1 x Ø 18 ,drill Ø for 1/2"NPT ,drill Ø 28/16 mm and tap 1/2" NPT as per Det.-T for T3.								
0270	DG9863	P006	QM01	0.000	0.000	0.000	0.000	
Final inspection including dimensional conformity ,tube hole size ,finish ,ovality ,overlay thickness uniformity. Inspection by QC.								
0280	DH9284	P006	ZP01	12.000	0.000	60.000	72.000	
Gas cut the aux. hook and pad welded on tube sheet.								
0285	DH9421	P006	ZQ01	0.000	0.000	0.000	0.000	
0290	DH9421	P006	QFNL	0.000	0.000	0.000	0.000	
Clean and finish grind gas cut surfaces. Acceptance Std. AA 0621101. Send to WC - 3631 Further process with Skirt assembly in WC - 3631.								

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	5	6

Revision status of WPSes applicable for HE & Fab

S.No	WPS Number	WPS latest Revision	Description
1	WE001	04	QW-482 welding Procedure Specification
2	WE003	04	QW-482 welding Procedure Specification
3	WE004	02	WPS-WE004
4	WE005	01	WPS-WE005
5	WE006	07	Welding Procedure Specification
6	WE007	01	WPS-WE007
7	WE008	01	WPS-WE008
8	WE169	00	Welding Procedure Specification
9	WE170	00	Welding Procedure Specification
10	WE171	00	Welding Procedure Specification
11	WE172	00	Welding Procedure Specification
12	WE173	00	Welding Procedure Specification
13	WE174	00	Welding Procedure Specification
14	WE175	00	Welding Procedure Specification

SAP PRINT

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
YPR	06.12.2022	00		KN	WA	6	6

FIRST ANGLE PROJECTION

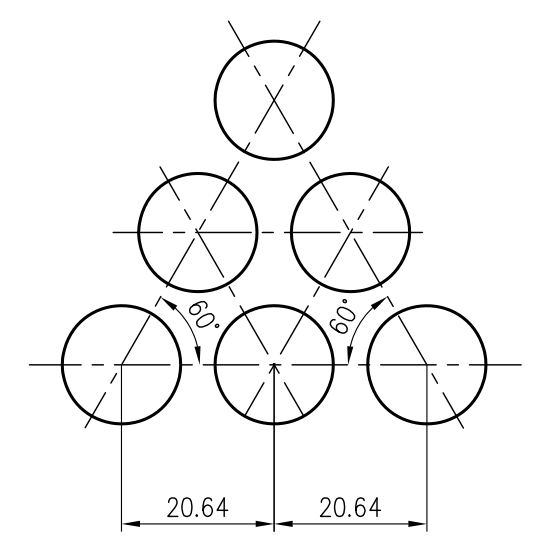
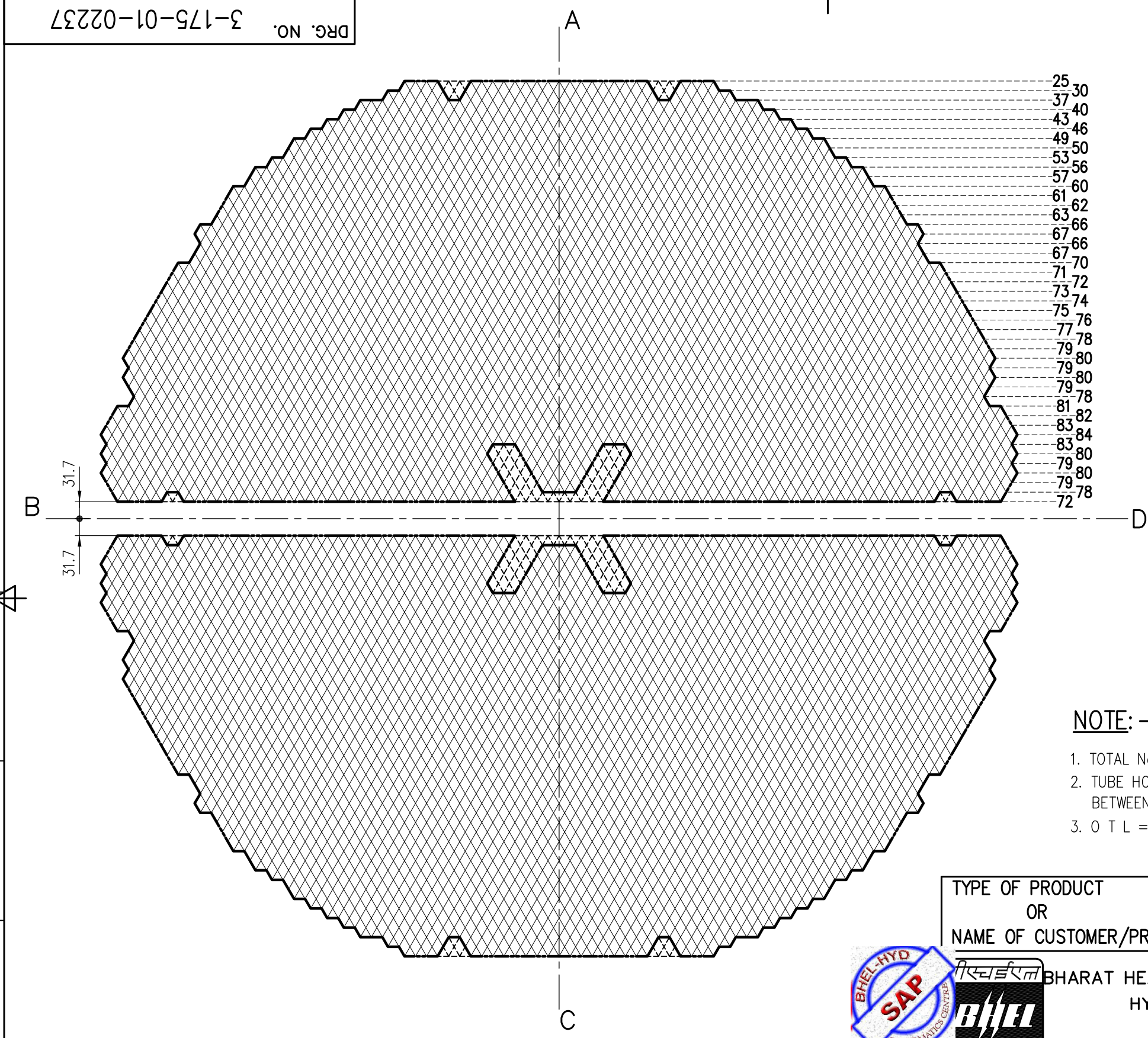
(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-175-01-02237

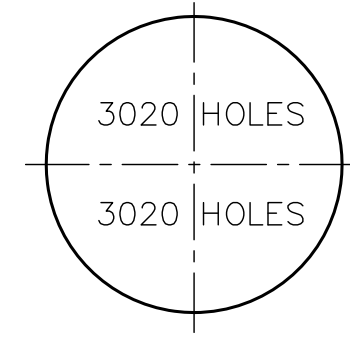
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COMPUTER FILE NAME
REF. DRG. NO.
SIGN. AND DATE

INVENTORY NO

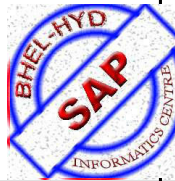



TUBE PITCH



NOTE: -

1. TOTAL No. OF TUBE HOLES (2 x 3020) = 6040.
2. TUBE HOLE SIZE IN TUBE SHEET IS $\phi 16.13 \pm 0.05$, ALSO THE VARIATION BETWEEN SPINDLE TO SPINDLE MAY BE RESTRICTED WITH IN 0.05 MM.
3. O T L = 1753 MM.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		660 MW			
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN.	NAME	SIGN.	DATE
 		jsr	jsr		11.12.13
		J.S.RAO	J.S.RAO		21.12.13
		B.SRINIVAS	B.SRINIVAS		21.12.13
DEPT. HEDDES	UNTOL. DIMS.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
CODE 405	GR. ϕ /M/f	NTS	NA	-NA-	-NA-
TITLE			CARD CODE	DRAWING NO.	REV.
TUBE LAYOUT (FOR HPHs)			-NA-	3-175-01-02237	00
			SHT. No	NO. OF SHT.	
			01	01	

		TECHNOLOGICAL PROCESS RE-PRINT			Production Order	Date	
Plant: P006		Equipment No: HEH2596			102011893	21.01.2023	
Type		WBS Element		Customer / Project Name		Part No	
		P-1032257400-17509		M/s. WBPDCCL		17509003	
Drawing No.-Var		E.Rev.	T.Rev	Material No.		Name Of The Part	
31750102750-01		00		31750102750-01		TUBESHEET-HPH 7A/7B	
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks	MDCC
0001	1.000	1.000	EA	IS06	7.435.000		Yes

BOM Details

Pos.No	IC	Material Code			P.No	Remarks				
Matl.Spec	SPK	Qty	MU	Size 1	Size 2	Size 3	Formula Key	MPCs	St.	
0001	L	HE9718634096			17509004	QC, CIB, Verification by TPIA.				
HE51155		1.000	EA	0.000	0.000	0.000		0.000	ST06	
Material Description : TUBESHEET FORGING (430MM THK)					Reservation :	Item : 0001		Picklist:		
					0014516456					

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
0181	DA9995	P006	ZP01	0.000	0.000	0.000	0.000	

Sagardiggi-7A- HPH Tube sheet drilling

SCOPE OF WORK

Note: - This scope of work is for Tube sheet drilling of Sagardiggi HP Heater-7A

Tube layout drg.no. :,3-17501-02287 Rev.00.

Tube sheet drg.no. :,3-17501-02750 Rev.00 -- HP Heater -7A.

- 1...Tube sheet shall be loaded on vendors who were having the deep hole drilling machine facility. Drilling depth 440 mm minimum and crane capacity of 15T.
- 2...A certificate to be produced along with technical bid mentioning machine specifications , make and date of manufacturing of machine and machine condition.
- 3...Tube sheet forging will be supplied with Stainless steel overlay, machining, inspections of overlaid surface, and hook welding on tube sheet for loading and unloading.
- 4...Tube sheet supplied with material attestation marks by concerned inspection agencies as per the quality plan.
- 5...Mock up piece (Drilling thk: 440 mm) - 1 no. per machine shall be made and available for our BHEL Hyd QC inspection with vendor material prior to start of tube holes drilling on actual job. Two clusters of 7 holes each length of 440 mm minimum.
- 6...Clearance for drilling of tube holes to be taken from the BHEL Hyd QC.
- 7...All notes given on Tube sheet drawing shall be followed.
- 8...Mark axis on as per drawing and punch on marking at ends for further reference.
- 9...Every marking on tube sheet shall get inspection by BHEL Hyd QC.
- 10...All Tube holes to be drilled in single setting.
- 11...Get inspection of Tube holes after every 10 cycles for finish, ovality, ligament and drift.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	28.01.2023					1	3



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2596

102011893

21.01.2023

Type

Work Order / PGMA

Customer

Part No

P-1032257400-17509/
17509

M/s. WBPDCCL

17509003

Drawing No.-Var

E.Rev.

T.Rev.

Material No.

Name Of The Part

31750102750-01

00

31750102750-01

TUBESHEET-HPH 7A/7B

Pos.No

BOM Qty

Ord Qty

MU

St.

Nt.Wt.

Remarks

0001

1.000

1.000

EA

IS06

7,435.000

Operation Details

Opr No

W.C.

Plant

Ctl. ky

Prep Time

Time/ PC(M)

Time/ PC(L)

Total Time

QC Signature

PRT Cat

PRT No.

PRT Description

Sub Operation Text

12.,,Tube holes finish as indicated in the drawing shall be maintained.

13.,,Tube holes shall be drilled according to tube holes layout and as per tube sheet drawing.

14.,,Drift on Tube holes will not be acceptable.

15.,,Tie rod holes to be drilled and tapped on shell side as per drawing.

16.,,T3, T4 and T5 Tapped holes on periphery shall be done as per respective details of the drawing.

17.,,Chamfering of Tube holes both on shell side and Tube side shall be done as per det.-P of drg.

18.,,Get dimensional inspection of tube holes for layout, tube hole finish, ovality, ligament and drift as per quality plan.

19.,,Tube holes shall be answered to the BHEL Hyd supplied Go-No Go gauge.

20.,,Any deviation on the job is not acceptable.

21.,,Easily removable rust preventive shall be applied on all machined surfaces.

22.,,Machining of shell side step as per det.-R and tube side weld bevel as per det.-Q will be carried out at our BHEL Hyd works.

23.,,Submit dimensional report sheet along with dispatch of Tube sheet.

24.,,Machined Tube sheet shall be covered properly while transportation. BHEL Hyd will not provide any packing material.

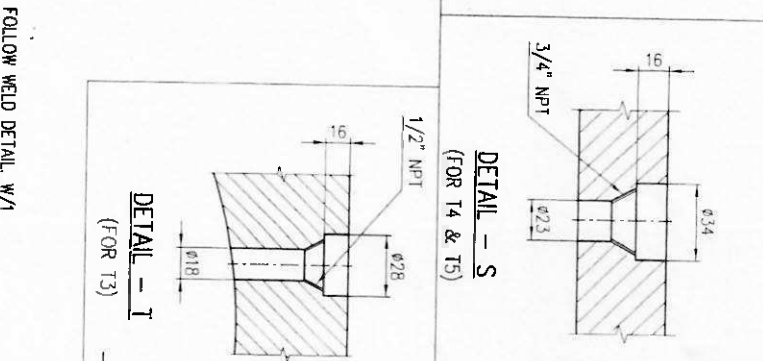
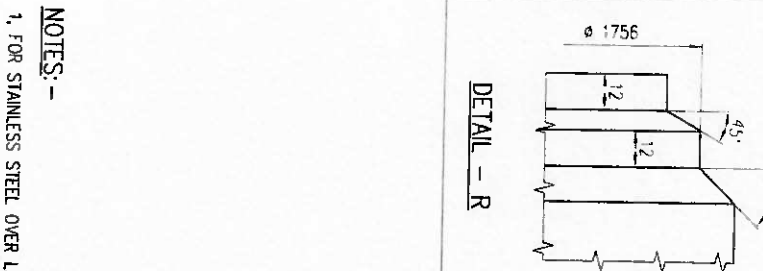
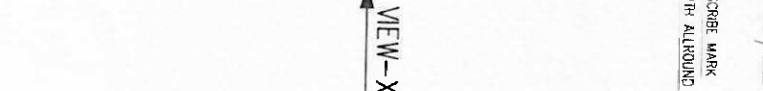
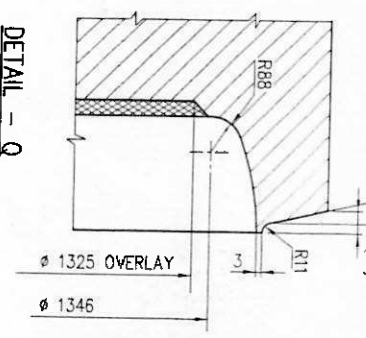
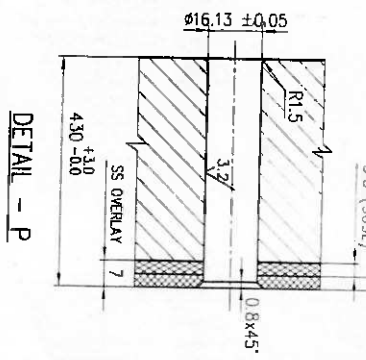
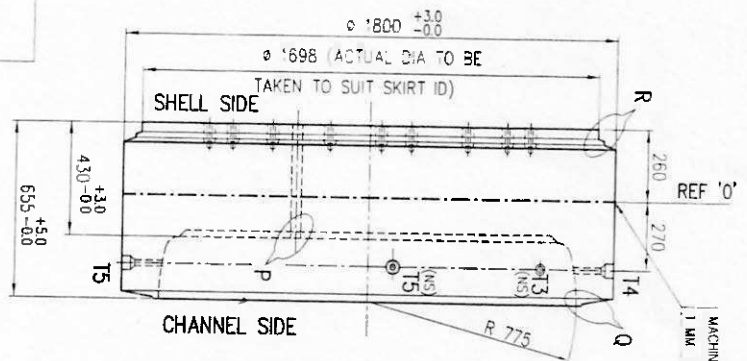
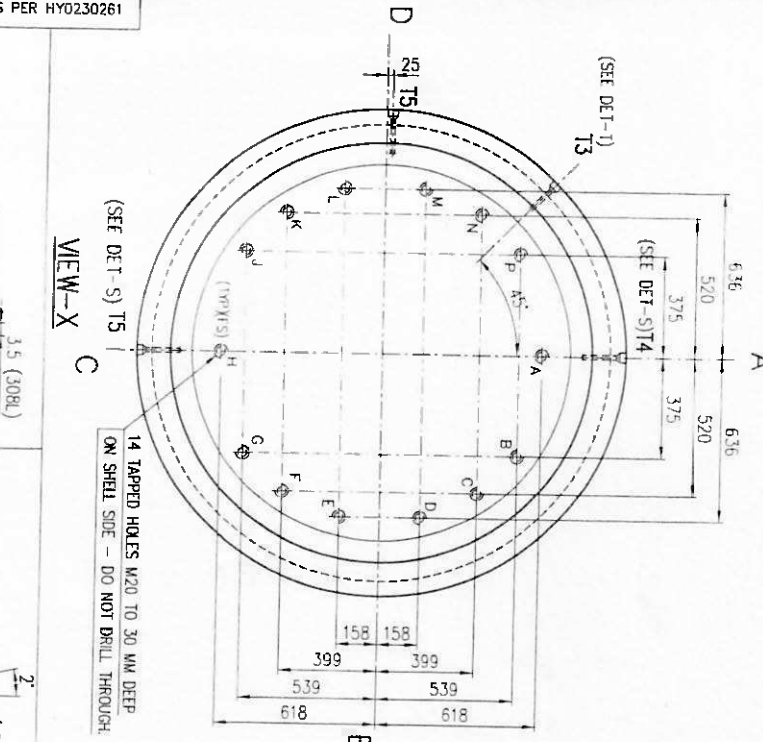
Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	28.01.2023					2	3

05L20-10-5L1-3
DRG. NO.

FIRST ANGLE PROJECTION

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GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HYD230261



- NOTES:-**
1. FOR STAINLESS STEEL OVER LAY FOLLOW WELD DETAIL W/1 AFTER OVER LAY U.T. REQUIRED. ACCEPTANCE STD HE71046.
 2. FOR TUBE LAYOUT REF. DRG. No. 3-175-01-02287.
 3. FOR WELD SYMBOLS & PROCEDURES SEE DRG.No.3-175-01-00544.
 4. M.T. REQUIRED FOR WELD EDGE PREPN. DETAIL Q & R.
 5. P.W.H.T AFTER OVERLAY REQUIRED.
 6. P.W.H.T AFTER SKIRT TO TUBE SHEET WELDING.
 7. P.W.H.T TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING.
 8. PMHT TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING.
 9. FOR UNSPECIFIED TOLERANCES REFER PRODUCT STD HE71036.



BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

DRN.	NAME	SIGN.	DATE	NO. OF VAR.
SAPYARSHI			09.09.22	NA-
A.K.SAHOO			09.09.22	NA-
K.KISHORE			09.09.22	NA-
K.K.K.			09.09.22	NA-

REV.	DATE	ALTERED	CHD	APPD	REV.	DATE	ALTERED	CHD	APPD

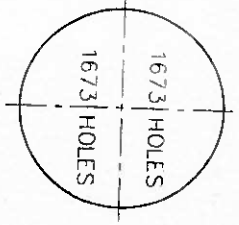
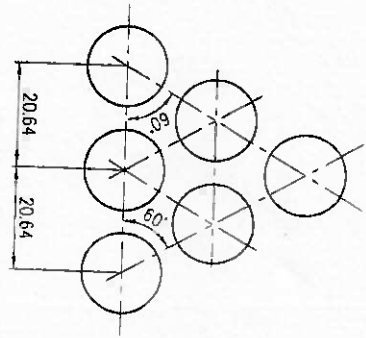
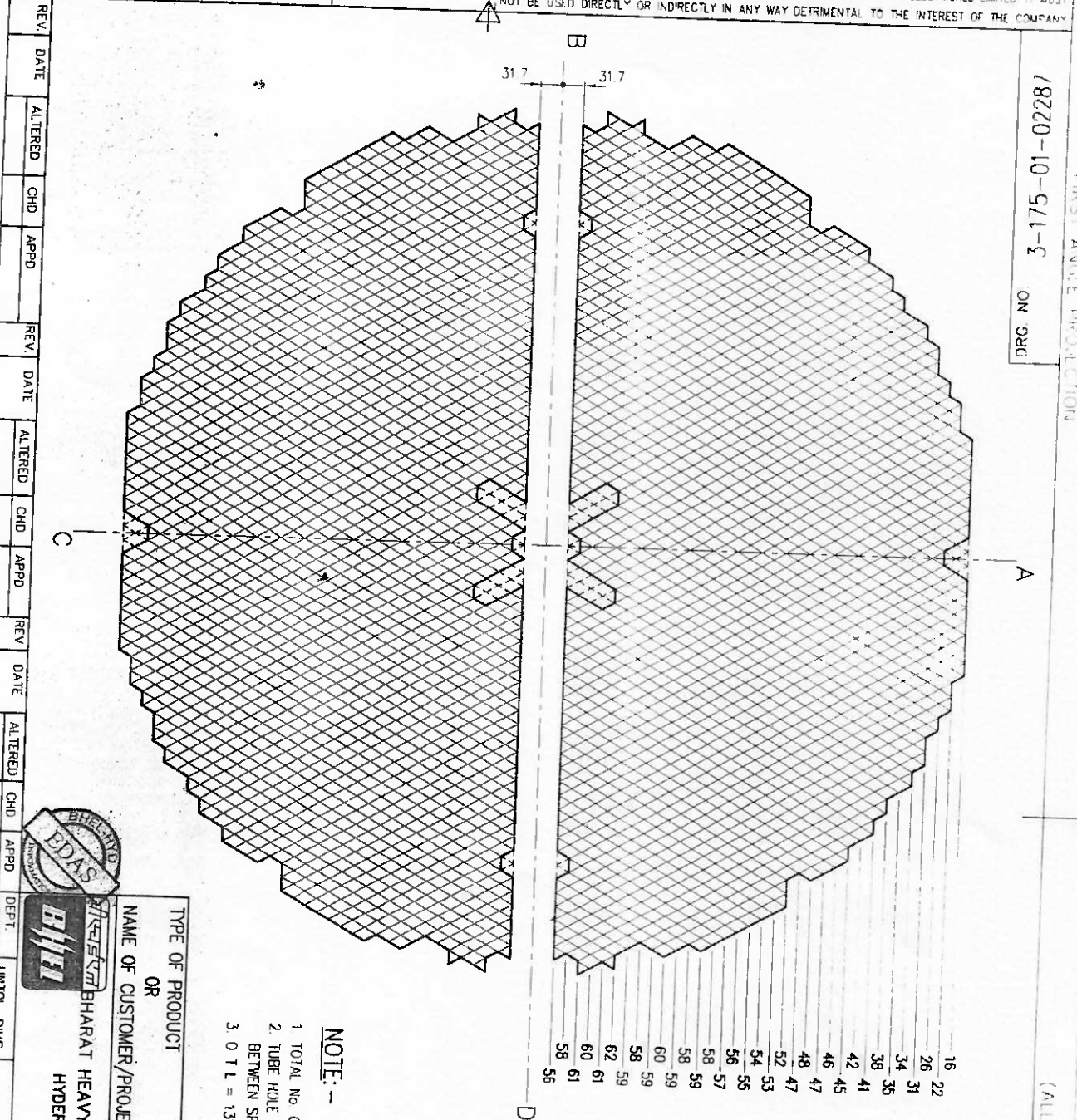
DEPT.	UNTOL.	DIMS	SCALE	WEIGHT (KG)	CARD CODE
H.E.D	OR	OR	N.T.S	NA	3-175-01-02750

TUBE SHEET
(FOR HPH-7A & 7B)

INVENTORY NO. SIGN. AND DATE REF. DRG. NO. COMPUTER FILE NAME
 Oct Wed 19 10:47 2022
 Printed by : SAPYARSHI BHATTACHARYA - K.C.P. WME8039 / 6191614 on 19-10-22 15:49:23
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INVENTORY NO. SIGN. AND DATE REF. DRG. NO. COMPUTER FILE NAME



- NOTE:-**
- 1 TOTAL NO. OF TUBE HOLES (2 x 1673) = 3346.
 - 2 TUBE HOLE SIZE IN TUBE SHEET IS ϕ 16.13 \pm 0.05, ALSO THE VARIATION BETWEEN SPINDLE TO SPINDLE MAY BE RESTRICTED WITH IN 0.05.
 - 3 O.T.L = 1315 MM.

TYPE OF PRODUCT		OR		NAME OF CUSTOMER/PROJECT	
BHARAT HEAVY ELECTRICALS LTD.		HYDERABAD			
DEPT. HEADS	UNTL. DIMS	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
405	ϕ /M/Y	NTS	NA	-NA-	-NA-
TITLE		DRAWING NO.			
TUBE LAYOUT		3-175-01-02287			
(FOR HPHS)		NO. OF SHT. 01			
		NO. OF SHT. 01			
REV.	DATE	CHD	APPD	REV.	DATE
00					



DRN.	NAME	SIGN.	DATE	NO. OF VAR.
RAJESH M.			09.08.14	
CHD.	NAME	SIGN.	DATE	NO. OF VAR.
K. KIRAN KUMAR			09.08.14	
APPD.	NAME	SIGN.	DATE	NO. OF VAR.
B. SRINIVAS			09.08.14	

Aug Sat 30 14:33 2014

Printed by : SAKTARSHI BHATTACHARYA - RCP-WMES/19 / 6191614 on 19-10-22 13:15:00

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TECHNOLOGICAL PROCESS RE-PRINT

Production Order

Date

Plant: P006

Equipment No: HEH2598

102012669

21.01.2023

Type

WBS Element

Customer / Project Name

Part No

P-1032257600-17511

M/s. WBPDCCL

17511003

Drawing No.-Var

E.Rev.

T.Rev

Material No.

Name Of The Part

31750501459

00

31750501459-00

TUBE SHEET FOR HPH 8 A/B

Pos.No

BOM Qty

Ord Qty

MU

St.

Nt.Wt.

Remarks

MDCC

0001

1.000

1.000

EA

IS06

9.100.000

Yes

BOM Details

Pos.No	IC	Material Code	P.No	Remarks					
Matl.Spec	SPK	Qty	MU	Size 1	Size 2	Size 3	Formula Key	MPcs	St.
0010	L	HE9718634100	17511004	QC, CIB, Verification by TPIA.					
HE51155-NA		1.000	EA	0.000	0.000	0.000		0.000	ST06
Material Description : TUBESHEET FORGING C.S.(460MM THK)				Reservation :	Item : 0001	Picklist:			
				0014516717					

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
Sub Operation Text								
0181	DA9995	P006	ZP04	0.000	0.000	0.000	0.000	

Sagardiggi-8A- HPH Tube sheet drilling

SCOPE OF WORK

Note: - This scope of work is for Tube sheet drilling of Sagardiggi HP Heater-8A

Tube layout drg.no. : 3-17501-02329 Rev.00.

Tube sheet drg.no. : 3-17505-01459 Rev.00 -- HP Heater -8A.

- 1.,,Tube sheet shall be loaded on vendors who were having the deep hole drilling machine facility. Drilling depth 470 mm minimum and crane capacity of 15T.
- 2.,,A certificate to be produced along with technical bid by mentioning machine specifications, make and date of manufacturing of machine and machine condition.
- 3.,,Tube sheet forging will be supplied with Stainless steel overlay, machining, inspections of overlaid surface, and hook welding on tube sheet for loading and unloading.
- 4.,,Tube sheet supplied with material attestation marks by concerned inspection agencies as per the quality plan.
- 5.,,Mock up piece (Drilling thk: 470 mm) - 1 no. per machine shall be made and available for our BHEL Hyd QC inspection with vendor material prior to start of tube holes drilling on actual job. Two clusters of 7 holes each length of 470 mm minimum.
- 6.,,Clearance for drilling of tube holes to be taken from the BHEL Hyd QC.
- 7.,,All notes given on Tube sheet drawing shall be followed.
- 8.,,Mark axis on as per drawing and punch on marking at ends for further reference.
- 9.,,Every marking on tube sheet shall get inspection by BHEL Hyd QC.
- 10.,,All Tube holes to be drilled in single setting.
- 11.,,Get inspection of Tube holes after every 10 cycles for finish, ovality, ligament and drift.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	25.01.2023					1	3



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2598

102012669

21.01.2023

Type

Work Order / PGMA

Customer

Part No

P-1032257600-17511/
17511

M/s. WBPDCCL

17511003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part			
31750501459	00		31750501459-00	TUBE SHEET FOR HPH 8 A/B			
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks	
0001	1.000	1.000	EA	IS06	9,100.000		

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.		PRT Description					

Sub Operation Text

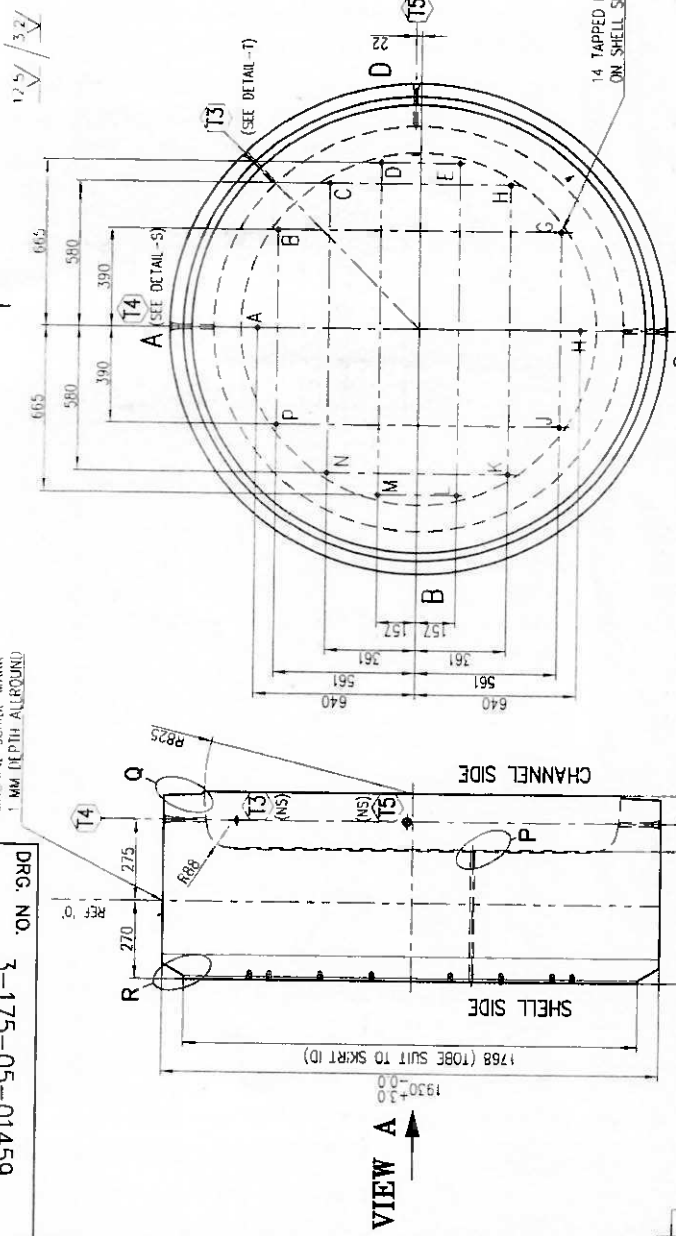
- 12.,,Tube holes finish as indicated in the drawing shall be maintained.
 - 13.,,Tube holes shall be drilled according to tube holes layout and as per tube sheet drawing.
 - 14.,,Drift on Tube holes will not be acceptable.
 - 15.,,Tie rod holes to be drilled and tapped on shell side as per drawing.
 - 16.,,T3, T4 and T5 Tapped holes on periphery shall be done as per respective details of the drawing.
 - 17.,,Chamfering of Tube holes both on shell side and Tube side shall be done as per det.-P of drg.
 - 18.,,Get dimensional inspection of tube holes for layout, tube hole finish, ovality, ligament and drift as per quality plan.
 - 19.,,Tube holes shall be answered to the BHEL Hyd supplied Go-No Go gauge.
 - 20.,,Any deviation on the job is not acceptable.
 - 21.,,Easily removable rust preventive shall be applied on all machined surfaces.
 - 22.,,Machining of shell side step as per det.-R and tube side weld bevel as per det.-Q will be carried out at our BHEL Hyd works.
 - 23.,,Submit dimensional report sheet along with dispatch of Tube sheet.
 - 24.,,Machined Tube sheet shall be covered properly while transportation.
- BHEL Hyd will not provide any packing material.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	25.01.2023					2	3

FIRST ANGLE PROJECTION
 DRG. NO. 3-175-05-01459

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

(ALL DIMENSIONS ARE IN mm)



NOTES:-

1. FOR STAINLESS STEEL OVER LAY FOLLOW WELD DETAIL. W/1 AFTER OVER LAY U.T. REQUIRED. ACCEPTANCE STD HE71046.
2. FOR TUBE LAYOUT REF. DRG. No. 3-175-01-02329.
3. FOR WELD SYMBOLS & PROCEDURES SEE DRG.No.3-175-01-00544
4. M.T. REQUIRED FOR WELD EDGE PREPN. DETAIL Q & R.
5. P.W.H.T AFTER OVERLAY REQUIRED.
PWHT TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING
6. FOR UNSPECIFIED TOLERANCES REFER PRODUCT STD HE71036.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME		SIGN.	DATE	NO. OF VAR.
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN. A.L.Rajam	AL	06.09.22	06.09.22	-NA-
UNTL. DIMS. CR. 4/NA/Y		CHD. Rajesh M	RJ	20080922	20080922	-NA-
SCALE		APPD. KISHORE K	KK	ITEM NO.	NO. OF ITEMS	-NA-
WEIGHT (KG)		REF. TO ASSY. DRG.	DRG.	NO.	NO.	NO.
TITLE		DRAWING NO.		REV.		
TUBE SHEET (FOR HPH-8A&8B)		3-175-05-01459		00		
SHT. No. 01		NO. OF SHT. 01				

This Drawing is printed from Engineering Digital Archive System (EDAS). Therefore signatures are not essentially required.

Printed by : M. RAJESH-RCP-FMH 3031 / 6102654 on 12-09-22 10:52:15

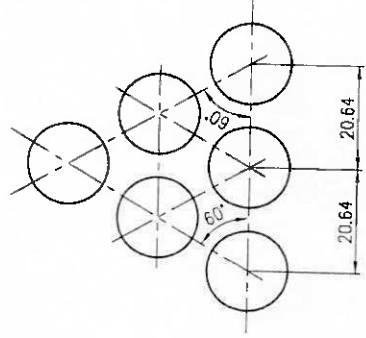
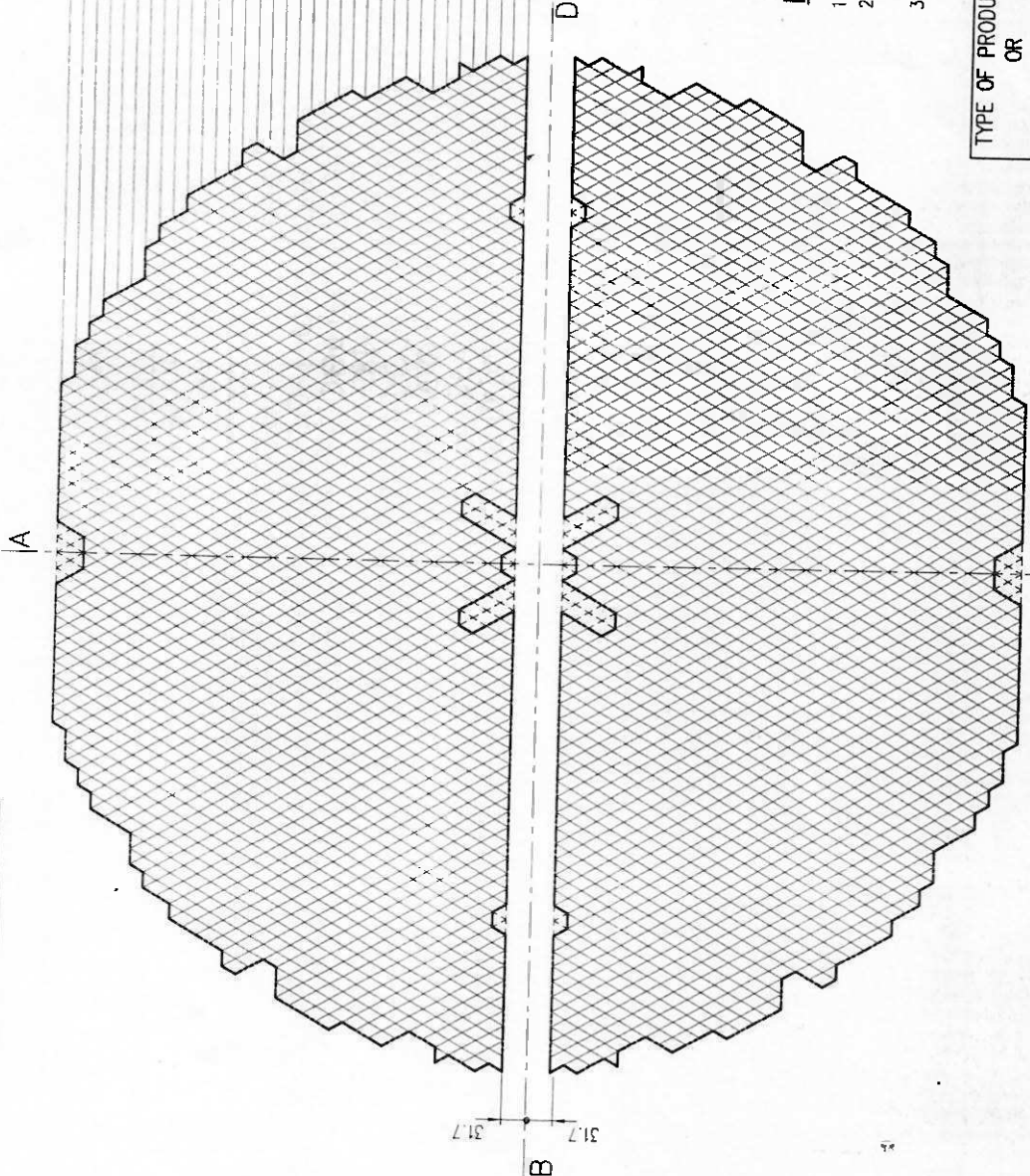
Sep Mon 12 10.36 2022

FIRST ANGLE PROJECTION

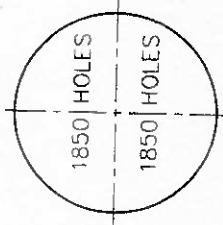
DRG. NO. 62329-10-541-3

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

- 20
- 26 31
- 34 35
- 36 41
- 44 45
- 48 49
- 50 51
- 54 55
- 54 53
- 58 59
- 60 61
- 62 61
- 62 63
- 64 63
- 62 63
- 66 65
- 64 65
- 64 62



TUBE PITCH



NOTE:--

1. TOTAL No OF TUBE HOLES (2 x 1850) = 3700.
2. TUBE HOLE SIZE IN TUBE SHEET IS $\phi 16.13 \pm 0.05$, ALSO THE VARIATION BETWEEN SPINDLE TO SPINDLE MAY BE RESTRICTED WITH IN 0.05.
3. O.T.L = 1385 MM.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		800 MW	
NAME		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	
DRN.	NAME	SIGN.	DATE
CHD.	A. K SAHOO	[Signature]	30.03.15
APPD.	K. KIRAN KUMAR	[Signature]	30.03.15
	B. SRINIVAS	[Signature]	30.03.15
DEPT. CODE	UNTOOL. DIMS. GR.	WEIGHT (KG)	REF. TO ASSY. DRG.
405	$\phi/M/f$	NA	NA
REV.	DATE	REV.	DATE
ALTERED	CHD.	ALTERED	CHD.
APPD.	DATE	APPD.	DATE
INVENTORY NO.	SIGN. AND DATE	REF. DRG. NO.	COMPUTER FILE NAME
TITLE		TUBE LAYOUT (FOR HPHS)	
DRAWING NO.		3-175-01-02329	
REV.		NO. OF SHT.	
NA		01	

Apr Mon 6 12:41:2015

Printed by : M. RAJESH-RCP-FMH/3031 / 6102654 on 12-09-22 10:52:02

This Drawing is printed from Engineering Digital Archive System (EDAS). Therefore signatures are not essentially required.



TECHNOLOGICAL PROCESS RE-PRINT

Production Order

Date

Plant: P006

Equipment No: HEH2600

102013557

25.01.2023

Type

WBS Element

Customer / Project Name

Part No

P-1032257800-17523

M/s. WBPDCCL

17523003

Drawing No.-Var

E.Rev.

T.Rev

Material No.

Name Of The Part

31750501469

00

31750501469-00

TUBESHEET FOR HPH-9A/B

Pos.No

BOM Qty

Ord Qty

MU

St.

Nt.Wt.

Remarks

MDCC

0001

1.000

1.000

EA

IS06

10,725.000

Yes

BOM Details

Pos.No	IC	Material Code	P.No	Remarks					
Matl.Spec	SPK	Qty	MU	Size 1	Size 2	Size 3	Formula Key	MPcs	St.
0010	L	HE9751155010	17523004	QC, CIB, Verification by TPIA.					
HE51155-NA		1.000	EA	0.000	0.000	0.000		0.000	ST06
Material Description : TUBESHEET FORGING				Reservation : 0014521449		Item : 0001		Picklist:	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				
0181	DA9995	P006	ZP04	0.000	0.000	0.000	0.000	

Sagardiggi-9A- HPH Tube sheet drilling

SCOPE OF WORK

Note: - This scope of work is for Tube sheet drilling of Sagardiggi HP Heater-9A

Tube layout drg.no. :,3-17505-01468 Rev.00.

Tube sheet drg.no. :,3-17505-01469 Rev.00 -- HP Heater -9A.

- 1.,,Tube sheet shall be loaded on vendors who were having the deep hole drilling machine facility. Drilling depth 510 mm minimum and crane capacity of 15T.
- 2.,,A certificate to be produced along with technical bid by mentioning machine specifications , make and date of manufacturing of machine and machine condition.
- 3.,,Tube sheet forging will be supplied with Stainless steel overlay, machining, inspections of overlaid surface, and hook welding on tube sheet for loading and unloading.
- 4.,,Tube sheet supplied with material attestation marks by concerned inspection agencies as per the quality plan.
- 5.,,Mock up piece (Drilling thk: 510 mm) - 1 no. per machine shall be made and available for our BHEL Hyd QC inspection with vendor material prior to start of tube holes drilling on actual job. Two clusters of 7 holes each length of 510 mm minimum.
- 6.,,Clearance for drilling of tube holes to be taken from the BHEL Hyd QC.
- 7.,,All notes given on Tube sheet drawing shall be followed.
- 8.,,Mark axis on as per drawing and punch on marking at ends for further reference.
- 9.,,Every marking on tube sheet shall get inspection by BHEL Hyd QC.
- 10.,,All Tube holes to be drilled in single setting.
- 11.,,Get inspection of Tube holes after every 10 cycles for finish, ovality, ligament and drift.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	25.01.2023					1	3



TECHNOLOGICAL PROCESS

Production Order

Date

Plant:P006

Equipment No: HEH2600

102013557

25.01.2023

Type

Work Order / PGMA

Customer

Part No

P-1032257800-17523/
17523

M/s. WBPDCCL

17523003

Drawing No.-Var	E.Rev.	T.Rev.	Material No.	Name Of The Part		
31750501469	00		31750501469-00	TUBESHEET FOR HPH-9A/B		
Pos.No	BOM Qty	Ord Qty	MU	St.	Nt.Wt.	Remarks
0001	1.000	1.000	EA	IS06	10,725.000	

Operation Details

Opr No	W.C.	Plant	Ctl. ky	Prep Time	Time/ PC(M)	Time/ PC(L)	Total Time	QC Signature
PRT Cat	PRT No.			PRT Description				

Sub Operation Text

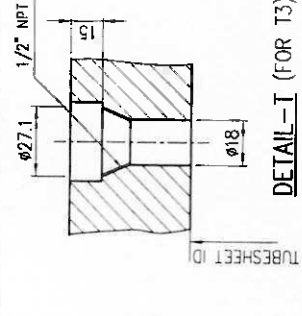
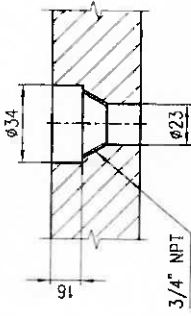
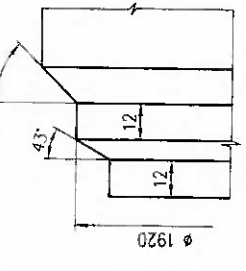
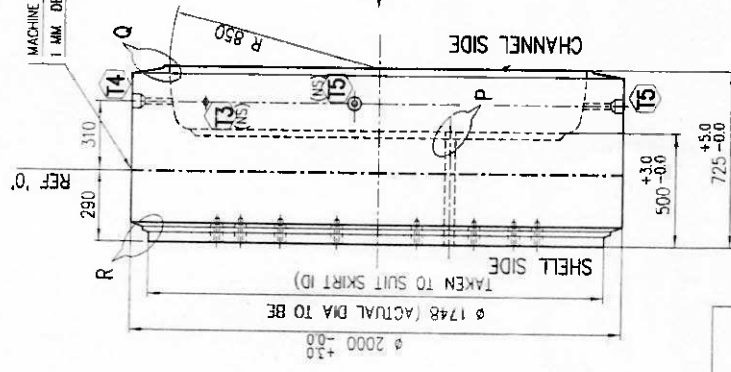
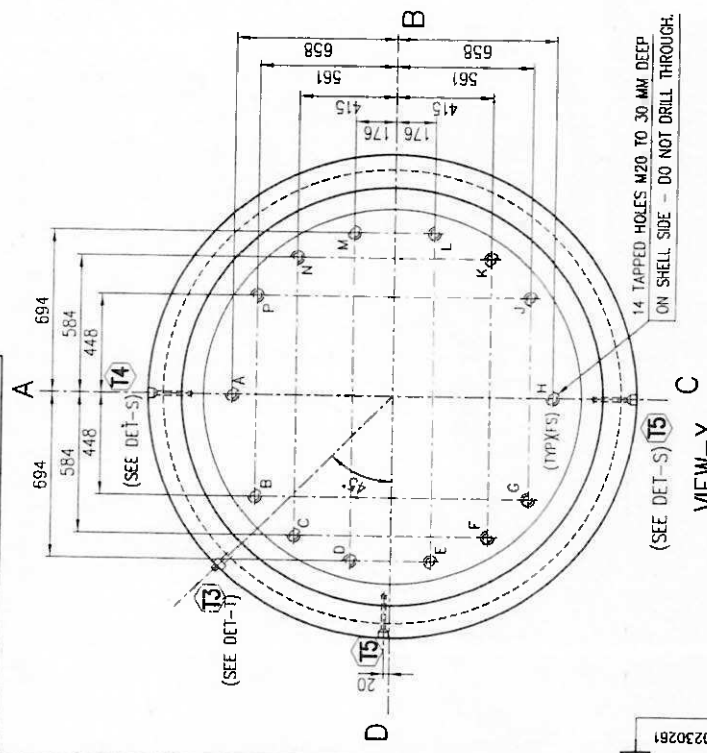
- 12.,,Tube holes finish as indicated in the drawing shall be maintained.
 - 13.,,Tube holes shall be drilled according to tube holes layout and as per tube sheet drawing.
 - 14.,,Drift on Tube holes will not be acceptable.
 - 15.,,Tie rod holes to be drilled and tapped on shell side as per drawing.
 - 16.,,T3, T4 and T5 Tapped holes on periphery shall be done as per respective details of the drawing.
 - 17.,,Chamfering of Tube holes both on shell side and Tube side shall be done as per det.-P of drg.
 - 18.,,Get dimensional inspection of tube holes for layout, tube hole finish, ovality, ligament and drift as per quality plan.
 - 19.,,Tube holes shall be answered to the BHEL Hyd supplied Go-No Go gauge.
 - 20.,,Any deviation on the job is not acceptable.
 - 21.,,Easily removable rust preventive shall be applied on all machined surfaces.
 - 22.,,Machining of shell side step as per det.-R and tube side weld bevel as per det.-Q will be carried out at our BHEL Hyd works.
 - 23.,,Submit dimensional report sheet along with dispatch of Tube sheet.
 - 24.,,Machined Tube sheet shall be covered properly while transportation.
- BHEL Hyd will not provide any packing material.

Chkd. By	Dt.	ECR/ Rev No	Dt.	Pro.Plnr	Rate Fixr / Tool Plnr	Pg no	No.of Pgs
	25.01.2023					2	3

ALL DIMENSIONS ARE IN MM

FIRST ANGLE PROJECTION

DRG. NO. 3-175-05-01469

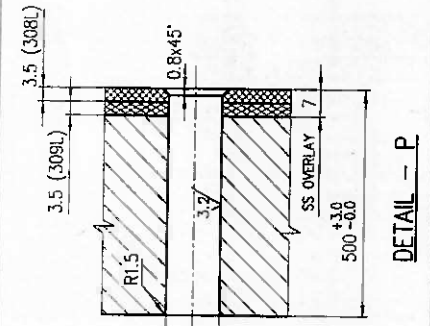
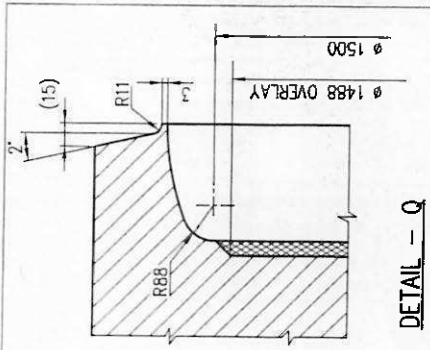


NOTES:-

1. FOR STAINLESS STEEL OVER LAY FOLLOW WELD DETAIL W/1 AFTER OVER LAY U.T. REQUIRED. ACCEPTANCE STD HE71046.
2. FOR TUBE LAYOUT REF. DRG. No. 3-175-05-01468.
3. FOR WELD SYMBOLS & PROCEDURES SEE DRG.No.3-175-01-00544.
4. M.T. REQUIRED FOR WELD EDGE PREPN. DETAIL Q & R.
5. P.W.H.T AFTER OVERLAY REQUIRED. P.W.H.T TO BE DONE AFTER SKIRT TO TUBE SHEET WELDING
6. FOR UNSPECIFIED TOLERANCES REFER PRODUCT STD HE71036.

INVENTORY NO. _____
 SIGN. AND DATE _____
 REF. DRG. NO. _____
 COMPUTER FILE NAME _____
 GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230281

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME	SIGN.	DATE	NO OF VAR.
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		A. K SAHOO		14.09.22	14.09.22 - NA -
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		K. KISHORE KUMAR		14.09.22	14.09.22 - NA -
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		K. KIRAN KUMAR		14.09.22	14.09.22 - NA -
DEPT. H.E.D	UNTO. DIMS. GR. #/M/IT	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
405	405	N.T.S	NA	-NA-	-NA-
TITLE		DRAWING NO.		REV.	
TUBE SHEET (FOR HPH-9A&9B)		3-175-05-01469		00	
CARD CODE		SHT. No 01	NO. OF SHT. 01		



1

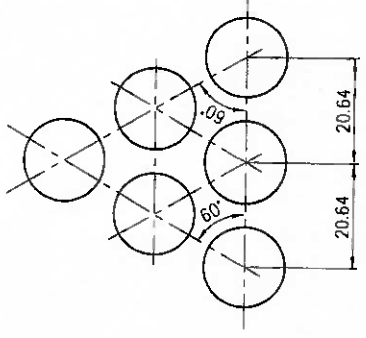
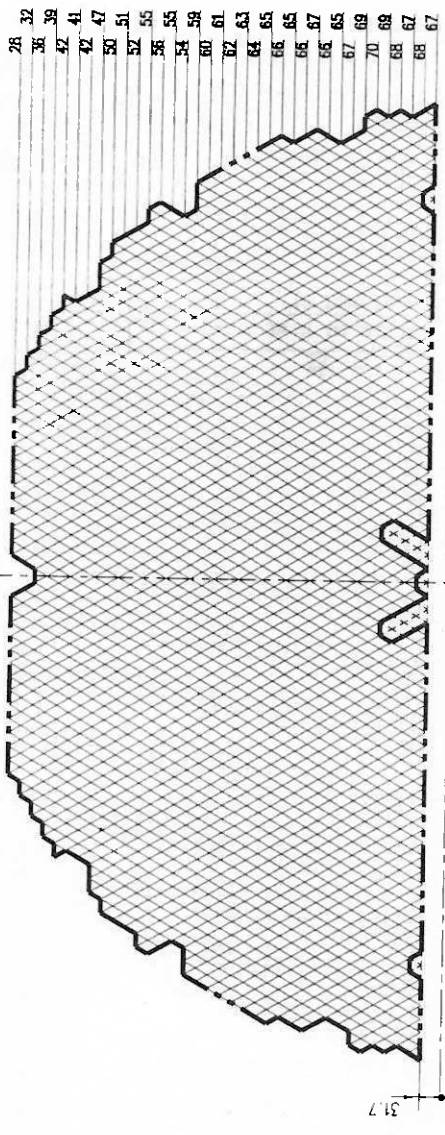
2

3

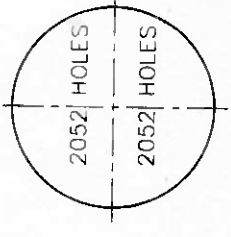
ALL DIMENSIONS ARE IN mm

FIRST ANGLE PROJECTION

DRG. NO. 3-175-05-01-668



TUBE PITCH



NOTE: -

1. TOTAL NO. OF TUBE HOLES (2 x 2052) = 4104.
2. TUBE HOLE SIZE IN TUBE SHEET IS $\phi 16.13 \pm 0.05$, ALSO THE VARIATION BETWEEN SPINDLE TO SPINDLE MAY BE RESTRICTED WITH IN 0.05.
3. O T L = 1463 MM.

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

TYPE OF PRODUCT		660MW SAGARDIGCHI UNIT-5	
OR		NAME OF CUSTOMER/PROJECT	
BHARAT HEAVY ELECTRICALS LTD.		HYDERABAD	
DRN.	A K SAHOO	NAME	
CHD.	K KISHORE KUMAR KKK	SIGN.	
APPD.	K KIRAN KUMAR	DATE	07.09.22
WEIGHT (KG)	NA	ITEM NO.	NA
SCALE	NTS	REF. TO ASSY. DRG.	NA
UNTO. DIMS. CR. ϕ /M/M			
DEPT. HEDDES CODE 405			
TITLE		DRAWING NO.	
TUBE LAYOUT (FOR HPH-9A/9B)		3-175-05-01468	
CARD CODE		NO. OF SHT. 01	
NA		NO. OF SHT. 01	
NO. OF ITEMS		REV.	
NA		00	





BHARAT HEAVY ELECTRICALS LIMITED
R.C.PURAM, HYDERABAD

MANUFACTURING QUALITY PLAN

ITEM: **HP HEATER & DESUPER HEATER**
TYPE: **660 MW**

QP No: HYQA/SSMQP/HE/544/5244
Rev. No.:04
DATE: 11.01.2023
SHEET Page 8 of 9
DOC NO : HY-MQ-445-LAD-A007

CUSTOMER: M/s WBPDC(L West Bengal Power Development Co Ltd.)
CONSULTANT: M/S DCPL
PROJECT: 1X660 MW WBPDC SAGARDIGHI TPP, UNIT -5
BHEL SALE ORDER NO.: MPA1066001
BHEL WORK ORDER NOS.: W-1032257400, 1032257500,
1032257600, 1032257700, 1032257800, 1032257900, W-1032258000
& 1032258100

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY			REMARKS
										M	B	C	

2.1 TUBE SHEET OVERLAY AND DRILLING

2.1.1	TUBE SHEET OVERLAY AND DRILLING	A	MATERIAL IDENTIFICATION AND VERIFICATION OF TC	MAJOR	VISUAL	100%	DRG. TC & SPEC	DRG. TC & SPEC	IR / LOG RECORD		P	W		
		B	PT ON SURFACE TO BE OVERLAYED	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	W	
		C	PT AFTER OVERLAY	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	W	
		D	UT ON OVERLAY FOR CLADDING BOND	MAJOR	NDE	100%	ASME SEC.V ART.5	HE 71046	NDE REPORT	✓	P	W	W	
		E	DIMN. CONFORMITY AFTER DRILLING.	MAJOR	MEASRT.	100%	21750101672 21750101673 21750501225 21750501226 21750501227 21750501228 21750501229 21750501230	21750101672 21750101673 21750501225 21750501226 21750501227 21750501228 21750501229 21750501230	IR / LOG RECORD	✓	P	W	W	
2.1.1	TUBE SHEET OVERLAY AND DRILLING	F	PT/MT ON BOTH WELD EDGE PREPARATIONS FOR HEMIHEAD & SKIRT SIDE	MAJOR	NDE	100%	ASME SEC.V ART.6/7	ASME SEC.VIII DIV.I APPX.6/8	INSPN. RECORD	✓	P	W	W	

2.2 SKIRT FABRICATION

2.2.1	SKIRT FABRICATION	A	IDENTIFICATION OF MATERIALS & VERIFICATION OF TC (SKIRT PLATES AND NOZZLES)	MAJOR	VISUAL	100%	21750101672 21750101673 21750501225 21750501226 21750501227 21750501228 21750501229 21750501230, TCS & SPECIFICATION	21750101672 21750101673 21750501225 21750501226 21750501227 21750501228 21750501229 21750501230, TCS & SPECIFICATION	IR / LOG RECORD		P	W	✓	
-------	-------------------	---	---	-------	--------	------	---	---	-----------------	--	---	---	---	--

<p>LEGEND:</p> <p>M: MANUFACTURER / VENDOR B: BHEL /BHEL NOMMNATED INSPECTION AGENCY, C: CUSTOMER / CUSTOMER NOMINATED INSPECTION AGENCY.</p> <p>P: PERORM, W: WITNESS V: VERIFICATION, * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.</p>	<p>PREPARED BY:</p> <p><i>Alok Behera</i></p> <p>ALOK BEHERA DY.MGR/ QA</p>	<p>REVIEWED BY</p> <p><i>B. Ashok Kumar</i></p> <p>B. ASHOK KUMAR AGM / QA</p>	<p>APPROVED BY</p> <p><i>B. Ashok Kumar</i></p> <p>B. ASHOK KUMAR AGM / QA</p>	<p>APPROVED BY:</p> <p>CUSTOMER / CONSULTANT</p>
	Format no. : HYQA/QP/MQP-1 Rev.00			

Pre-Qualification Criteria for Tube Sheet Drilling

The BIDDER has to compulsorily meet the Qualifying criteria indicated in section 1 to get qualified. Otherwise the technical offer will not be considered.

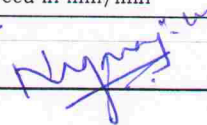
SECTION: 1

S.NO	Requirement	Vendors Response
1.1	Only those vendors shall quote who mandatorily meets the clause nos : 1.2 to 1.10	
1.2	Vendor shall have Deep Hole Drilling machine with BTA drilling and capability of more than 660 mm thickness drilling.	
1.3	Vendor shall have deep hole drilling machine to drill all holes on tube sheet in a single job setting.	
1.4	Machine shall have X-Axis: 2000 mm(min); Y-axis : 2000 mm(min).	
1.5	For drg no: 3-175-01-02566, 3-175-05-1415, 3-175-05-1418 : Vendor shall have capacity for loading and unloading of tube sheet of 26T weight. Or vendor shall hire mobile crane for loading and unloading of tube sheet of 26T weight. For drg no: 3-175-01-02750, 3-175-05-1459, 3-175-05-1469 : Vendor shall have capacity for loading and unloading of tube sheet of 15T weight. Or vendor shall hire mobile crane for loading and unloading of tube sheet of 15T weight.	
1.6	Vendor shall submit latest and valid machine calibration certificate.	
1.7	Vendor should have drilled atleast one tubesheet of 450 mm thk (min) in last 5 years without any deviation. PO Copy, Inspection report copy of the tube sheet shall be submitted. Phone number and e-mail of the organization who placed the order for drilling shall be submitted.	
1.8	No gun drilling is permitted. Only BTA drill bits shall be used for drilling.	
1.9	Vendor shall not outsource the job or part of operations to other parties	
1.10	BHEL reserves the right to accept or reject the offer based on the assessment of their technical capability. BHEL reserves the right to verify the information provided by the Vendor by taking feed back or by visit to vendor works. In case the information provided by vendor is found to be false / incorrect, the offer shall be rejected.	

SECTION: 2

S.NO	Information	Vendors Response
2.1	Deep hole drilling machine Commissioning year	
2.2	No of deep hole drilling machines available. No of spindles on each machine. Minimum & maximum hole size and drilling depth capability of the machine.	
2.3	OEM of the machine	
2.4	KVA rating of the machine	
2.5	Detail of lube oil(make and brand name) used for the machine	
2.6	BTA Bits supplier details	
2.7	Drilling Spindle Feed in mm/min	

Prepared by



Approved by



A. CHANDRA SEKHAR

अपर महा प्रबंधक/इंजि.(एचई एवं एफ)

Addl. General Manager/Engg. (HE&F)

डी एच ई एल, हैद/ BHEL, HYD-502 032



(Attachment to Enquiry No. E9AWS0012 Due on Date 08.04.2023

Special Conditions of Contract (SCC)

Sl.No	ITB Clause No.	Clause	Available Options	BHEL requirements	Bidder response
1	3	Mode of Submission	Conventional / E-Procurement	Conventional	
2	5	Type of Bid	Single part / Two Part / Three Part	Two Part	
3	6	Indigenous purchase - Destination	BHEL, RCPuram, Hyderabad / Site	BHEL, RCPuram, Hyderabad	
4			Destination in case of Site	NA	
		Mode of Shipment	Air / Sea	NA	
5		Imports purchase - Destination	Mumbai / Navasheva / Hyderabad / Others	NA	
6		Freight	Customer / BHEL / Vendor	Refer SCC cl. 5	
7		Insurance	Customer / BHEL / Vendor	Vendor	
8			Basic Custom Duty	Project Imports/ Concessional Duty / Merit Duty / Nil / Others Duty Structure	NA
9	9	Price validity	____ days	90 from TBO	
		Optional Spares price validity	____ Months / years from the date of ____	NA	
10	8	Delivery Period	____ weeks / ____ Months (Staggered delivery to be detailed)	Refer SCC cl. 4	
11	18	Evaluation basis	Itemwise / Total	Itemwise	
12	Others	Quantity Split	Splittable / Non-Splittable	Non-Splittable	
13					
14	9	Price Variation Clause (PVC)	Applicable / Not applicable	NA	
15	12	Payments Terms	Inland Letter of Credit (ILC) In case Bidder opts for ILC Payment, the LC Usance period shall be 120 days with all charges to bidder's account and loading of 0.50%. Note : Wherever it is felt necessary to include ILC payment term in SCC in order to promote competition, the same shall be done with due consent of Finance and approval of competent authority during checklist approval	NA	
16		Tender cost	Applicable / Not applicable	NA	
17		Earnest Money Deposit (EMD)	____ % of tender value / Not applicable	NA	
18		E & C Supervision Charges	Applicable / Not applicable	NA	
19			If applicable , max 2% of Total contract value .	NA	
20		Bank Guarantee against milestone payment	(If envisaged to be detailed with %)	NA	
21	Others	Contract execution Bank Guarantee	____ % of PO Value to be submitted after receipt of PO / Not Applicable	NA	
22	17	Performance Bank Guarantee		NA	
	7	Additional documentation for payment	Test / Warranty / Guaranty / O&M Manual etc.,	NA	
24	13	Max Penalty applicable on	Delayed portion / Order value	Order Value	
25	Others	Contract Specific Penalty Clause	Including Documentation delay , Performance , E&C etc., to be detailed , considering Project , Unit , Set , etc.,	NA	
26	16	Guarantee / Warranty Period	Applicable Clause a/b/c	As per 16a of ITB	
27		Contract Specific Guarantee / Warranty Period	Specific period if any to be detailed	NA	
28	Others	Expected commissioning period	____ months from the date of supply	NA	
29	48	Detailed Billing Breakup (BBU)	Applicable / Not applicable	NA	
30			(If applicable , Bidder shall provide detailed billing break-up in respect of the major items/components (stipulated in the tender) as part of offer .)		
31	Others	Customer approval of vendor	Applicable / Not applicable	NA	
32		Drawing approval	Applicable / Not applicable	NA	
33		QAP approval	Applicable / Not applicable	NA	
34	36	Inspection by	BHEL / BHEL TPI / Vendor TPI / Customer	BHEL QC & End Customer/As per QAP	
35	Others	Financial / Commercial PQC	Applicable / Not applicable	Technical PQC Applicable	
36			If Applicable to be detailed		