		BHARAT HEAVY ELECTRICALS LIMITED [A Government of India Undertaking] Ramachandrapuram, Hyderabad, 502032, A.P. India Phone 040-23184526, 23182322 FAX:040-23021910, 1954			भारत हेवी इलेक्ट्रिकल्स लिमिटेड (भारत सरकार का उपक्रम) रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत		RFQ NO :		PURCHASE DEPARTMENT ENQUIRY क्रय विभाग जांच (ई मेल : tenderbox@bhelhyd.co.in)		SHEET:1 OF :1	
HY17001 C REV.NO.0		Phone 091-40-23184526 091-40-23182322		FAX : 091-40-23021910 091-40-23021954		PURCHASE DEPARTMENT						
		GSTIN:		Enq/Collective No :E9AWS00030		Enq.Dt. : 18.05.2023		No.Of Items :7		DUE Dt. OF QUOTN. : 29.05.2023		
Office Copy				Please submit your lowest quotation in sealed cover superscribed with Enquiry No./Collective No.(RFQ No) and due date subject to our terms and conditions attached ,for the materials mentioned below.Your offer has to reach us onor before due date by 11.00 Hours (IST) and will be opened at 14.00 Hours.(IST).If our Enquiry No./Collective No.(RFQ No) and tender due date are not super scribed on the tender cover , your offer shall be summarily rejected. Incomplete offers and late offers will not be considered.								
SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var	Description	Unit	Qty	Delivery Date	Schedule Qty			
1	1700035572	10	31750102505-01	31750102505-,00,,,	DISHED END 2:1 ELLIP ID1800X28THK(MIN)	EA	2.000	15.06.2023	2.000			
2	1700035572	20	31750102505-02	31750102505-,00,,,	DISHED END 2:1 ELLIP ID1800X57THK(MIN)	EA	2.000	15.06.2023	2.000			
3	1700035572	30	31750102505-03	31750102505-,00,,,	DISHED END 2:1 ELLIP ID1600X60THK(MIN)	EA	2.000	15.06.2023	2.000			
4	1700035571	10	41622200421-01	41622200421-,00,,,	DISH 2:1 ELLIP ID1650X13THK(MIN)LPH	EA	2.000	15.06.2023	2.000			
5	1700035571	20	41622200421-02	41622200421-,00,,,	DISH 2:1 ELLIP ID1850X13THK(MIN)LPH	EA	2.000	15.06.2023	2.000			
6	1700035571	30	41622200421-03	41622200421-,00,,,	DISH 2:1 ELLIP ID1400X30THK(MIN)LPH	EA	2.000	15.06.2023	2.000			
7	1700035571	40	41622200421-04	41622200421-,00,,,	DISH 2:1 ELLIP ID1570X34THK(MIN)LPH	EA	2.000	15.06.2023	2.000			
Special Remarks												
CheckList of Quality Interventions:												
BHEL reserves the right to enforce any or all of the following checks during execution of the order. There is no additional cost to the vendor on account of these checks.												
						TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART			For and on-behalf of Bharat Heavy Electricals Limited. MITHLESH KUMAR DY. MANAGER/SC(HE&FAB)			



(Attachment to Enquiry No. E9AWS00030 Due on Date 29.05.2023 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)	DEVIATIONS / COMMENT
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 envelopes 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.,</p> <p>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</p> <p>AND</p> <p>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.</p> <p>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> <ul style="list-style-type: none">a. Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)b. Packing List - clearly showing number of packages, gross weight and net weight.c. Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC)d. Insurance intimation/declaration certificatee. Pre-dispatch Inspection report /Third Party Inspection Certificates.f. Consignee copy of LR signed & stamped by Customer/Site representative for DD Itemsg. e-waybillh. Any 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>		<p>Non Deviatable</p>
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B

Imports

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.

iii) AWB/BL must contain the information of BHEL GST no., and PAN no.

iv) **Air Shipments:**
Bidder shall ensure the following

a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC).

b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier.

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.

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.

e) Following dimensions of single package may be noted.

i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63"

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.

f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support.

v) **Sea Shipments:-**
bidder shall ensure the following

a). Port of discharge -- Nhavaseva/Mumbai/Chennai.

b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS.

c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt.

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.

e). **For CIP shipments**

1. In case of FCL shipments, Detention free period must be 14 days.

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.

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.

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.

5. bidder must insure the cargo for 110% of material value including the freight amount.

(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.

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:

1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector

A. **For FOB Sea Consignments:-**

Penalty for late submission / negotiation of documents beyond 14 days shall be as under:

Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges	Recoverable Charges per day per container	
		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



	<p>B. For CIP Sea Shipments: -</p> <p>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.</p> <p>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:</p> <p>a) No Business Connection in India declaration issued by the bidder as per the format specified. (or)</p> <p>b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified.</p> <p>(ii) Tax Residence Certificate issued by the bidder's tax authorities.</p> <p>(iii) Form 10F, as attached in Annexure V, to be issued by the bidder.</p> <p>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		
	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.		Non Deviatable
9	Pricing Terms		
	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.	Non Deviatable	execution of
10	PRICE VALIDITY :		
	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.	Non Deviatable	opening
11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)		
A	Indigenous Purchase		Non Deviatable
	<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.</p> <p>- IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided</p> <p>iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services.</p> <p>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:</p> <p>- TDS as per the extant statutes shall be deducted.</p> <p>- In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act.</p> <p>- Concessional certificates, if any, should be provided well in time for lower deduction of tax.</p>		



	Terms & Conditions to be complied 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. 2. Reimbursement of GST amount will be made only upon completion of the following: i. Bidder declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL 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. 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. 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. 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. 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. 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. 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.		
B.	Foreign Purchase (Imports) 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. Taxes deducted at source: a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered. 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.		Non Deviatable
12	Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.		
A	Indigenous: a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days b. Medium Enterprises - 100% Direct EFT payment within 60 days c. Non MSME Bidders - 100% direct EFT Payment within 90 Days Note 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. B. MSEs (covered under MSME Act) need to register and renew periodically and update the sameBHEL C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order deliverythe amount actually paid whichever is less. 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. 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	omission of with date or ;T	
B	Imports: i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a crperiod of 60 days - Cash Against Documents (CAD) 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% 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.	edit ective lian	

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:</p> <p>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.</p> <p>A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery.</p> <p>Loading for deviation:</p> <p>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.</p> <p>Further detailing on PBG as specified in SCC.</p> <p>The PBG shall be for the performance of the goods and shall remain binding not withstanding 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.</p> <p>The Bidders may specifically note the following.</p>			
18	Evaluation and Loading Criteria:		

	<p>i) Evaluation Currency for this tender shall be “INR”.</p> <p>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.</p> <p>INDIGENOUS</p> <p>a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL.</p> <p>b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value.</p> <p>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”</p> <p>IMPORTS</p> <p>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.</p> <p>In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at “Total Cost to BHEL”:</p> <p>- Import duty as applicable on the date of Part-I bid opening.</p> <p>- Loading will be as per the table below</p> <table><tr><td></td><td>Ex Works</td><td>FOB/ FC A</td><td>CIF/ CFR</td><td>CIP</td></tr><tr><td>Foreign Inland freight and insurance</td><td>2%</td><td></td><td></td><td></td></tr><tr><td>Marine freight and marine insurance</td><td>3%</td><td>3%</td><td></td><td></td></tr><tr><td>Destination Port handling charges</td><td>0.50%</td><td>0.50%</td><td>0.50%</td><td></td></tr><tr><td>clearing charges & inland freight and insurance</td><td>2%</td><td>2%</td><td>2%</td><td>2%</td></tr></table> <p>COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL"</p> <p>A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation.</p> <p>B. Loading for payment terms as per clause 12 of ITB</p> <p>C. Loading for deviation in Warranty & PBG as per clause 16,17.</p>		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%
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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	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.
B	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.
C	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.
D	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.
24	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.
25	ISO-9001, ISO14001 & OHSMS 45001 shall be complied.
26	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.
27	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).
28	Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.
29	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.
30	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.
31	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
32	Ordering and confirmation of order 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.
33	Execution The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.
34	Progress Report 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.
35	Non-disclosure Obligations

	<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 of 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 (L x 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 OM 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 .
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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 PM D) **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, recovery 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:

Annexure V

(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:.....

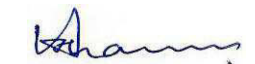
		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HY/HE/016/DE REV. NO. : 04 DATE: 19.06.2021 VALID UPTO: 19.06.2023					
				ITEM: CS DISHED ENDS BHEL SPEC: HE 51370 Rev.00				PAGE 1 OF 4					
				SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D
										P	W	V	
1	PLATE MATERIAL	VERIFICATION OF MILL TEST CERTIFICATE AND IDENTIFICATION MARKS FOR MECHANICAL AND CHEMICAL PROPERTIES	CRITICAL	VISUAL	100%	SA516 GR.70 (with S1,S5,S8)	SA516 GR.70 (with S1,S5,S8)	TEST CERTIFICATE				1	CHP
2	WELD SEAM OF BLANKS (IF APPLICABLE)	1. PT ON WELD EDGE PREPARATION	CRITICAL	NDE	100%	ASME SEC.V ARTICLE 6	ASME SEC.VIII DIVISION I APPENDIX 8	SUPPLIER TC	✓	2	1		
		2. RT OF WELD JOINT BEFORE FORMING	CRITICAL	NDE	100%	ASME SEC.V ARTICLE 2	ASME SEC.VIII DIVISION 1 UW 51	SUPPLIER TC	✓	2		1	REVIEW OF RT FILMS
		3. MECHANICAL TEST ON TEST COUPON	CRITICAL	VISUAL	SAMPLE	SA516 GR.70	SA516 GR.70	SUPPLIER TC	✓	2	1		
3	IN PROCESS	1 UT OF PLATE BEFORE FORMING	CRITICAL	NDE	100%	SA 435	SA 435	SUPPLIER TC/IR	✓	2		1	
		2 DIMENSIONAL CONFORMITY INCLUDING CHECKING FOR MINIMUM THICKNESS	MAJOR	MEASURE MENT	100%	DRAWING	DRAWING	IR	✓	2	1	1	CHP Note -8
		3 RT ON WELD SEAM AFTER FORMING (IF APPLICABLE)	CRITICAL	NDE	100%	ASME SEC VIII ARTICLE 2	ASME SEC VIII DIVISION I UW 51	IR,RT FILM	✓	2		1	REVIEW OF RT FILMS
		4 VERIFICATION OF PWHT CHARTS FOR NORMALISING AFTER FORMING	CRITICAL	VISUAL	100%	ASME SEC VIII DIVISION I UCS 56	ASME SEC VIII DIVISION I UCS 56	HT CHART,IR	✓	2		1	CHP Note -7
		5 PT / MT ON ENTIRE SURFACE AFTER FORMING	CRITICAL	NDE	100%	ASME SEC.V ARTICLE 6/7	ASME SEC.VIII DIVISION 1 APPENDIX 8/6	IR	✓	2	1		CHP

LEGEND:
P: - PERFORM, W: - WITNESS, V: - VERIFICATION,
INDICATING 1: - BHEL / BHEL NOMINATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V.
* D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.


PREPARED BY:



ALOK BEHERA
DY.MGR/ QA

Reviewed by:


B. ASHOK KUMAR
AGM/QA




Approved by:



B. ASHOK KUMAR
AGM/QA

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HY/HE/016/DE REV. NO. : 04 DATE: 19.06.2021 VALID UPTO: 19.06.2023					
				ITEM: CS DISHED ENDS BHEL SPEC: HE 51370 Rev.00									
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SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY			REMARKS
										P	W	V	
3	IN PROCESS /FINAL	6 CHECK FOR THICKNESS AFTER REMOVAL OF SCALES	CRITICAL	MEASURE MENT	100%	DRAWING	DRAWING	IR		2	1		CHP
		7 MT OF WELD SEAMS ON INSIDE AND OUTSIDE SURFACES AFTER FORMING AND NORMALISATION (IF APPLICABLE)	CRITICAL	NDE	100%	ASME SEC.V ARTICLE 7	ASME SEC.VIII DIVISION 1 APPENDIX 6	IR	✓	2	1		
		8 UT ON OUTER SURFACE AFTER FORMING	CRITICAL	NDE	100%	SA 435	SA 435	IR	✓	2	1		CHP
		9 LIFTING LUG ARRGT PT LIFTING LUG WELD	CRITICAL	VISUAL NDE	100%	DRG, ASME SEC.V ARTICLE 6	DRG, ASME SEC.VIII DIVISION 1 APPENDIX 8	IR	✓	2	1		
		10 MATCHING OF DISHED ENDS	CRITICAL	MEASRT	100 %	DRG,SPEC	DRG,SPEC	IR	✓	2		1	NOTE-4
		11 MARKING OF DISHED ENDS	CRITICAL	VISUAL	100%	DRAWING,SPEC	DRAWING,SPEC	IR	✓	2	1		
		12 MECHANICAL TESTS ON TEST COUPON	CRITICAL	VISUAL	SAMPLE	SA 516 GR.70	SA 516 GR.70	IR	✓	2	1		CHP

Notes:

1. PROJECT SPECIFIC REQUIREMENTS, IF ANY, AS PER P.O. SHALL ALSO BE COMPLIED WITH.
2. ALL REQUIREMENTS AS PER BHEL SPECIFICATION AND DRAWING ARE TO BE COMPLIED WITH.
3. VALID IBR TC SHALL BE FURNISHED AS APPLICABLE AS PER PO. VERIFICATION SHALL BE BY BHEL TPIA.
4. WHEN DISHED ENDS ARE ORDERED IN PAIRS FOR SINGLE SHELL.
5. IN CASE OF SPINNING METHOD IS ADOPTED, THE CENTRAL HOLE SHALL BE PLUGGED AND RADIOGRAPHED 100%. REVIEW OF RT FILMS BY BHEL TPI
6. VERIFICATION OF WPS, WPQ AS PER ASME SEC-IX BY BHEL TPIA

LEGEND: P: - PERFORM, W: - WITNESS, V: - VERIFICATION, INDICATING 1: - BHEL / BHEL NOMMNATED INSPECTION AGENCY, 2: - VENDOR / SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT / CHARACTERISTICS UNDER THE COLUMNS P, W & V. * D: RECORDS IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED IN QA DOCUMENTATION.		PREPARED BY:  ALOK BEHERA DY.MGR/ QA	Reviewed by:  B. ASHOK KUMAR AGM/QA	Approved by:  B. ASHOK KUMAR AGM/QA
Format no. : HYQA/QP/VSQP Rev.02				

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS				QP. NO: HY/HE/016/DE					
				ITEM: CS DISHED ENDS BHEL SPEC: HE 51370 Rev.00				REV. NO. : 04					
								DATE: 19.06.2021					
								VALID UPTO: 19.06.2023					
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SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY P W V			REMARKS

7. NORMALIZATION SHALL BE DONE FOR SPHERICAL DISH ALSO AFTER PRESSING




8. SPHERICAL DISH SHALL BE OF SEAMLESS CONSTRUCTION AND PROFILE SHOULD MATCH WITH DISHED END OD AS PER BHEL DRAWING.


NOTES FOR INSPECTOR - TPIA

1. TPIA TO CHECK THE LATEST VERSION OF STANDARDS/DRAWINGS /TOLERANCES ETC TO BE MENTIONED IN QUALITY PLAN/DRAWING. THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS / APPROVED DRAWINGS, DATA SHEET, BOM AND PO.
2. ONLY LEVEL II & ABOVE QUALIFIED PERSON IN RESPECTIVE NDE TO VERIFY OR WITNESS THE NDT TEST REPORT/RESULTS
3. INSPECTOR TO ENSURE THAT DOCUMENTS (QUALITY PLAN, DRAWINGS, DATA SHEET, PURCHASE SPECIFICATIONS, ETC) ARE AVAILABLE AS PER PURCHASE ORDER BEFORE STARTING THE INSPECTION.
4. TPIA TO REVIEW ONLY THE ORIGINAL TEST CERTIFICATES ISSUED BY THIRD PARTY LABORATORIES OR SUPPLIERS.
5. INSPECTION REPORTS SHALL BE SUBMITTED WITH A REMARK THAT ' COMPARED WITH ORIGINAL TEST CERTIFICATE. REVIEWED, VERIFIED AND FOUND IN ORDER '. TPIA TO ENSURE THE SAME.
6. INSPECTOR TO ENSURE USE OF VALID AND CALIBRATED MEASURING INSTRUMENTS AND EQUIPMENT.
7. TPIA SHALL ENSURE THAT MATERIAL TEST CERTIFICATE & TRACEABILITY RECORDS ARE AVAILABLE FOR USE OF CORRECT MATERIAL
8. QUALIFICATION OF EQUIPMENT, PROCESS & PERSONNEL FOR SPECIAL PROCESSES LIKE WELDING, BRAZING, PAINTING & METAL COATING ETC.
9. TPIA TO ENDORSE ON ALL CERTIFICATES WITH COMMENTS (WITNESSED OR VERIFIED) AS PER QUALITY PLAN
10. TPIA SHALL ENSURE THAT LOG SHEETS CONTAIN ACTUAL MEASURED VALUES INSTEAD OF SAYING OK/NOT OK.
11. COMPLETE INSPECTION AND TEST DOCUMENTATION WHICHEVER IS IDENTIFIED WITH (V) UNDER COLUMN D OF APPROVED QUALITY PLAN SHALL BE ENCLOSED WITH THE INSPECTION REPORT. ALL TEST CERTIFICATES/ REPORTS REVIEWED AND CERTIFIED BY BHEL/TPI SHALL BE SUBMITTED TO BHEL AS DOCUMENTATION PACKAGE
12. ORIGINAL COPIES OF ALL INSPECTION AND TEST DOCUMENTS AUTHENTICATED BY TPIA SHALL BE SUBMITTED.

GENERAL NOTES

- BHEL RESERVES THE RIGHT FOR CONDUCTING REPEAT TEST, IF REQUIRED.
- BHEL APPROVED INSPECTION ENGINEERS TO BE DEPLOYED FOR INSPECTION.

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Format no. : HYQA/QP/VSQP Rev.02				

		BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		STANDARD QUALITY PLAN FOR VENDOR ITEMS ITEM: CS DISHED ENDS BHEL SPEC: HE 51370 Rev.00				QP. NO: HY/HE/016/DE REV. NO. : 04 DATE: 19.06.2021 VALID UPTO: 19.06.2023					
								PAGE 4 OF 4					
				SL NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D

- DRAWING / DATA SHEET SHALL PREVAIL OVER QUALITY PLAN IN CASE OF ANY CONTRADICTION BETWEEN QUALITY PLAN AND DRAWING / DATA SHEET.
- ALL TEST REPORTS SHALL BE PROVIDED AS PER PRESCRIBED FORMATS IN BHEL SPEC.
- ANY OTHER TESTS/ CHECKS INDICATED IN SPECIFICATION, P.O., OR DRAWING & ANY ADDITIONAL CHECKS ENVISAGED BY BHEL/TPI TO ENSURE WORKMANSHIP, FINISH, AESTHETICS, ETC. SHALL ALSO BE CONDUCTED AND WITNESSED/VERIFIED BY BHEL /TPI / CUSTOMER AS REQUIRED

MTC – MILL TEST CERTIFICATE

TC – TEST CERTIFICATE

IR – INSPECTION REPORT

COC – CERTIFICATE OF CONFORMITY

TPIA – THIRD PARTY INSPECTION AGENCY APPOINTED BY BHEL.

PO – PURCHASE ORDER

MPS – MANUFACTURING PROCESS SHEET

HTP - HEAT TREATMENT PROCEDURE

WPS- WELDING PROCESS SPECIFICATION

PQR- PROCESS QUALIFICATION RECORD

WQR- WELDER'S QUALIFICATION RECORD




RP - REPAIR PROCEDURE



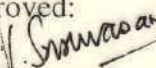
SP – STORAGE PROCEDURE OF WELDING CONSUMABLE


FCR – FURNACE CALIBRATION RECORD/REPORT

ICR – MEASURING INSTRUMENT CALIBRATION RECORD/REPORT

NDE - NON DESTRUCTIVE EXAMINATION

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	Format no. : HYQA/QP/VSQP Rev.02		

TD-106-2 Rev-5	Form No.		PRODUCT STANDARD HEAT EXCHANGERS HYDERABAD		No: HE 51370 REV. NO. 00 PAGE 1 OF 3
COPYRIGHT AND CONFIDENTIAL 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		<p align="center"><u>SPECIFICATION FOR DISHED ENDS</u></p> <p>1.0 Material: The material shall confirm to SA 516 gr. 70 (As per ASME Section II Part A, year of edition and addenda, as per Drawing/ Enquiry/ P.O). The plate shall meet the requirements of S1, S5 and S8 of supplementary requirements of ASME.</p> <p>2.0 Code of Construction: The code of construction shall be ASME section VIII division 1, year of edition and addenda as per drawing/ Enquiry/ P.O.)</p> <p>3.0 The dished ends up to a diameter of 1600 mm shall be pressed from a single plate by cold-forming/hot-forming/spinning. In case of spinning method is adopted, the central hole shall be plugged and radiographed 100%.</p> <p>4.0 For dished ends above 1600 mm, a weld joint is permitted and the butt weld shall be fully radiographed before forming. MPI/DPT shall be carried out on weld edge preparation, back chip area and weld. Qualified welders using approved procedures, as per the requirements of ASME Section IX, latest edition shall carry out the welding. Production test coupon for weld shall be prepared and tested as per the requirements of section IX of ASME.</p> <p>5.0 Tolerance: As per code of construction (para 2.0 above)</p> <p>6.0 When dished ends are ordered in pairs for a single shell, it is essential that the diameters of the two dished ends are matched within 3 mm and are clearly marked for identification to ensure proper alignment in further fabrication at BHEL.</p> <p>7.0 Thickness: The thickness specified is minimum thickness, which shall be ensured, after forming, throughout the surface of the dished ends including the knuckle portion. Minimum thickness shall be measured all over the area after removal of scales.</p> <p>8.0 Heat Treatment: Cold formed dished ends shall be normalized. Hot-formed dished ends shall be normalized, irrespective of the forming of the dished ends in normalizing range. Normalizing charts duly certified by the inspecting agency should be submitted. Dished end mechanical properties shall be proved on the test coupons, after the coupon is subjected to same heat treatment as the dished ends including the final normalization.</p> <p>9.0 In case the dished ends with butt welded joint in the blank, the following additional test shall be carried out;</p> <p>a. The butt weld shall be 100 % radiographed after forming</p> <p>b. Both inside and outside surface of weld seam shall be MT examined after normalization</p>			
		Ref.Doc	Revision: Refer to record of revision	Prepared:  B. Srinivas	Approved:  V.Srinivasan

TD-106-2 Rev-5	Form No.		PRODUCT STANDARD HEAT EXCHANGERS HYDERABAD	No: HE 51370
				REV. NO. 00
				PAGE 2 OF 3

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PT/MT shall be carried out on the entire surface of the dished ends after forming. If required, as drawing/ Enquiry. /P.O., UT shall be carried out on the entire surface of the formed dished end, as per requirement of SA 435 of ASME code. Acceptance standard shall be as per SA 435.

10.0 Dished ends shall be protected against corrosion by a temporary coat of rust preventive.

11.0 Three lifting lugs at 120 deg apart, of suitable sizes of the same material as dished ends shall be provided for handling. Qualified welders using approved procedures, followed by PT examination shall carry out the welding.

12.0 Inspection: The inspection shall be as follows

1. For HP Heater Dished ends : By DOB and LRIS and certification in IBR form III C.
2. For others : By LRIS

The scope of inspection shall be as per the approved quality assurance plans (HY/ HE/ 016/ DE).

13.0 The following test certificates/ information shall be furnished by supplier duly attested by the inspection agency.


- a. Mill test certificate of raw material & test coupon (if material is not free issue)
- b. Process of manufacture.
- c. Minimum thickness achieved.
- d. Normalizing charts
- e. As built dimensions of the dished ends.
- f. Mechanical test results.
- g. Radiography results(if applicable)
- h. UST results (if applicable)
- i. PT & MT examination report.
- j. IBR form IIIC (if applicable)

15. IDENTIFICATION :- The following identifications shall be hard punched.




1. Suppliers Monogram.
2. Dish number
3. Material Specification
4. Heat & Plate Number
5. P.O Number
6. Inspection Agency/ Personnel stamp

The above punching shall be done outside 50 mm below the peripheral edge.

Ref.Doc.

		MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C.PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN				PROJECT: 3 X 800 MW PATRATU STP EXPANSION PHASE –I PACKAGE: TG & AUX CONTRACT NO: CS- 9585-001 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1062-001,002 & 003 BHEL WO NO: WO- 1-0-322-529-00 TO 1-0-322-536-00, 1-0-322-537-00 TO 1-0-322-544-00, 1-0-322-545-00 TO 1-0-322-552-00							
				ITEM: HP HEATER & DESUPERHEATER OF HP HEATERS(800 MW) SUB SYSTEM: TG & AUX PKG		QP No HYQA/SSMQP/HE/510/5094 Rev. No.:03 DATE: 09.04.2019									
SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS	
					M	C/N					D*	M	C	N	
1.	2.	3.	4.	5.	6		7	8	9.			** 10.			11.

1.5		SKIRT MATERIAL												
1.5.1	AT SUPPLIER'S WORK	A	CHEMICAL COMPOSITION	MAJOR	CHEM.	AS PER SPEC	SA 516 GR.70 / SA 387 GR 12 CL2, SPEC	SUPPLIER'S TC	✓	P	V			
		B	MECH. PROPERTIES & HT CONDITION	MAJOR	MECH, HT	AS PER SPEC	SA 516 GR.70 / SA 387 GR 12 CL2, SPEC	SUPPLIER'S TC	✓	P	V			
		C	UT OF THE PLATE	MAJOR	NDE	100%	SA435	SUPPLIER'S TC	✓	P	V			
1.5.2	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC & ATTESTATION	MAJOR	VISUAL	100 %	SA 516 GR.70 / SA 387 GR 12 CL2, SPEC	IR	✓		V	V		
1.6		SHELL DISHED END												
1.6.1	AT BHEL	A	VERIFICATION & IDENTIFICATION OF MATERIAL WITH TC AS PER QP 9585-001-110-QVM-Q-870 D	MAJOR	VISUAL	100 %	QP & PO	IR	✓		V	V		R-03
1.7		FEED NOZZLE & MANWAY FORGING												
1.7.1	AT BHEL	A	VERIFICATION & IDENTIFICATION OF MATERIAL WITH TC AS PER QP 9585-001-110-QVM-Q-870 E	MAJOR	VISUAL	100 %	QP & PO	IR	✓		V	V		R-03
1.8		MAN HOLE COVER												
1.8.1	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC	MAJOR	VISUAL	100 %	SA 516 GR.70,SPEC	IR	✓		V	V		

 MANUFACTURER / SUB-SUPPLIER	 MAIN SUPPLIER	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"	 FOR NTPC USE	DOC.NO.: 9585-001-110-QVM-Q-870 REV 03 CAT I		
				REVIEWED BY	APPROVED BY	APPROVAL SEAL

Pre-Qualification Criteria for Dished Forming

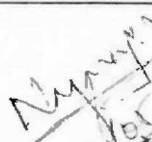
The BIDDER has to compulsorily meet the Qualifying criteria indicated in section 1 to get qualified. Otherwise the technical offer will not be considered.

SECTION: 1

S.NO	Requirement	Vendors Response
1.1	Only those vendors shall quote who mandatorily meets the clause nos. 1.2 to 1.6	
1.2	Vendor shall have facility for forming dished with carbon steel/stainless steel/alloy steel material of nominal plate thickness in the range of 12mm to 90 mm and diameters in the range of 700 mm to 2000 mm. Higher capacity than this minimum requirement is also acceptable.	
1.3	Vendor facilities shall be approved by IBR for forming HP Heater dished ends. Valid document evidence shall be submitted for the same.	
1.4	Vendor should have formed and supplied at least one dished end with IBR inspection in last 3 years without any deviation. PO Copy, Inspection report copy of dished end shall be submitted. Phone number and e-mail of the organization who placed the order for dished forming shall be submitted.	
1.5	Vendor shall not outsource dished forming operation to other parties.	
1.6	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	Maximum dished end forming thickness.	
2.2	No of dished end forming facilities available	
2.3	Normalizing furnace details	


K. NAGARAJ
 Manager / Technology - HEAF
 BHEL, Hyderabad
 01-23-111111, 01-23-111111, 01-23-111111

Material

Plant P006

P-10323 31000 - 17506

Group

622200421-01
DISH 2:1 ELLIP ID1650X13THK (MIN) LPH
50424575
LSize From 1
Grp.ct 1

Use 1

LSize To 99,999,999 EA
Status 4 PlantP006Sequence 0 Seq. Cat. Std. seq.
Operation 0010 Work Ctr DA9995

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev (Latest as per PO/PR)
BHEL Spec: HE51370, Rev (Latest as per PO/PR)
Drawing no: 4-16222-00421, Rev.00. Refer Item No-01.

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.
2. Cutting of exact blank size required for forming is in vendor scope.
3. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.
4. All notes in the drawing shall be strictly adhered.
5. Necessary protection shall be provided to avoid damage to edge preparation during transit.
6. Three lifting lug shall be welded at equal spacing on dished end. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.
7. PO Number, Item no, drawing number, BHEL Specification, QP number, inspection stamp shall be punched on the dished end.
8. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.
9. Final inspection of dished end by BHEL QC and CIB (For HP Heaters and Deaerators dished ends) in line to dished quality plan (QP number mentioned above).
10. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.
11. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

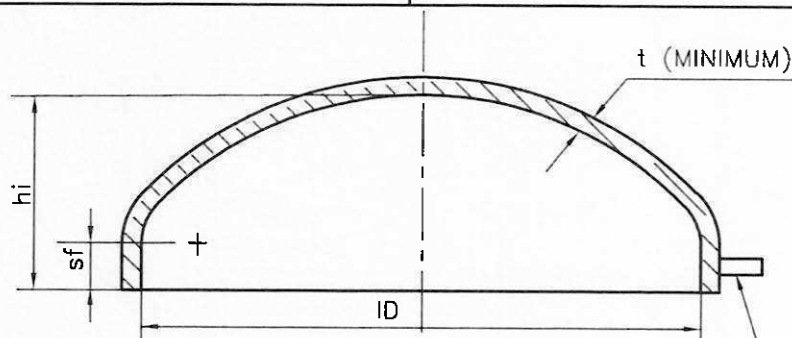
Ctrl Key QFNL
Base Qty

1 EA

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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



t = MIN. THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

T = PLATE THICKNESS BEFORE FORMING.

4 NO. OF LIFTING LUGS AT 90°.

(AT STRAIGHT FACE.) TO BE D.P.

CHECKED AFTER WELDING.

CERTIFIED BY BHEL APPROVED TPIA

ITEM No.	MATERIAL CODE	ID	hi	t	sf	WEIGHT IN KG.
01	HE9711814676	1650	462.5	13	50	400
02	HE9711814684	1850	512.5	13	50	500
03	HE9711814692	1400	400	30	50	685
04	HE9711814706	1570	442.5	34	50	945

NOTES:-

1. MATERIAL: SA 516 GR 70 WITH S1, S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O/P.R
2. TECHNICAL REQUIREMENTS: AS PER PRODUCT STANDARD HE51370 REVISION (LATEST AS PER P.O/INDENT).
3. QUALITY REQUIREMENTS AS PER QP No. HY/HE/016/DE REVISION (LATEST AS PER P.O/INDENT).
4. SHAPE : 2:1 ELLIPSOIDAL
5. INSPECTION AGENCY : AS PER P.O/INDENT.
6. DISHED END SHALL BE OF SEAMLESS CONSTRUCTION.
7. DISHED END SHALL BE ULTRASONICALLY TESTED BEFORE AND AFTER FORMING.
8. HEAT TREATMENT (NORMALISING) CYCLE :
 - i) RATE OF HEATING: 400 °F (222 °C) / Hr PER INCH Thk.(Max)
(BUT NOT MORE THAN 400°F (222°C)/Hr)
 - ii) HOLDING TEMPERATURE: 1652 °F (900 °C) - 1688 °F (920 °C).
 - iii) HOLDING TIME : 30 MINUTES (MINIMUM).
9. APPLICABLE CODE : AS PER P.O / INDENT.

REMARKS	ITEM NO	DESCRIPTION	STD	MATL. CODE	A/C	UNIT	UNIT Wt.
				MATL. SPEN.			QTY.
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME	SIGN.	DATE	NO.OF VAR.
				DRN. RAJESH M	M RAJESH	26.12.18	NA
				CHD. A K SAHOO	A K SAHOO	26.12.18	NA
				APPD. K.KISHORE KUMAR	KKK	26.12.18	NA
DEPT. HE ENGG CODE 405	UNTOL. DIM. GR. 2/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA		ITEM NO. NA	NO.OF ITEMS NA
TITLE DISHED END				CARD CODE NA	DRAWING NO. 4-162-22-00421		REV. 00
				SHT No.	1	NO OF SHT.	1

23.03.2023

Task List Print List

Material 41622200421-02

Plant P006

Group DISH 2:1 ELLIP

ID1850X13THK (MIN) LPH

Grp.ct 1

LSize From 1

LSize To 4

99,999,999 EA
PlantP006

Sequence 0 Seq. Cat. Std. seq.
Operation 0010 Work Ctr DA9995

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev (Latest as per PO/PR)
BHEL Spec: HE51370, Rev (Latest as per PO/PR)
Drawing no: 4-16222-00421, Rev.00. Refer Item No-02.

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.
2. Cutting of exact blank size required for forming is in vendor scope.
3. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.
4. All notes in the drawing shall be strictly adhered.
5. Necessary protection shall be provided to avoid damage to edge preparation during transit.
6. Three lifting lug shall be welded at equal spacing on dished end. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.
7. PO Number, Item no, drawing number, BHEL Specification, QP number, inspection stamp shall be punched on the dished end.
8. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.
9. Final inspection of dished end by BHEL QC and CIB (For HP Heaters and Deaerators dished ends) in line to dished quality plan (QP number mentioned above).
10. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.
11. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

Ctrl Key QFNL
Base Qty

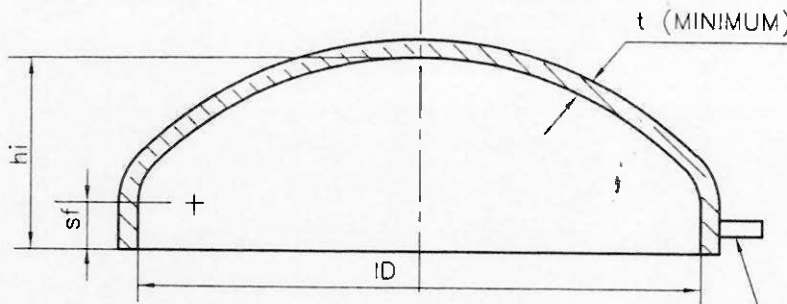
1 EA

P-10323 31000-1F506
Pabala APH DE

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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




t = MIN. THICK OF DISHED END AFTER FORMING.
hi = INSIDE HEIGHT WITH STRAIGHT FACE.
sf = STRAIGHT FACE (INSIDE)
T = PLATE THICKNESS BEFORE FORMING.

4 NO. OF LIFTING LUGS AT 90°
(AT STRAIGHT FACE.) TO BE D.P.
CHECKED AFTER WELDING.
CERTIFIED BY BHEL APPROVED TPIA

ITEM No.	MATERIAL CODE	ID	hi	t	sf	WEIGHT IN KG.
01	HE9711814676	1650	462.5	13	50	400
02	HE9711814684	1850	512.5	13	50	500
03	HE9711814692	1400	400	30	50	685
04	HE9711814706	1570	442.5	34	50	945

NOTES:-

- MATERIAL: SA 516 GR 70 WITH S1, S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O/P.R
- TECHNICAL REQUIREMENTS: AS PER PRODUCT STANDARD HE51370 REVISION (LATEST AS PER P.O/INDENT).
- QUALITY REQUIREMENTS AS PER QP No. HY/HE/016/DE REVISION (LATEST AS PER P.O/INDENT).
- SHAPE : 2:1 ELLIPSOIDAL
- INSPECTION AGENCY : AS PER P.O/INDENT.
- DISHED END SHALL BE OF SEAMLESS CONSTRUCTION.
- DISHED END SHALL BE ULTRASONICALLY TESTED BEFORE AND AFTER FORMING.
- HEAT TREATMENT (NORMALISING) CYCLE :
 - RATE OF HEATING: 400 °F (222 °C) / Hr PER INCH Thk.(Max)
(BUT NOT MORE THAN 400°F (222°C)/Hr)
 - HOLDING TEMPARATURE: 1652 °F (900 °C) - 1688 °F (920 °C).
 - HOLDING TIME : 30 MINUTES (MINIMUM).
- APPLICABLE CODE : AS PER P.O / INDENT.

REMARKS	ITEM NO	DESCRIPTION	STD	MATL. CODE	A/C	UNIT	UNIT Wt.	
				MATL. SPEN.			QTY.	
	BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	NAME	SIGN.	DATE	NO. OF VAR.			
						DRN. RAJESH M	M RAJESH	26.12.18
						CHD. A K SAHOO		26.12.18
		APPD. K.KISHORE KUMAR	KKK	26.12.18				
DEPT. HE ENGG	UNTO. DIM. GR. 2/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA	ITEM NO. NA	NO. OF ITEMS NA		
CODE 405								
TITLE DISHED END				CARD CODE NA	DRAWING NO. 4-162-22-00421		REV. 00	
				SHT No. 1	NO OF SHT. 1			

23.03.2023

Task List Print List

P-10323 31000-17506

Material 41622200421-03
DISH 2:1 ELLIP ID1400X30THK (MIN) LPH
Group 50424667
LSize From 1
Use 1

Plant P006

Grp.ct 1

LSize To 99,999,999
Status 4 PlantP006 EA

Sequence 0 Seq. Cat. Std.seq.
Operation 0010 Work Ctr DA9995

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev (Latest as per PO/PR)
BHEL Spec: HE51370, Rev (Latest as per PO/PR)
Drawing no: 4-16222-00421, Rev.00. Refer Item No-03.

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.
2. Cutting of exact blank size required for forming is in vendor scope.
3. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.
4. All notes in the drawing shall be strictly adhered.
5. Necessary protection shall be provided to avoid damage to edge preparation during transit.
6. Three lifting lug shall be welded at equal spacing on dished end. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.
7. PO Number, Item no, drawing number, BHEL Specification, QP number, inspection stamp shall be punched on the dished end.
8. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.
9. Final inspection of dished end by BHEL QC and CIB (For HP Heaters and Deaerators dished ends) in line to dished quality plan (QP number mentioned above).
10. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.
11. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

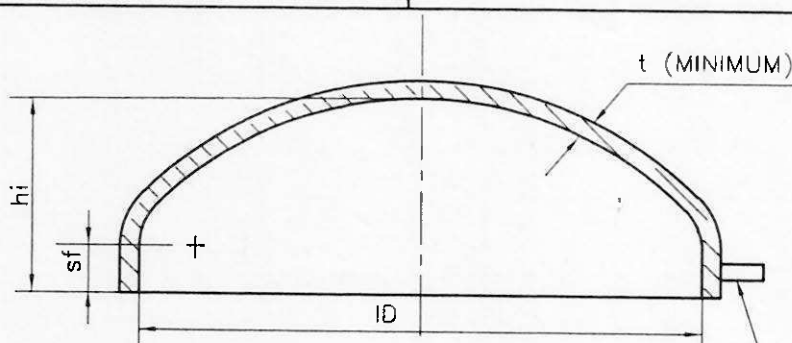
Ctrl Key QFNL
Base Qty

1 EA

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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



t = MIN. THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

T = PLATE THICKNESS BEFORE FORMING.

4 NO. OF LIFTING LUGS AT 90°

(AT STRAIGHT FACE.) TO BE D.P.


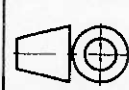
CHECKED AFTER WELDING.

CERTIFIED BY BHEL APPROVED TPIA

ITEM No.	MATERIAL CODE	ID	hi	t	sf	WEIGHT IN KG.
01	HE9711814676	1650	462.5	13	50	400
02	HE9711814684	1850	512.5	13	50	500
03	HE9711814692	1400	400	30	50	685
04	HE9711814706	1570	442.5	34	50	945

NOTES:-

1. MATERIAL: SA 516 GR 70 WITH S1, S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O/P.R
2. TECHNICAL REQUIREMENTS: AS PER PRODUCT STANDARD HE51370 REVISION (LATEST AS PER P.O/INDENT).
3. QUALITY REQUIREMENTS AS PER QP No. HY/HE/016/DE REVISION (LATEST AS PER P.O/INDENT).
4. SHAPE : 2:1 ELLIPSOIDAL
5. INSPECTION AGENCY : AS PER P.O/INDENT.
6. DISHED END SHALL BE OF SEAMLESS CONSTRUCTION.
7. DISHED END SHALL BE ULTRASONICALLY TESTED BEFORE AND AFTER FORMING.
8. HEAT TREATMENT (NORMALISING) CYCLE :
 - i) RATE OF HEATING: 400 °F (222 °C) / Hr PER INCH Thk.(Max)
(BUT NOT MORE THAN 400°F (222°C)/Hr)
 - ii) HOLDING TEMPERATURE: 1652 °F (900 °C) - 1688 °F (920 °C).
 - iii) HOLDING TIME : 30 MINUTES (MINIMUM).
9. APPLICABLE CODE : AS PER P.O / INDENT.

REMARKS	ITEM NO	DESCRIPTION	STD	MATL. CODE	A/C	UNIT	UNIT Wt.		
				MATL. SPEN.			QTY.		
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	DEPT. HE ENGG CODE 405	UNTO. DIM. GR. Ø/M/P		SCALE NTS	WEIGHT (KG) NA	NAME	SIGN.	DATE	NO. OF VAR.
						DRN. RAJESH M	M RAJESH	26.12.18	
						CHD. A K SAHOO		26.12.18	NA
				APPD. K.KISHORE KUMAR	KKK	26.12.18			
TITLE				REF. TO ASSY DRG. NA		ITEM NO. NA	NO. OF ITEMS NA		
DISHED END				CARD CODE NA	DRAWING NO. 4-162-22-00421		REV. 00		
				SHT No. 1	NO OF SHT. 1				

Plant P006

Material 41622200421-04
 DISH 2:1 ELLIP ID1570X34THK(MIN) LPH
 50424668
 LSize From 1
 Use 1

Grp. ct 1

LSize To 99,999,999
 Status 4 PlantP006 EA

Sequence 0 Seq. Cat. Std. seq.
 Operation 0010 Work Ctr DA9995

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev (Latest as per PO/PR)
 BHEL Spec: HE51370, Rev (Latest as per PO/PR)

Drawing no: 4-16222-00421, Rev.00. Refer Item No-04.

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.
2. Cutting of exact blank size required for forming is in vendor scope.
3. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.
4. All notes in the drawing shall be strictly adhered.
5. Necessary protection shall be provided to avoid damage to edge preparation during transit.
6. Three lifting lug shall be welded at equal spacing on dished end. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.
7. PO Number, Item no, drawing number, BHEL Specification, QP number, Inspection stamp shall be punched on the dished end.
8. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.
9. Final inspection of dished end by BHEL QC and CIB (For HP Heaters and Deaerators dished ends) in line to dished quality plan (QP number mentioned above).
10. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.
11. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

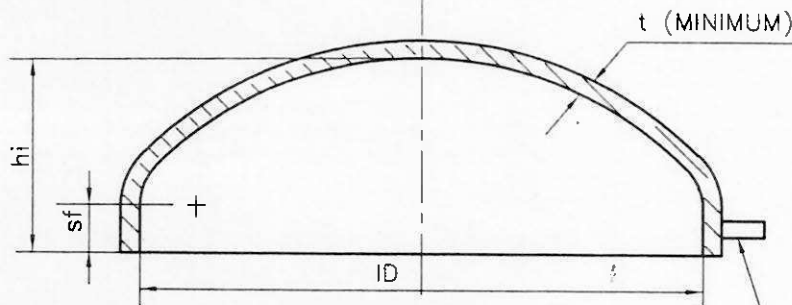
Ctrl Key QFNL
 Base Qty

1 EA

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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



t = MIN. THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

T = PLATE THICKNESS BEFORE FORMING.

4 NO. OF LIFTING LUGS AT 90°

(AT STRAIGHT FACE.) TO BE D.P.


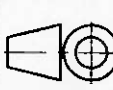
CHECKED AFTER WELDING.

CERTIFIED BY BHEL APPROVED TPIA

ITEM No.	MATERIAL CODE	ID	hi	t	sf	WEIGHT IN KG.
01	HE9711814676	1650	462.5	13	50	400
02	HE9711814684	1850	512.5	13	50	500
03	HE9711814692	1400	400	30	50	685
04	HE9711814706	1570	442.5	34	50	945

NOTES:-

1. MATERIAL: SA 516 GR 70 WITH S1, S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O/P.R
2. TECHNICAL REQUIREMENTS: AS PER PRODUCT STANDARD HE51370 REVISION (LATEST AS PER P.O/INDENT).
3. QUALITY REQUIREMENTS AS PER QP No. HY/HE/016/DE REVISION (LATEST AS PER P.O/INDENT).
4. SHAPE : 2:1 ELLIPSOIDAL
5. INSPECTION AGENCY : AS PER P.O/INDENT.
6. DISHED END SHALL BE OF SEAMLESS CONSTRUCTION.
7. DISHED END SHALL BE ULTRASONICALLY TESTED BEFORE AND AFTER FORMING.
8. HEAT TREATMENT (NORMALISING) CYCLE :
 - i) RATE OF HEATING: 400 °F (222 °C) / Hr PER INCH Thk.(Max)
(BUT NOT MORE THAN 400°F (222°C)/Hr)
 - ii) HOLDING TEMPERATURE: 1652 °F (900 °C) - 1688 °F (920 °C).
 - iii) HOLDING TIME : 30 MINUTES (MINIMUM).
9. APPLICABLE CODE : AS PER P.O / INDENT.

REMARKS	ITEM NO	DESCRIPTION	STD	MATL. CODE		A/C	UNIT	UNIT Wt.	
				MATL. SPEN.				QTY.	
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME	SIGN.	DATE	NO. OF VAR.		
				DRN. RAJESH M	M RAJESH	26.12.18	NA		
				CHD. A K SAHOO		26.12.18	NA		
				APPD. K. KISHORE KUMAR	KKK	26.12.18			
DEPT. HE ENGG	UNTO. DIM. GR		SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS		
CODE 405	2/M/P		NTS	NA	NA	NA	NA		
TITLE				CARD CODE	DRAWING NO.		REV.		
DISHED END				NA	4-162-22-00421		00		
				SHT No.	1	NO OF SHT.		1	

Material 31750102505-01
 Group 50424547
 Use 1
 Sequence 0
 Operation 0010
 Seq. Cat. Work Ctr
 Std.seq. DA9995

Plant P006

Grp.ct 1

LSize To 4

99,999,999

EA

PlantP006

LSize From 1

PlantP006

EA

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev.04.

BHEL Spec: HE51370, Rev(Latest as per PO/PR)

Drawing no: 31750102505-01, Rev.00

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.

2. Cutting of exact blank size required for forming is in vendor scope.

2. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.

3. All notes in the drawing shall be strictly adhered.

4. Necessary protection shall be provided to avoid damage to edge preparation during transit.

4. Three lifting lug shall be welded at equal spacing on dished end.

Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.

5. PO Number, Item no, drawing number, BHEL Specification, QP number, inspection stamp shall be punched on the dished end.

6. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.

7. Final inspection of dished end by BHEL QC and CIB(For HP Heaters and Deserators dished ends) in line to dished quality plan (QP number mentioned above).

8. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.

9. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

Ctrl Key QFNL
 Base Qty

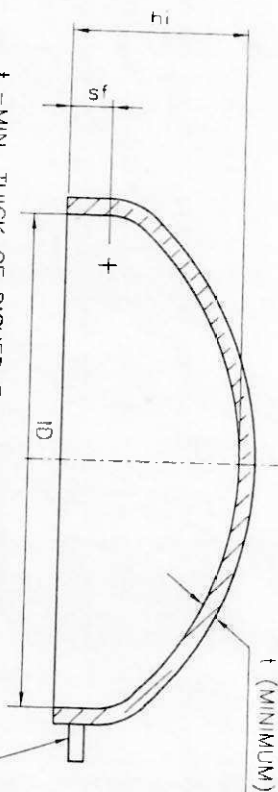
1 EA

1032250500-17306

Pahatu HP Dished

End.

50520-10-521-3 ON DRG



t = MIN THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

t = PLATE THICKNESS BEFORE FORMING

3 NO. OF LIFTING LUGS AT 120° (AT STRAIGHT FACE.)
(TO BE D.P. CHECKED AFTER WELDING)
CERTIFIED BY BHEL APPROVED TPIA

NOTES:-

1. SHAPE - 2.1 ELLIPSOIDAL.
2. MATERIAL SA 516 GR 70 WITH S1.S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O/P.R
3. DISHED END SHALL BE OF SEAM LESS CONSTRUCTION
4. PRODUCT STANDARD : HE51370 REV (LATEST AS PER P.O. / P.R.)
5. QUALITY PLAN : HY/HE/016/DE REV (LATEST AS PER P.O. / P.R.)
6. INSPECTION & CERTIFICATION BY M/S CIB & BHEL APPROVED TPIA.
(NO CIB IF IMPORTED)

ITEM No	DESCRIPTION	MATERIAL CODE	DIMENSIONS							REMARKS
			ID	hi	t	sf	MAX WORKING		WEIGHT	
							PR Kg/Sq.Cm(g)	TIME C		
1	SHELL DISHED END FOR H.P. HEATER-7A/7B	HE9711813017	1800	500	28	50	32	239	965	UT FOR PLATE BEFORE AND AFTER FORMING
2	SHELL DISHED END FOR H.P. HEATER-8A/8B	HE9711813025	1800	500	57	50	75	292	1980	
3	SHELL DISHED END FOR H.P. HEATER-9A/9B	HE9711813033	1600	450	60	50	92	305	1790	

INVENTORY NO SIGN AND DATE REF DRG NO THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
HP-F03 IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY

Sep Sat 8 12:57 2018

REV	DATE	ALTERED	CHECKED	APPO
ZONE				



TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

TITLE

DISHED END

DEPT.

GRADE OF

TOL./DIM.

SCALE

NTS

WEIGHT (KG)

APPO

REF TO ASSY DRG

N/A

ITEM NO

NO OF

REV

DRAWING NO.

3-175-01-02505

SHEET NO. 1

NO OF SHEETS 1

REV

Printed by : M. RAJESH-KC-P-FME3031 / 6102654 on 17-01-23 09:34:58

This Drawing is printed from Engineering Dwg by Archive System (FDAS)
Therefore signatures are not essentially required

1032254500-17506

Parbathu HP Dished End

Material 31750102505-02
 Group DISHED END 2:1 ELLIP ID1800X57THK(MIN)
 50424548
 LSize From 1
 Use 1
 Sequence 0 Seq. Cat. Std.seq.
 Operation 0010 Work Ctr DA9995

Plant P006

LSize To 99,999,999 EA
 Status 4 PlantP006

Scope of work for dished end forming:

QP. NO: HY/HE/016/DE, Rev.04.

BHEL Spec: HE51370, Rev(Latest as per PO/PR)

Drawing no: 31750102505-02, Rev.00

1. Raw material for dished end would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.

2. Cutting of exact blank size required for forming is in vendor scope.

2. Dished end shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.

3. All notes in the drawing shall be provided to avoid damage to edge preparation during transit.

4. Necessary protection shall be provided to avoid damage to edge preparation during transit.

4. Three lifting lug shall be welded at equal spacing on dished end. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.

5. PO Number, Item no, drawing number, BHEL Specification, QP number, Inspection stamp shall be punched on the dished end.

6. Clean and paint red oxide on the dished before dispatch and after all required inspections are completed.

7. Final inspection of dished end by BHEL QC and CIB(For HP Heaters and Deaerators dished ends) in line to dished quality plan (QP number mentioned above).

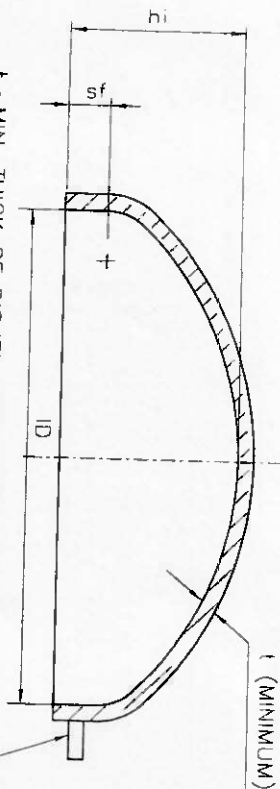
8. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dished end, Dimensional report, Mechanical reports of test coupon, shall be sent along with dished end to BHEL Stores.

9. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dished end to 06-stores, BHEL Hyderabad.

Ctrl Key QFNL
 Base Qty

1 EA

50520-10-521-E-ON DRG.



t = MIN. THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

T = PLATE THICKNESS BEFORE FORMING.

3 NO. OF LIFTING LUGS AT 120° (AT STRAIGHT FACE.)
(TO BE D.P. CHECKED AFTER WELDING)
CERTIFIED BY BHEL APPROVED TPIA

NOTES:-

1. SHAPE - 2:1 ELLIPSOIDAL.
2. MATERIAL: SA 516 GR 70 WITH S1.S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O./P.R
3. DISHED END SHALL BE OF SEAM LESS CONSTRUCTION
4. PRODUCT STANDARD : HE51370 REV (LATEST AS PER P.O. / P.R.)
5. QUALITY PLAN : HY/HE/016/DE REV (LATEST AS PER P.O. / P.R.)
6. INSPECTION & CERTIFICATION BY M/S CIB & BHEL APPROVED TPIA.
(NO CIB IF IMPORTED)

ITEM NO	DESCRIPTION	MATERIAL CODE	DIMENSIONS						REMARKS
			ID	hi	t	sf	MAX WORKING PR TYP IN KG	WEIGHT IN KG	
1	SHELL DISHED END FOR H P HEATER-7A/7B	HE9711813017	1800	500	28	50	32	239	985
2	SHELL DISHED END FOR H P HEATER-8A/8B	HE9711813025	1800	500	57	50	75	292	1380
3	SHELL DISHED END FOR H P HEATER-9A/9B	HE9711813033	1600	450	60	50	92	305	1790

UT FOR PLATE
BEFORE AND AFTER
FORMING.

INVENTORY NO SIGN AND DATE REF DRG NO THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
HP-F03 IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY

Sep Sat 8 12:57 2018

REV	DATE	ALTERED	CHECKED	APPO
ZONE				



TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

REV	DATE	ALTERED	CHECKED	APPO
ZONE				

SCALE

NTS

WEIGHT (KG)

APPO

REF TO ASSY DRG

NA

ITEM NO

NO OF ITEMS

NA

REV

NO

DISHED END

CARD CODE

DRAWING NO.

3-175-01-02505

REV

Material 31750102505-03
 Group DISHED END 2:1 ELLIP ID1600X60THK (MIN)
 50424549
 LSize From 1
 Use 1

Plant P006

1032254500-17506

Sequence 0
 Operation 0010
 Seq. Cat. Work Ctr
 Std. seq. DA9995

LSize To 99,999,999
 Status 4 PlantP006 EA

Scope of work for dishend and forming:

QP. NO: HY/HE/016/DE, Rev.04.

BHEL Spec: HE51370, Rev(Latest as per PO/PR)

Drawing no: 31750102505-03, Rev.00

1. Raw material for dishend and would be supplied by BHEL with all the due attestation marks. Welding, NDT of plate if the plate size is not sufficient for cutting the circular blank is in vendor scope.

2. Cutting of exact blank size required for forming is in vendor scope.

2. Dishend and shall be formed strictly as per drawing. Quality plan shall be strictly followed at all stages.

3. All notes in the drawing shall be provided to avoid damage to edge preparation during transit.

4. Necessary protection shall be provided to avoid damage to edge preparation during transit.

4. Three lifting lug shall be welded at equal spacing on dishend. Material for cutting of lifting lug shall be adjusted from the plate supplied by BHEL.

5. Po Number, Item no, drawing number, BHEL Specification, QP number, Inspection stamp shall be punched on the dishend.

6. Clean and paint red oxide on the dishend before dispatch and after all required inspections are completed.

7. Final inspection of dishend and by BHEL QC and CIB(For HP Heaters and Deaerators dishend ends) in line to dishend quality plan (QP number mentioned above).

8. PT/MT report after forming, UT Report before and after forming, approved HT Charts, approved Test certificate of dishend, Dimensional report, Mechanical reports of test coupon, shall be sent along with dishend end to BHEL Stores.

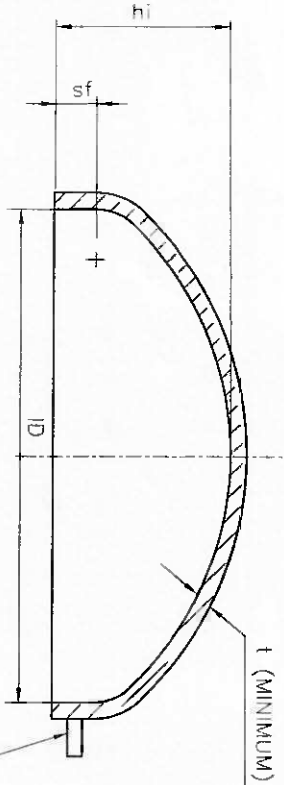
9. List of reports mentioned above are not exhaustive, vendor shall submit all the necessary reports required as per BHEL QP, drawing, and specification. BHEL QC shall ensure the availability of reports before release of dishend end to 06-stores, BHEL Hyderabad.

Ctrl Key QFNL
 Base Qty

1 EA

Paramtu-HP Dishend End

90520-10-941-8-ON DRG. NO. ON



t = MIN. THICK OF DISHED END AFTER FORMING.

hi = INSIDE HEIGHT WITH STRAIGHT FACE.

sf = STRAIGHT FACE (INSIDE)

T = PLATE THICKNESS BEFORE FORMING.

3 NO. OF LIFTING LUGS AT 120° (AT STRAIGHT FACE.)
(TO BE D.P. CHECKED AFTER WELDING)
CERTIFIED BY BHEL APPROVED TPIA

NOTES:-

1. SHAPE:- 2:1 ELLIPSOIDAL.
2. MATERIAL: SA 516 GR 70 WITH SI, S5 AND S8 SUPPLEMENTARY REQUIREMENTS AS PER ASME SEC II PART-A EDN AND ADDENDA AS PER P.O./P.R
3. DISHED END SHALL BE OF SEAM LESS CONSTRUCTION.
4. PRODUCT STANDARD : HES1370 REV (LATEST AS PER P.O. / P.R.)
5. QUALITY PLAN : HY/HE/016/DE REV (LATEST AS PER P.O. / P.R.)
6. INSPECTION & CERTIFICATION BY M/S CIB & BHEL APPROVED TPIA.
(NO CIB IF IMPORTED)

ITEM No	DESCRIPTION	MATERIAL CODE	DIMENSIONS							REMARKS
			ID	hi	t	sf	MAX WORKING PR		WEIGHT	
1	SHELL DISHED END FOR H.P. HEATER-7A/7B	HE9711813017	1800	500	28	50	32	239	965	UT FOR PLATE BEFORE AND AFTER FORMING.
2	SHELL DISHED END FOR H.P. HEATER-8A/8B	HE9711813025	1800	500	57	50	75	292	1980	
3	SHELL DISHED END FOR H.P. HEATER-9A/9B	HE9711813033	1600	450	60	50	92	305	1790	

TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
HYDERABAD

REV.	DATE	ALTERED	CHECKED	APPRO
ZONE				

REV.	DATE	ALTERED	CHECKED	APPRO	DEPT.	GRADE OF TOL. DIM.	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS
405					HEE	C/M/F	NTS		N/A	NA	NA

DISHED END

DRAWING NO. 3-175-01-02505

CARD CODE

SHEET NO. 1 OF 1 SHEETS