

**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 :2

HY17001 C
REV.NO.0Phone 091-40-23184526
091-40-23182322FAX : 091-40-23021910
091-40-23021954**PURCHASE DEPARTMENT**

GSTIN:

Eng/Collective No :E9AWS00075

Enq.Dt. : 24.11.2023

No.Of Items :*

DUE Dt. OF QUOTN. : 04.12.2023

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 on or 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	1700036561	40	31750501511-00	31750501511-,00,,	SHELL ASSEMBLY HPH 7A & 7B	EA	4.000	25.06.2024	1.000
2	1700036561	10						25.02.2024	1.000
3	1700036561	20						25.06.2024	1.000
4	1700036561	30						25.02.2024	1.000
5	1700036691	20	31750501526-00	31750501526-,00,,	SHELL ASSEMBLY HPH 8A	EA	2.000	25.06.2024	1.000
6	1700036691	10						25.02.2024	1.000
7	1700036691	40	31750501527-00	31750501527-,00,,	SHELL ASSEMBLY HPH 8B	EA	2.000	25.06.2024	1.000
8	1700036691	30						25.02.2024	1.000
9	1700036751	40	31752300008-00	31752300008-,00,,	SHELL ASSEMBLY HPH 9A/9B	EA	4.000	27.06.2024	1.000
10	1700036751	10						27.06.2024	1.000
11	1700036751	20						27.02.2024	1.000

TEST CERTIFICATE REQD:
GUARANTEE REQ :
SAMPLE REQD :
BID TYPE : TWO PART

For and on-behalf of
Bharat Heavy Electricals Limited.

NAGARJUNA SAGAR C
MANAGER

	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:2 OF :2
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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 :E9AWS00075	Enq.Dt. : 24.11.2023	No.Of Items :*	DUE Dt. OF QUOTN. : 04.12.2023

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
12	1700036751	30						27.03.2024	1.000

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. NAGARJUNA SAGAR C MANAGER
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SPECIAL CONDITIONS OF CONTRACT (SCC) ENQ. NO. E9AWS00075,**DUE DATED: 04.12.2023**

SI.NO	DESCRIPTION	BHEL REQUIREMENT	VENDOR'S CONFIRMATION
1	TWO-PART BID	Offer shall be submitted in two part bid system against this enquiry. Part-I shall consist of Techno-Commercial bid with all required documents and Price shall be fed in Part-II.	
1.a	TECHNO-COMMERCIAL BID	<p>Techno-Commercial Bid shall essentially consist of:</p> <p>(i) Bidder's confirmation of BHEL drawing/Specification & technological scope.</p> <p>(ii) Bidder's confirmation of BHEL Quality plan (if applicable)</p> <p>(iii) Duly filled in signed and stamped Special Contract Conditions (SCC).</p> <p>(iv) Duly filled in signed and stamped Instructions to Bidder (ITB).</p> <p>(v) Duly filled in and completed in all respect ITB ANNEXURE-II (Framework Confidentiality Agreement cum Underatking)</p> <p>(vi) Udyam Registration Certificate for MSE vendors.</p> <p>(vii) Duly signed and stamped Un-price bid.</p> <p>All the above documents shall be duly authenticated by signature and official seal of the company.</p> <p><u>Note:</u> Bid shall be complete in all respects including all the documents / information required for techno-commercial evaluation. Incomplete offers shall be liable for rejection.</p>	
1.b	PRICE BID	<p>Vendor shall quote Rate on Rs/Kg basis for each package/Item separately.</p> <p>The rate quoted shall be inclusive of conversion charges, all consumables, handling charges and dispatch of finished jobs to BHEL (HPEP) Stores. Quoted price shall be on firm basis. No revision of prices will be entertained after the tender is opened.</p>	
2	DETAILS OF JOB	Manufacturing of HP Heater Shells Assly as per BHEL drawings/DCA and technological scope/Quality plan with BHEL materials & in line with NIT Terms & Conditions	
3	QUANTITY (Aproximately)	<p>There are Four different items with four different drawings in enquiry which are as follows:-</p> <p>Item-1---HPH 7A/7B---Total quantity-----40204 Kg (For Four Shells).</p> <p>Item-2---HPH 8A---Total Quantity-----51538 Kgs (For Two Shells).</p> <p>Item-3---HPH 8B---Total Quantity-----51538 Kgs (For Two Shells).</p> <p>Item-4---HPH 9A/9B---Total Quantity-----94392 Kgs (For Four Shells).</p> <p>Please refer the BOQ for the same.</p>	
4	VENDOR QUALIFICATION	Vendor's offer is subjected to our final customer approval (NTPC)	
5	DELIVERY	To be delivered with in 45 days from the date of receipt of last SMIV material for each item.	

6	SCOPE OF MATERIAL SUPPLY AND TRANSPORTATION CHARGES	<p>Collection of raw materials from BHEL,R.C. Puram, Hyd to vendor works and supply of the finished equipment from vendor works to BHEL, R.C. Puram store is in vendor scope, that means to and fro transportation charges (Freight and insurance) are to be borne by vendor. Price submitted by bidders shall be inclusive of the above transportation charges.</p> <p>In case, even after one week from the intimated date, vendor does not place the vehicle for collection of ready materials from BHEL, then BHEL will supply the raw materials and transportaion charges shall be deducted from vendor as per BHEL norms.</p>	
7	PAYMENT TERM	<p>75% payment will be made within 45/60/90 (MSE/Medium Enterprise/Non MSME) days from the date of receipt of finished items at our works against GR and 25% will be paid after material accounting is done.</p> <p>Note:</p> <p>A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made on acceptance of Material.</p> <p>B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL</p> <p>C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less.</p> <p>D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment.</p> <p>E. In case of packaged items, 10% of supply value will be retained till completion of total supplies.</p> <p>F. Bidders to comply with clause 11 on GST requirements</p>	
8	VALIDITY OF OFFER	<p>Your Offers must be kept valid for a period of 90 days from the date of part-i bid opening and in the event of our acceptance of your offer the prices finalized should remain firm for ""one year"" from the date of finalisation of tender(approval of PO note).</p>	
9	PENALTY	<p>In the event of delay in supply of goods, a penalty of 0.5% per week or part there of shall be levied on the undelivered portion subject to a maximum of 10% of the order value. Reckoning date for penalty is c-note date.</p>	
10	TOOLS	<p>Tools,gauges,jigs & fixtures and instruments will not be supplied by BHEL</p>	
11	REJECTION OF CONDITIONAL OFFERS	<p>Conditional offers if any submitted by the firms will not be acceptable.</p>	

12	MODE OF TENDER FINALIZATION	<p>“BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.”</p>	
13	RISK PURCHASE	<p>In case of abnormal delays (beyond the maximum late delivery period as per Penalty clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / equivalent market price at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. Nonperformance of contract attracts penal provisions inline with BHEL's Suspension of Business dealings</p>	
14	BASIS OF TENDER EVALUATION	<p>Tender will be evaluated on lumpsum basis. Vendor quoting lowest considering all the items shall qualify for L1.</p>	
15	QUANTITY DISTRIBUTION	<p>Total quantity will be distributed among three sources as follows: L1 Vendor will be given 1,26,674 Kgs (5 nos of Shell Assly with drawing no 31750501526-00 (2 nos),31750501527-00 (2 nos) and 31752300008-00 (1 no). L2 Vendor will be counter offered 67,298 Kgs(4 nos of Shell Assly with drawing no 31750501511-00 (2 nos) and 31752300008-00 (2 no) at L1 rate. L3 Vendor will be counter offered 43,700 Kgs (3 nos of Shell Assly with drawing no 31750501511-00 (2 nos) and 31752300008-00 (1 no) at L1 rate. If L2 vendor/L3 vendor is not accepting the counter offer,the same will be counter offered to next ranking vendor.If none of vendors is accepting the counter offer ,then the counter offered quantity will be loaded on L1 vendor only.</p>	
16	SCRAP	<p>There will be no scrap cost deduction at BHEL end at the time of material accountal. Thus, bidder to quote accordingly.</p>	
17	CHANGE IN WEIGHT	<p>Any change in weight of components either lower or higher side due to non-availability of particular raw material and subsequent change proposal to higher thickness/lower thickness shall not attract for amendment of PO and therefore payment of increased or decreased cost. Amendment of PO will be done only when net weight of drawing has increased/decreased due to Engineering oversight.</p>	
18	INSPECTION	<p>Stage and final inspection shall be carried out by BHEL QC/BHEL TPIA and or Customer (as applicable).Tests & Inspection shall be in line with drawing and technological scope/approved quality plan. Vendor shall raise inspection call accordingly.</p>	
19	DRAWINGS	<p>a)These drawings are the property of BHEL. Copying or circulating or misuse of these drawings or parts of it by vendor is not permitted and will have to face legal consequences if found so. b)Assembly drawings shall be provided along with enquiry. However complete drawings will be given at the time of placement of order.</p>	

20	CLARIFICATION	If any further clarification is required kindly depute your representative for discussion before submitting your offer. Contact phone no: 040-23183555 mob: 7799181180/9490758635/9959477023. Mail ID: mithlesh@bhel.in , marisa@bhel.in , nagarjunasagar339@bhel.in	
21	GUARANTEE	Equipment shall be guaranteed against all manufacturing defects for a period of 24 months after supply or 18 months after commissioning whichever is later. Defects noticed shall be replaced / rectified at free of cost by the supplier.	
22	LOADING/UNLOADING FACILITIES	You must have adequate material handling facilities for safe unloading of raw materials/loading of finished products.	
23	INSPECTION	The goods will be cleared for dispatch on provisional basis. On receipt of the goods at our BHEL shop/site, the goods shall be subjected to inspection. And any defects noticed during assembly, testing or use , notwithstanding the same may have been passed, certified and paid for – is to be rectified by the subcontractor, in whole or in part, as the case may require, at their own cost. In the event of his failure to do so with in reasonable period, BHEL will rectify or remove and re-execute the work at the risk & cost of subcontractor. The cost of rework or rejection, and any cost of freight incidental to such work will be to the subcontractor's account. Thus, Our acceptability of the goods shall be final.	
24	CONSEQUENCES OF REJECTION	In the event of any rejection arising due to the workmanship or due to mishandling of assemblies or components or any kind of damage which renders the assemblies unfit for use, the cost of each assembly shall be recovered along with taxes & duties as per BHEL norms from the bank guarantee being furnished by vendor.	
25	RIGHT OF CANCELLATION	BHEL shall have the right to cancel the contract wholly or in part in case it is obliged to do so on account of any decline, diminution, curtailment or stoppage of business.	
26	CONSEQUENCE OF FAILURE TO EXECUTE THE ORDER	After placing PO, in case vendor fails to execute the order due to reasons attributable to vendor, it is vendor's obligation to return the raw material to BHEL, failing which BHEL will bring back material as per transport contract and the amount will be taken/deducted from available bills of vendor. Further action will be initiated on vendor for non performance of contract as per BHEL norms.	
27	PACKING	For any loss or damages arising out of improper packing and dispatch, the vendor will be held responsible	
28	TAXES & DUTIES	Applicable taxes and duties to be mentioned in the offer.	
29	BANK GUARANTEE	For material valuing upto Rs. 50,000/- per SCO no BG is required. For material valuing more than Rs. 50,000/- per SCO , 10% of the material value shall be provided as BG specific to enquiry with sufficient validity minimum six months or any other financial instrument as specified by BHEL without which PO will not be released.	
30	DISCRETION OF ACCEPTANCE	BHEL reserves right to accept or reject any tender or a portion thereof without assigning any reason whatsoever. BHEL has the right to refloat or short-close the Tender if L1 price is not the lowest acceptable price, or for other reasons.	

31	MSE CLAUSE	<p>"MSE suppliers can avail the intended benefits only if they submit along with the offer, Udyam Registration Certificate. Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through E-Procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted Officer."</p>	
32	INDEMNITY	<p>Subcontractors shall indemnify BHEL against the following: (A)All claims for injury or damage caused by the sub contractor's negligence or the negligence of subcontractor's employees or arising from any defect in the goods supplied or on the work carried out by the subcontractor's. (B)All claims for injury to the subcontractor employees or agents employed whilst on BHEL premises.</p>	
33	GENERAL	<p>Any change in the address/reduction in qualified workplaces/ownership of the subcontractor's unit during the operation of the contract will have to be made only after getting the specific written approval from BHEL. Any deviation found later will be dealt with as deemed fit, including cancellation of registration.</p>	
34	ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP	<p><i>If any work has been executed with unsound, imperfect or bad workmanship or with materials of inferior quality, the Sub-contractor shall on demand in writing from BHEL specifying the work, material/articles complained of, notwithstanding that the same may have been passed, certified and paid for, forthwith, rectify the work so specified in whole or in part as the case may require, at their own cost and in the event of his failure to do so within reasonable period, BHEL will rectify or remove and re-execute the work at the risk and cost of the Sub-contractor.</i></p>	

35	CONFLICT OF INTEREST	<p>A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder, found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <ul style="list-style-type: none"> a) they have controlling partner (s) in common; or b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or c) they have the same legal representative/agent for purposes of this bid; or d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; or f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following: <ul style="list-style-type: none"> 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal, <p>or</p> <ul style="list-style-type: none"> g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. 	
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Note: The above terms and conditions are applicable for this tender. All the remaining terms and conditions are as per ITB.

VENDOR'S SIGNATURE WITH COMPANY SEAL

Pre-Qualification Criteria for HP Heater Shells Fabrication

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 1.5	
1.2	Vendor shall have facility(i.e, job rotators, welding machines, baking/holding ovens, space under shed) for fabrication for HP Heater Shell Assembly with IBR inspection.	
1.3	Vendor should have fabricated and supplied at least one HP Heater shell or pressure vessel or sub-assembly of pressure vessel with IBR inspection in last 5 years without any deviation. PO Copy, Inspection report copy of the same shall be submitted. Phone number and e-mail of the organization who placed the order for fabrication shall be submitted.	
1.4	Vendor shall not outsource fit-up and welding activities to other parties	
1.5	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	Working space under shed.	
2.2	No cranes, capacity of each crane	
2.3	No of IBR qualified welders	
2.4	No of job rotators, capacity of each rotator	
2.5	No of welding machines available (SMAW, SAW)	

Prepared by

Nayana

Approved by

[Signature]
B. VEENANAND

वर्किंग स्पेस महा अखंडक / पी. पी. सी. एम. स्टोर & वे. ई. ए. ए. ए.
Sr.Dy. General Manager / PPC, MPC, Stores & WE - HE&F
बी.एच.ई.एल.-एचपीईपी, हैदराबाद-32 BHEL-HPEP-HYD-32



A Maharatna Company

एन टी पी सी लिमिटेड
(भारत सरकार का उद्यम)
NTPC Limited
(A Govt. of India Enterprise)
(Formerly National Thermal Power Corporation Ltd.)
(केंद्रीय कार्यालय नोएडा)
Corporate Center NOIDA

Reference : CC-ENGG-4540-001-110-QVM-Q-184

Date : 16/11/2023

From : CHANDEKAR PRADEEP GOPAL
DY. GENERAL MANAGER

To : BHARAT HEAVY ELECTRICALS LTD
NEW DELHI
110049
IN

Cc : singhjp@bhel.in

Subject : EPC TTPP3 (2x660MW)

Please find enclosed following drawings/ documents for necessary action at your end.

Vendor Drg. No. : HY/QA/HEF/MQP/581/04
Orgn. Drg. No. : 4540-001-110-QVM-Q-184
Revision No. : 00
Drg. Title : MQP FOR HP HEATER
App. Category : CAT-II
Release Date : 16/11/2023





Scan to verify

Comments : Approved in Cat-II with comments.




Engineering Division
ISO 9001:2008 Certified




अभियंत्रिकी कार्यालय परिसर, प्लॉट नं.- ए 8ए, सेक्टर-24, पोस्ट बॉक्स नं.- 13, नोएडा (उ प) पिन-201 307
टेलिफोन नं.- 0120-2410333, 2410116 फेक्स-0120-2410136, 2410137
पंजीकृत कार्यालय: एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7 इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110 003
टेलिफोन नं.- 011-24361018 फेक्स-011-24361018, वेबसाइट: www.ntpc.co.in
ENGINEERING OFFICE COMPLEX, Plot No: A-SA, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307
Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137
Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003
Telephone No: 011 24360100 Fax: 011 24361018, Website: www.ntpc.co.in

OWNER			
		NTPC Ltd (A Government of India Enterprise)	
MAIN SUPPLIER			
		BHARAT HEAVY ELECTRICALS LTD HPEP , RC PURAM HYDERABAD	
PROJECT 2X660 MW TALCHER-III			
TITLE:			
MQP for HP HEATER			
DOCUMENT NO : 4540-001-110-QVM-Q-184 rev 00			
INDEX SHEET FOR QUALITY PLANS (INCLUDING RAW MATERIALS)			
SI No.	Description	QP No:	Page No.
1	QP of HP HEATER	4540-001-110-QVM-Q-184	A1-14
2	QP FOR SS SEAMLESS U TUBE	4540-001-110-QVM-Q-184B	C1-7
3	QP FOR HEMIHEAD	4540-001-110-QVM-Q-184C	D1 - 4
4	QP FOR CS DISHED END	4540-001-110-QVM-Q-184D	E1-4
5	QP FOR NOZZLE FORGING AND MANWAY FORGING	4540-001-110-QVM-Q-184E	F1-2
CONTRACT NO: CS-4540-001-110			


Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.1 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400					
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N		
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.			11.




RAW MATERIAL & MAJOR BOIS														
1.1	TUBE SHEET													
1.1.1	AT BHEL	A	VERIFICATION OF TCs AS PER NTPC APPROVED QAP : 4540-001-110-QVM-Q-184A Separate QAP approval Taken .					SUPPLIER'S TC	√		V	V		
1.2	TUBES													
1.2.1	AT BHEL	A	VERIFICATION OF TCs AS PER NTPC APPROVED QAP : 4540-001-110-QVM-Q-184B					SUPPLIER'S TC	√		V	V		
1.3	HEMI HEAD													
1.3.1	AT BHEL	A	VERIFICATION OF TCs AS PER NTPC APPROVED QAP : 4540-001-110-QVM-Q-184C					SUPPLIER'S TC	√		V	V		
1.4	SHELL & PAD MATERIAL													
1.4.1	AT SUPPLIER'S WORK	A	CHEMICAL COMPOSITION	MAJOR	CHEM.	AS PER SPEC	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	SUPPLIER'S TC	√	P	V		From NTPC agreed sources	
		B	MECH. PROPERTIES	MAJOR	MECH, HT	AS PER SPEC		SUPPLIER'S TC	√	P	V			
		C	UT OF THE PLATE (≥ 25 mm)	MAJOR	NDE	100%		SA 435	SUPPLIER'S TC	√	P	V		
1.4.2	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC & ATTESTATION	MAJOR	VISUAL	100 %	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	IR	√		V	V		

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"						DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I					
		MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER					FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL		
SIGNATURE													


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	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.2 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400			
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N	
1.	2.	3.	4.	5.	6	7	8	9.	D*	** 10.		11.




1.5	SKIRT MATERIAL													
1.5.1	AT SUPPLIER'S WORK	A	CHEMICAL COMPOSITION	MAJOR	CHEM.	AS PER SPEC	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	SUPPLIER'S TC	√	P	V			
		B	MECH. PROPERTIES & HT CONDITION	MAJOR	MECH, HT	AS PER SPEC		SUPPLIER'S TC	√	P	V			
		C	UT OF THE PLATE (>25 mm)	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 %	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	IR	√		V	V		
1.6	SHELL DISHED END													
1.6.1	AT BHEL	A	VERIFICATION OF TCs AS PER NTPC APPROVED QAP : 4540-001-110-QVM-Q-184D					SUPPLIER'S TC	√		V	V		
1.7	FEED NOZZLE & MANWAY FORGING													
1.7.1	AT BHEL	A	VERIFICATION OF TCs AS PER NTPC APPROVED QAP : 4540-001-110-QVM-Q-184E					SUPPLIER'S TC	√		V	V		
1.8	MAN HOLE COVER													


 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MANUFACTURER / SUB-SUPPLIER		MAIN SUPPLIER				
SIGNATURE						

Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.3 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400			
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N	
1.	2.	3.	4.	5.	6	7	8	9.	D*	** 10.		11.




1.8.1	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC	MAJOR	VISUAL	100 %	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	IR	v		V	V	
1.9.1	NOZZLE PIPES (>4")												
1.9.1	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC	MAJOR	VISUAL	100 %	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	IR	v		V	V	
1.10	BAFFLE PLATES & PADS												
1.10.1	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC	MAJOR	VISUAL	100 %	AS PER BHEL MFG DRAWING	IR	✓		V	V	
1.11	INNER SHROUDS OF DS & DC ZONE (IF APPLICABLE)												
1.11.1.	AT BHEL	A	VERIFICATION , CORRELATION OF MATERIAL WITH TC	MAJOR	VISUAL	100 %	AS PER BHEL MFG DRAWING	IR	✓		V	V	
2.0	INPROCESS INSPECTION												
2.1	TUBE SHEET OVERLAY AND DRILLING												

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I
MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER		FOR NTPC USE	
SIGNATURE				REVIEWED BY
				APPROVED BY
				APPROVAL SEAL


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
	ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG	QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.4 of 14								

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.	D*	** 10.			11.

2.1.1	TUBE SHEET OVERLAY AND DRILLING	A	MATERIAL IDENTIFICATION AND VERIFICATION OF TC	MAJOR	VISUAL	100%	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		IR / LOG RECORD		P	V		
		B	PT ON SURFACE TO BE OVERLAYED	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	V	V	
		C	PT AFTER OVERLAY	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	V	
		D	UT ON OVERLAY FOR CLADDING BOND	MAJOR	NDE	100%	ASME SEC.V ART.5	HE 71046	NDE REPORT	✓	P	W	W/V*	*V IF Witnessed by IBR
		E	DIMN. CONFORMITY AFTER DRILLING.	MAJOR	MEASRT.	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		DRILLING BY CNC MACHINE
		F	PT/MT ON BOTH WELD EDGE PREPARATIONS FOR HEMIHEAD & SKIRT SIDE	MAJOR	NDE	100%	ASME SEC.V ART.6/7	ASME SEC.VIII DIV.I APPX.6/8	INSPN. RECORD		P	V		
2.2	SKIRT FABRICATION													
2.2.1		A	IDENTIFICATION OF MATERIALS & VERIFICATION OF TC (SKIRT PLATES AND NOZZLES)	MAJOR	VISUAL	100%	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		IR / LOG RECORD		P	V		




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER					
SIGNATURE			FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL

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	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD	MANUFACTURING QUALITY PLAN QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.5 of 14				PROJECT: 2X660 MW TALCHER-III PACKAGE:TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400			
	ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG								

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.	D*	** 10.			11.




SKIRT FABRICATION	B	L SEAM FIT UP OF SKIRT SEGMENT (PT/MT ON WELD EDGE PREPARATION OF PLATES > 40MM)	MAJOR	MEASRT., VISUAL	100%	BHEL DRAWING, ASME SEC.VIII DIV.I	BHEL DRAWING, ASME SEC.VIII DIV.I	IR / LOG RECORD		P	V		PT TO BE DONE AFTER BACK CHIPPING OF WELD
	C	RT OF L SEAM WELD	MAJOR	NDE	AS PER DRG	ASME SEC.V ART.2	ASME SEC.VIII DIV.I UW51	NDE REPORT	✓	P	V	V	REVIEW OF RT FILM
	D	C-SEAM FITUP OF SKIRT TO TUBE SHEET (PT/MT ON WELD EDGE PREPARATION OF PLATES > 40MM)	MAJOR	MEASRT., VISUAL	100%	BHEL DRAWING, ASME SEC.VIII DIV.I	BHEL DRAWING, ASME SEC.VIII DIV.I	IR / LOG RECORD		P	V		PT TO BE DONE AFTER BACK CHIPPING OF WELD
	E	UT OF SKIRT TO TUBE SHEET WELD	MAJOR	NDE	100%	ASME SEC.V ART.5	ASME SEC.VIII DIV.I APPX.12	NDE REPORT	✓	P	W	W	
	F	MT OF SKIRT TO TUBE SHEET WELD	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT	✓	P	W	V	
	G	FIT UP OF NOZZLES & PADS TO SKIRT	MAJOR	VISUAL & MEASRT	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
	H	PT OF NOZZLE WELDS	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	W	
	I	PWHT OF SKIRT ASSLY ALONG WITH TUBE SHEET	MAJOR	HT	100%	ASME SEC.VIII DIV.I UCS 56	ASME SEC.VIII DIV.I UCS 56	HT REPORT	✓	P	V	V	


 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER	FOR NTPC USE
SIGNATURE						

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	MANUFACTURER'S NAME & ADDRESS:		MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400							
	BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG		QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.6 of 14									
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.	D*	** 10.			11.




		J	DIMENSIONAL CONFORMITY OF SKIRT ASSLY.	MAJOR	MEASRT.	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
2.3	SHELL FABRICATION													
2.3.1	SHELL FABRICATION	A	IDENTIFICATION OF MATERIALS & VERIFICATION OF TC (SHELL PLATES AND NOZZLES)	MAJOR	VISUAL	100%	APPROVED GA DRG, & SPECIFICATION	APPROVED GA DRG, & SPECIFICATION	IR / LOG RECORD		P	V		
		B	L SEAM FIT UP OF SHELL SEGMENTS (PT/MT ON WELD EDGE PREPARATION OF PLATES > 40MM)	MAJOR	MEASRT., VISUAL	100%	BHEL DRAWING ASME SEC.VIII DIV.I	BHEL DRAWING, ASME SEC.VIII DIV.I	IR / LOG RECORD		P	V		
2.3.1	SHELL FABRICATION	C	RT OF L SEAM WELDS	MAJOR	NDE	AS PER DRG	ASME SEC.V ART.2	ASME SEC.VIII DIV.I UW51	NDE REPORT	✓	P	V	V	REVIEW OF RT FILM
		D	C-SEAM FITUP OF SHELL SEGMENTS (PT/MT ON WELD EDGE PREPARATION OF PLATES > 40MM)	MAJOR	MEASRT., VISUAL	100%	BHEL DRAWING ASME SEC.VIII DIV.I	BHEL DRAWING, ASME SEC.VIII DIV.I	IR / LOG RECORD	✓	P	V	V	
		E	RT OF C SEAM WELDS	MAJOR	NDE	AS PER DRG	ASME SEC.V ART.2	ASME SEC.VIII DIV.I UW51	NDE REPORT	✓	P	V	V	REVIEW OF RT FILM
		F	FIT UP OF NOZZLES & PADS TO SHELL	MAJOR	VISUAL & MEASRT	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I
MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER		FOR NTPC USE	
SIGNATURE				REVIEWED BY
				APPROVED BY
				APPROVAL SEAL


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD	MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.7 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				

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.	D*	** 10.			11.




		G	PT OF NOZZLE WELDS	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	W*	PT after back chipping of weld
		H	PWHT OF SHELL ASSLY	MAJOR	HT	100%	ASME SEC.VIII DIV.I UCS 56	ASME SEC.VIII DIV.I UCS 56	HT REPORT	✓	P	V	V	
		I	DIMENSIONAL CONFORMITY OF SHELL ASSLY.	MAJOR	MEASRT.	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
2.4	TUBE BUNDLE FABRICATION													
2.4.1	TUBES	A	MATERIAL IDENTIFICATION & VERIFICATION OF TC	MAJOR	VISUAL	100%	DRG TC & SPEC	DRG TC & SPEC	IR / LOG RECORD		P	V		
2.4.2	TUBE BUNDLE ASSEMBLY	A	EXAMINATION OF SKELETON FABRICATION INCLUDING SHROUDS,BAFFLE ORIENTATION, LOCATION OF IMPINGEMENT PLATE (PRIOR TO INSERTION OF TUBES)	MAJOR	VISUAL & MEASRT	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
		B	FIT UP EXAM OF TUBE TO TUBE SHEET JOINT	MAJOR	VISUAL & MEASRT	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MANUFACTURER / SUB-SUPPLIER		MAIN SUPPLIER				
SIGNATURE						


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	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.8 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N	
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.		11.




		C	DIMN. EXAM. OF TUBE BUNDLE AFTER COMPLETION OF ASSEMBLY	MAJOR	MEASRT.	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
		D	PT OF THE STRENGTH WELD	MAJOR	NDE	100%	ASME SEC.V ART.6	ASME SEC.VIII DIV.I APPX.8	NDE REPORT	✓	P	W	W	
2.5	TUBE BUNDLE TO SHELL ASSEMBLY													
2.5.1	TUBE BUNDLE TO SHELL ASSEMBLY	A	FIT UP OF SHELL TO SKIRT	MAJOR	MEASRT.	100%	BHEL DRAWING	ASME SEC.VIII DIV.I	IR / LOG RECORD		P	V		
		B	UT OF SHELL TO SKIRT WELD	MAJOR	NDE	100%	ASME SEC.V ART.5	ASME SEC.VIII DIV.I APPX.12	NDE REPORT	✓	P	W	W	
2.5.1	TUBE BUNDLE TO SHELL ASSEMBLY	C	MT OF SHELL TO SKIRT WELD	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT	✓	P	W	W	AFTER PWHT
		D	PWHT OF SKIRT TO SHELL JOINT	MAJOR	HT	100%	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	HT REPORT	✓	P	V	V	
		E	PNEUMATIC TESTING OF TUBE TO TUBE SHEET WELD JOINT	MAJOR	VISUAL	100%	HY 0852161	HY 0852161	IR / LOG RECORD	✓	P	V	V	

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MANUFACTURER / SUB-SUPPLIER		MAIN SUPPLIER				
SIGNATURE						


Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.9 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400					
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N		
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.			11.

		F	EXAM. OF TUBE EXPANSION FOR % THINNING	MAJOR	MEASRT.	100%	HE 71011 REV.05	HE 71011 REV.05	IR / LOG RECORD	✓	P	W	W*	% THINNING SHALL BE WITHIN 2- 11 % * 5% BY NTPC
2.6	HEMI HEAD ASSEMBLY													
2.6.1	HEMI HEAD ASSEMBLY	A	MATERIAL IDENTIFICATION & VERIFICATION OF TC	MAJOR	VISUAL	100%	DRG. TC & SPEC	DRG TC & SPEC	IR / LOG RECORD		P	V		
		B	PT OF WELD EDGE PREPARATION FOR WELDING WITH TUBE SHEET	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT		P	V		
		C	FIT UP OF NOZZLES, MANHOLE FORGING TO HEMIHEAD	MAJOR	VISUAL & MEASRT	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
		D	UT OF NOZZLES & MANHOLE WELD JOINTS.	MAJOR	NDE	100%	ASME SEC.V ART.5	ASME SEC.VIII DIV.I APPX.12	NDE REPORT	✓	P	W	W	
		E	MT OF NOZZLES & MANHOLE WELD JOINTS.	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT	✓	P	W	Y	AFTER PWHT
		F	PWHT OF HEMI HEAD ASSLY	MAJOR	HT	100%	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	HT REPORT	✓	P	V	V	




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MANUFACTURER / SUB-SUPPLIER		MAIN SUPPLIER				
SIGNATURE						

Chandekar


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD	MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.10 of 14	PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				

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.	D*	** 10.			11.




		G	DIMN. EXAM. OF HEMI HEAD ASSLY	MAJOR	MEASRT.	100%	BHEL DRAWING	BHEL DRAWING	IR / LOG RECORD		P	V		
2.7	FINAL ASSEMBLY													
2.7.1	FINAL ASSEMBLY	A	FIT UP OF HEMI HEAD TO TUBE SHEET.	MAJOR	MEASRT.	100%	BHEL DRAWING		IR / LOG RECORD		P	V		
		B	RT OF HEMI HEAD TO TUBE SHEET WELD JOINT.	MAJOR	NDE	100%	ASME SEC.V ART.2	ASME SEC.VIII DIV.I UW 51	NDE REPORT	✓	P	V	V	REVIEW OF RT FILM
		C	UT OF HEMI HEAD TO TUBE SHEET WELD JOINT.	MAJOR	NDE	100%	ASME SEC.V ART.5	ASME SEC.VIII DIV.I UW 51	NDE REPORT	✓	P	W	V	
		D	MT OF HEMI HEAD TO TUBE SHEET WELD JOINT.	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT	✓	P	W	V	
		E	PWHT OF HEMI HEAD TO TUBE SHEET JOINT.	MAJOR	HT	100%	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	ASME SEC.VIII DIV.I UCS 56 / IBR REG 267	HT REPORT	✓	P	V	V	
		F	UT OF HEMI HEAD TO TUBE SHEET WELD JOINT AFTER PWHT	MAJOR	NDE	100%	ASME SEC.V ART.5	ASME SEC.VIII DIV.I APPX.12	NDE REPORT	✓	P	W	W	
		G	MT OF HEMI HEAD TO TUBE SHEET WELD JOINT AFTER PWHT	MAJOR	NDE	100%	ASME SEC.V ART.7	ASME SEC.VIII DIV.I APPX.6	NDE REPORT	✓	P	W	W	

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER	
SIGNATURE			FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL


Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.11 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N	
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.		11.

		H	VISUAL & DIMENSIONAL INSPECTION OF FINAL ASSEMBLY	MAJOR	VISUAL, MEASRT	100%	AS PER NTPC APPROVED GA DRAWING		IR / LOG RECORD	✓	P	V	V	
		I	IMPACT TEST ON TEST COUPON (IF APPLICABLE AS PER DESIGN)	MAJOR	MECH	100 %	ASME SEC VIII, DIV -1 UG 84	ASME SEC VIII , DIV -1 UG 84	IR / LOG RECORD	✓	P	W	W/V*	V in case of IBR witness
3.0	HYDRO TEST													
3.1.1	HYDRO TEST	A	SHELL SIDE HYDRO TEST	CRITICAL	HYDRO	100%	TEST PRESSURE AS PER NTPC APPROVED GA DRAWING, IBR REQUIREMENTS WHICHEVER IS HIGHER HOLDING TIME 30 MINUTES		HYDRO TEST REPORT	✓	P	W	W	CHP
		B	TUBE SIDE HYDRO TEST.	CRITICAL	HYDRO	100%			HYDRO TEST REPORT	✓	P	W	W	CHP
4.0	PRE DISAPATCH INSPECTION													
4.1.1	PRE DISPATCH INSPECTION	A	DRAINING DRYING, N2 FILL-UP, CHECKUP FOR PRESSURE AND ITS MAINTENANCE WITHOUT DECAY AFTER 24 HRS	MAJOR	VISUAL	100%	DRAWING	DRAWING	IR / LOG RECORD	✓	P	V	V	SUPPLIER TC FOR N2 PURITY SHALL BE FURNISHED
		B	CLEARANCE FOR PAINTING BALNKING OF ALL OPENINGS	MAJOR	VISUAL	100 %	DRG	DRG	IR / LOG RECORD	✓	P	V	V	

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"						DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I					
		MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER	SIGNATURE		FOR NTPC USE		REVIEWED BY	APPROVED BY	APPROVAL SEAL			




Chandekar


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.12 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE:TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK M C/N		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY M C N	
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.		11.

		B	PAINTING	MAJOR	VISUAL, MEASRT	100%	DRG. / SPECN.	DRG. / SPECN.	IR / LOG RECORD	√	P	V		
		C	PRE-DESPATCH INSPECTION FOR CLEANILINESS, COMPLETENESS, DIMENSIONAL CHECK & BLANKING OF OPEN HOLES AND REVIEW OF QUALITY DOCUMENTATION	MAJOR	VISUAL	100%	APPD. QP,BHEL PRACTICE AND DRG		IR / LOG RECORD	√	P	V	V	CHP

NOTES:




- ALL MATERIALS OF CONSTRUCTION SHALL BE AS PER APPROVED DATA SHEET/DRG MEETING TALCHER PROJECT TECHNICAL SPECIFICATION.
- AS A STATUTORY REQUIREMENT, VALID IBR CERTIFICATION SHALL BE PROVIDED.
- IN CASE OF INCONSISTENCY BETWEEN REQUIREMENTS OF DRG. /DATA SHEET AND QP, DRG. /DATASHEET WILL PREVAIL.
- TESTING OF PRODUCTION WELD TEST COUPON AS PER IBR CODE.
- RAW MATERIAL TCs AND IR AS PER APPROVED QAP SHALL BE FURNISHED FOR REVIEW DURING MATERIAL INDUCTION.
- THIS QAP INCLUDES INSPECTION STAGES OF RAW MATERIAL & BOI, NO SEPARATE QAP FOR RAW & BOI MATERIAL SHALL BE SUBMITTED.
- MOCK UP TEST FOR A GIVEN COMBINATION TO BE DEMONSTRATED BY BHEL AS PER STANDARD.IF THE SAME IS CARRIED OUT IN THE PAST, THE REPORT OF THE SAME SHALL BE FURNISHED FOR REVIEW.
- ITEMS NOT COVERED IN APPROVED LOA VENDOR LIST, SHALL BE PROCURED FROM BHEL APPROVED VENDORS, AS PER NTPC ON-GOING PROJECTS.

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER					
SIGNATURE			FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.13 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400			
	SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY		REMARKS
					M C/N				M C N			
1.	2.	3.	4.	5.	6	7	8	9.	D*	** 10.	11.	

GENERAL LEGENDS					
NDE	NON DESTRUCTIVE EXAMINATION	ASSLY	ASSEMBLY	CHEM	CHEMICAL
UT	ULTRASONIC TEST	QC	QUALITY CONTROL	MECH	MECHANICAL
PT	DYE PENETRANT TEST	TPIA	THIRD PARTY INSPECTION AGENCY	TC	TEST CERTIFICATES
MT/MPI	MAGENTIC PARTICLE INSPECTION	WPS	WELDING PROCEDURE SPECIFICATION	VERFN	VERIFICATION
RT	RADIOGRAPHY TEST	WQR	WELDER QUALIFICATION RECORD	IGC	INTER GRANULAR CORROSSION
MEASRT	MEASUREMENT	PQR	PROCEDURE QUALIFICATION RECORD	HT	HEAT TREATMENT
DIMN	DIMENSION	IR	INSPECTION REPORT	QA	QUALITY ASSURANCE

REVISION HISTORY					
SL NO.	REVISION DETAILS	DATE OF REV	PREPARED BY	REVIEWED BY	APPROVED BY
1	FIRST ISSUE	07.11.2023	AB	BAK	BAK




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED 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"		DOC.NO.: 4540-001-110-QVM-Q-184 REV 00 CAT I		
				MANUFACTURER / SUB-SUPPLIER	MAIN SUPPLIER	FOR NTPC USE
SIGNATURE						

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	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LIMITED R.C. PURAM, HYDERABAD		MANUFACTURING QUALITY PLAN ITEM: HP HEATER SUB SYSTEM: TG & AUX PKG				QP No HY/QA/HEF/MQP/581/04 Rev. No.:00 DATE: 07.11.2023 PAGE : Page A.14 of 14		PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
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1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.		11.

Approved HP/LP FABRICATOR as per LOA of NTPC Talcher Project PAGE NO 36 &37 /43, SL NO 57

SL	ITEM DESCRIPTION	VENDOR	LOCATION
1	HP/LP FABRICATOR	ISGEC	YAMUNA NAGAR
2		GODREJ & BOYCE MANUFACTURING COMPANY LTD	MUMBAI
3		TEMA INDIA LTD	MUMBAI
4		SWATHI INDUSTRIES	HYDERABAD
5		PAVAN ENTERPRISES	HYDERABAD
6		V.R.K. INDUSTRIES	HYDERABAD
7		MULTIFABS	HYDERABAD
8		BHEL TRICHY	TRICHY

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				FOR NTPC USE	REVIEWED BY	APPROVED BY
MANUFACTURER / SUB-SUPPLIER		MAIN SUPPLIER				
SIGNATURE						

Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-II PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400			
		ITEM: SS SEAMLESS U TUBES HP HEATERS BHEL SPEC: HE51173 REV 10		QP No : 4540-001-110-QVM-Q-184 B Rev. No.: 00 DATE: 07.11.2023 PAGE : Page C.1 of 7					




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.	D*	** 10.			11.

1.0 RAW MATERIAL INSPECTION


1.1	MOTHER TUBES	A) IDENTIFICATION OF MOTHER TUBES MARKINGS W.R.TO TC	MAJOR	VISUAL	100%	TEST CERTIFICATE	BHEL SPECIFICATION	TC & INSPN. RECORD		P	V		
		B) VISUAL & DIMN. EXAM	MAJOR	VISUAL & MEASRT	100%	TEST CERTIFICATE	BHEL SPECIFICATION	TC & INSPN. RECORD		P	V		
1.2	VERIFICATION OF MOTHER TUBES TEST CERTIFICATE	A) CHEMICAL COMP.	MAJOR	CHEM.	100%	TEST CERTIFICATE	BHEL SPECIFICATION	TC & INSPN. RECORD	✓	P	V	V	C<=0.05%
		B) MECH. PROPERTIES	MAJOR	MECH.	100%	TEST CERTIFICATE	BHEL SPECIFICATION	TC & INSPN. RECORD	✓	P	V	V	
		C) UT	MAJOR	NDE/INTERNAL FLAW	100%	TEST CERTIFICATE	BHEL SPECIFICATION	TC & INSPN. RECORD	✓	P	V	V	

2.0 IN PROCESS INSPECTION

2.1	PILGERING / INTERMEDIATE DRAWING	COLD PILGERING / COLD DRAWING	MAJOR	OD, THK, SURFACE	100%	MFR STD	BHEL SPECIFICATION	-DO-	✓	P	V		
2.2	TUBE WASHING	SURFACE CONDITION	MAJOR	VISUAL	100%	MFR STD	BHEL SPECIFICATION	-DO-	✓	P	V		
2.3	INTERMEDIATE HEAT TREATMENT IF APPLICABLE	SOLUTION ANNEALING	MAJOR	TEMP, SOAKING TIME, SPEED	100%	BHEL SPECIFICATION	BHEL SPECIFICATION	-DO-	✓	P	V	V	




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
				FOR NTPC USE		
				REVIEWED BY	APPROVED BY	APPROVAL SEAL

Chandekar


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				QP No : 4540-001-110-QVM-Q-184 B Rev. No.:00 DATE: 07.11.2023 PAGE : Page C.2 of 7	PROJECT: 2X660 MW TALCHER-II PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
		ITEM: SS SEAMLESS U TUBES HP HEATERS BHEL SPEC: HE51173 REV 10									

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.	D*	** 10.			11.

2. 4	FINAL DRAWING & SIZING	COLD DRAWN	MAJOR	OD, WALL THK & SURFACE	100%	MFR STD	BHEL SPECIFICATION	-DO-		P	V		
2. 5	FINAL HEAT TREATMENT	BRIGHT ANNEALING IN INERT ATMOSPHERE	MAJOR	TEMP, HOLDING TIME, RATE OF COOLING	100%	BHEL SPECIFICATION	BHEL SPECIFICATION	H T CHART	✓	P	V	V	NOTE 3
2. 6	STRAIGHTENING	STRAIGHTNESS	MAJOR	OD, SURFACE	100%	BHEL SPECIFICATION	BHEL SPECIFICATION	INSPN. RECORD		P			
2. 7	CUT TO LENGTH WITH ALLOWANCE	LENGTH	MAJOR	MEASRT	100%	BHEL SPECIFICATION & PO	BHEL SPECIFICATION & PO	INSPN. RECORD		P			
2. 8	SAMPLING FOR TESTING		MAJOR	MEASRT	100%	BHEL SPECIFICATION & PO	BHEL SPECIFICATION & PO	INSPN. RECORD	✓	P	W	W	
2. 9	TEST ON TUBES	a) PRODUCT ANALYSIS	MAJOR	CHEMICAL	AS PER SPEC.	SA213, SA1016 & PO	SA213, SA1016 & PO	SUPPLIERS TC	✓	P	V	V	
		b) TENSILE TESTING	MAJOR	MECH.	AS PER SPEC.	SA213, SA1016 , BHEL SPECIFICATION & PO	SA213, SA1016 , BHEL SPECIFICATION & PO	TC & INSPN. RECORD	✓	P	W	W	
		c) HARDNESS TESTING	MAJOR	MECH.	AS PER SPEC.			TC & INSPN. RECORD	✓	P	W	W	
		d) FLATTENING TEST	MAJOR	MECH.	AS PER SPEC.			TC & INSPN. RECORD	✓	P	W	W	
		e) FLARING TEST	MAJOR	MECH.	AS PER SPEC.			TC & INSPN. RECORD	✓	P	W	W	
		f) INTER GRANULAR CORROSION TESTING	MAJOR	CORROSION RESISTANCE	AS PER SPEC.			TC & INSPN. RECORD	✓	P	W	V	
		g) RESIDUAL CHLORIDE	MAJOR	CHEM.	AS PER SPEC.			TC & INSPN. RECORD	✓	P	W	V	




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
MAIN SUPPLIER			FOR NTPC USE			
SIGNATURE				REVIEWED BY	APPROVED BY	APPROVAL SEAL

Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-II PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400			
		ITEM: SS SEAMLESS U TUBES HP HEATERS BHEL SPEC: HE51173 REV 10	QP No : 4540-001-110-QVM-Q-184 B Rev. No.: 00 DATE: 07.11.2023 PAGE : Page C.3 of 7						

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.	D*	** 10.			11.
		h) MICROSTRUCTURE, GRAIN PROPERTIES	MAJOR	METALLOGRAPHY	ONE PER HEAT		BHEL SPEC.	BHEL SPEC. & P.O	TC	✓	P	W	V	
2. 10	EDDY CURRENT TEST	INTERNAL FLAWS	MAJOR	NDE	100 %	10 %	ASTM E426	ASME SA1016 & NOTE 8	SUPPLIER TC	✓	P	W	W	10% BY BHEL TPIA 5 % BY NTPC
2. 11	ULTRASONIC TEST	INTERNAL FLAWS	MAJOR	NDE	100 %	10 %	ASTM E213	ASME SA1016	SUPPLIER TC	✓	P	W	V	10% BY BHEL TPIA
2. 12	INSPECTION OF STRAIGHT TUBES	OD, THICKNESS, LENGTH, STRAIGHTNESS, EDGE BURRS, SURFACE CONDITION	MAJOR	VISUAL & MEASRT	100 %		MFR. STD.	MFR. STD., BHEL SPEC	-DO-	✓	P	V		
2. 13	U-BENDING OF TUBES	CENTRE LINE BEND RADIUS (CLR)	MAJOR	VISUAL	100%		MFR. STD.	MFR. STD.	INSPN. RECORD		P	V		NOTE 4
		WALL THINNING	MAJOR	MEASRT	1 SAMPLE OF MIN BEND RADIUS FOR EACH THK		BHEL SPECIFICATION & DRG.	BHEL SPECIFICATION & DRG.	INSPN. RECORD	✓	P	W		
2. 14	STRESS RELIEVING OF U- BEND PORTION	SOLUTION ANNEALING	MAJOR	TEMP, SOAKING TIME	100%		BHEL SPECIFICATION & DRG.	BHEL SPECIFICATION & DRG.	INSPN. RECORD	✓	P	V	V	NOTE 5

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"					DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
		MAIN SUPPLIER							
		SIGNATURE					FOR NTPC USE	REVIEWED BY	APPROVED BY

Chandekar



MANUFACTURER'S NAME
& ADDRESS:
**BHARAT HEAVY ELECTRICALS
LTD. HYDERABAD**

ITEM: **SS SEAMLESS U TUBES
HP HEATERS**
BHEL SPEC:HE51173 REV 10

QP No : 4540-001-110-QVM-Q-184 B
Rev. No.:00
DATE: 07.11.2023
PAGE : Page C.4 of 7

PROJECT: 2X660 MW TALCHER-II
PACKAGE: TG & AUX
CONTRACT NO: CS-4540-001-110
MAIN SUPPLIER: HPEP, BHEL HYDERABAD
BHEL SALE ORDER NO: M-PA-1087
BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400




SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.

2. 1. 5	STRESS RELIEVING	RESIDUAL CIRCUMFERENTIAL STRESS	MAJOR	MEASRT	ONE SPECIMEN PER LOT		BHEL SPEC HE51173,PO & DRG.	BHEL SPEC HE51173,PO & DRG.	INSPN. RECORD	✓	P	V	V	
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3.0 FINAL INSPECTION

3. 1	HYDROSTATIC TESTING AFTER BENDING	PRESSURE, TIME, LEAKAGE	CRITICAL	HYDRO	100 %	10 %	ASTM A1016	ASTM A1016	HYDRO TEST REPORT	✓	P	W	W	10% BY BHEL TPIA 5 % BY NTPC
3. 2	CUT TO LENGTH & DEBURR	LENGTH, EDGE CONDITION	MAJOR	MEASRT	100%		BHEL SPECIFICATION & PO	BHEL SPECIFICATION & PO	INSPN. RECORD		P	V		
3. 3	DIMN. CONFORMITY & VISUAL EXAM.	OD, CLR, THICKNESS, LENGTH, OVALITY, LEG SPACING, PLANE OF BEND, CURVATURE, EDGE BURRS.	MAJOR	VISUAL/ MEASRT	100 %	10 %	DRG. / PO & SPEC	DRG. / PO & SPEC	INSPN. RECORD	✓	P	W	W	10% BY BHEL TPIA 1 % BY NTPC
3. 4	CLEANLINESS OF INSIDE SURFACE OF TUBES	NITROGEN PURGING	MAJOR	MEASRT	100%		DRG. / PO & SPEC	DRG. / PO & SPEC	INSPN. RECORD	✓	P	V		

4.0 PRESERVATION AND DESPATCH

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"			DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
		MAIN SUPPLIER	FOR NTPC USE		REVIEWED BY	APPROVED BY	APPROVAL SEAL
SIGNATURE							

Chandekar




	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-II PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400			
		ITEM: SS SEAMLESS U TUBES HP HEATERS BHEL SPEC: HE51173 REV 10	QP No : 4540-001-110-QVM-Q-184 B Rev. No.: 00 DATE: 07.11.2023 PAGE : Page C.5 of 7						

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.	D*	** 10.			11.


4. 1	PACKING & DESPATCH	VERIFICATION OF ALL TCS FOR COMPLETION.	MAJOR	VISUAL	100%		PO, SPEC., DRG. & QP	DRG. / PO & SPEC	INSPN. RECORD	✓	P	V		
		PMI	MAJOR	NDE	10 %	5%	BHEL SPECIFICATION & PO.	BHEL SPECIFICATION & PO.	INSPN. RECORD	✓	P	W	V	
		PACKING & DISPATCH	MAJOR	VISUAL	100 %		PO, SPEC., DRG. & QP	DRG. / PO & SPEC	INSPN. RECORD	✓	P	V		

NOTES:

- LUBRICANTS USED IN TUBE DRAWING OPERATION SHALL BE NON-CHLORINATED (50 PPM CHLORIDES OR LESS). ALL CLEANING COMPOUNDS SHALL BE CHLORIDE AND CAUSTIC FREE. EACH CLEANING OPERATION SHALL BE FOLLOWED BY A RINSE OR RINSES WITH WATER, THE FINAL RINSE SHALL BE WITH DEMINERALISED WATER CONTAINING NOT MORE THAN 10 PPM CHLORIDES.
- INTERMEDIATE SOLUTION ANNEALING SHALL ALSO BE DONE IN BRIGHT ANNEALING FURNACE ONLY.
- STRAIGHT TUBES SHALL BE CLEANED AND BRIGHT ANNEALED AT A TEMPERATURE OF 1040°C MIN. FOLLOWED BY QUENCHING TO BELOW 370° C.
- HOT BENDING TO FORM 'U' TUBES SHALL NOT BE PERMITTED.
- U BEND AREA PLUS APPROXIMATELY 150MM OF EACH LEG BEYOND TANGENT POINT OF THE U BEND SHALL BE HEAT TREATED.
- HYDROSTATIC TESTING OF TUBES SHALL BE CARRIED OUT WITH DEMINERALISED WATER. CHLORIDE CONTENT OF D.M. WATER SHALL NOT EXCEED 10 PPM.
- TUBES SHALL BE PACKED IN SEA WORTHY PACKING & SHALL BE CAPABLE OF WITHSTANDING MECHANICAL DAMAGES DURING TRANSIT.
- EDDY CURRENT TEST SHALL BE CARRIED OUT WITH A TRANSVERSE TANGENTIAL NOTCH AS PER SA1016
- PROJECT SPECIFIC REQUIREMENTS, IF ANY, AS PER PO SHALL ALSO BE COMPLIED WITH. VENDOR HOLDS THE RESPONSIBILITY OF SUPPLYING TUBES TO THE SPECIFICATION AND RELEVANT STANDARDS.
- THE REQUIRED CERTIFICATION FOR HP HEATER U-TUBES FROM IBR IN IBR FORM III B FORMAT SHALL BE FURNISHED TO BHEL.
- ALL TUBES PASSED IN EDDY CURRENT TEST SHALL BE MARKED BY ELECTRO-STENCILLING BY BHEL/BHEL TPIA. ALL REJECTED TUBES SHALL BE REMOVED FROM WORK AREA IN PRESENCE OF BHEL/BHEL TPIA
- MATERIAL OF CONSUTRCTION SHALL BE AS PER NTPC APPROVED GA DRAWING OF EQUIPMENT.
- THE MOTHER HOLLOWES SHALL BE PRODUCED BY HOT EXTRUSION METHOD. RAW MATERIAL SHALL BE SOURCED FROM BHEL APPROVED SOURCES

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						




Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-II			
		ITEM: SS SEAMLESS U TUBES HP HEATERS BHEL SPEC:HE51173 REV 10	QP No : 4540-001-110-QVM-Q-184 B Rev. No.:00 DATE: 07.11.2023 PAGE : Page C.6 of 7		PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				

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.	D*	** 10.			11.

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** **NDE - NON-DESTRUCTIVE EXAMINATION**
UT – ULTRASONIC TEST **MEASRT – MEASUREMENT MFR – MANUFACTURER** **STD – STANDARD SPEC - SPECIFICATION**

- 14) IN CASE OF DIFFERING/CONFLICTING REQUIREMENTS, ANOMALIES, ANY DRAWING/SPECN SHALL PREVAIL OVER QUALITY PLAN
- 15) THIS QP IS APPLICABLE ONLY FOR NTPC APPROVED VENDORS AS PER LOA APPROVED VENDOR LIST .
- 16) THIS QP IS APPLICABLE FOR THE MAIN AS WELL AS SUBSEQUENT SPARE SUPPLIES.
- 17) FOR IMPORTED VENDORS, BHEL & NTPC WITNESS SHALL BE CONSIDERED VERIFICATION.
- 18) THIS QP IS ALSO APPLICABLE FOR OTHER VENDORS APPROVED BY NTPC DURING DETAILED ENGINEERING AS PER ONGOING NTPC PROJECTS.

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPJA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						

Chandekar



MANUFACTURER'S NAME
& ADDRESS:
**BHARAT HEAVY ELECTRICALS
LTD. HYDERABAD**

ITEM: **SS SEAMLESS U TUBES
HP HEATERS**
BHEL SPEC:HE51173 REV 10




QP No : 4540-001-110-QVM-Q-184 B
Rev. No.:00
DATE: 07.11.2023
PAGE : Page C.7 of 7


PROJECT: 2X660 MW TALCHER-II
PACKAGE: TG & AUX
CONTRACT NO: CS-4540-001-110
MAIN SUPPLIER: HPEP, BHEL HYDERABAD
BHEL SALE ORDER NO: M-PA-1087
BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400

SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.			11.

Approved Vendor as per LOA of NTPC Talcher Project PAGE NO 34 &35 /43, SL NO 53

SL	ITEM DESCRIPTION	VENDOR	LOCATION
1	STAINLESS STEEL TUBE (U TUBE) SEAMLESS & WELDED – FOR LP HEATER/HP HEATER/DESUPERHEATER	RATNAMANI METALS & TUBES LTD.,	AHMEDABAD/ KUTCH
2		HEAVY METALS & TUBES LTD	AHMEDABAD
3		PLYMOUTH TUBE COMPANY	USA
4		REMI EDELSTAHL TUBULARS LTD	TARAPUR
5		SHINHAN METAL	SOUTH KOREA
6		NEOTISS LIMITED (formerly VALLOUREC HEAT EXCHANGER TUBES LTD.,)	PATANCHERU, HYDERABAD
7		RATNADEEP METAL&TUBES P.LTD	AHMEDABAD
8		APEX	ALWAR
9		VALTIMAT	FRANCE
10		NIPPON STEEL CORP	JAPAN
11		SCHOLLER WERKE	GERMANY




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"				DOC.NO 4540-001-110-QVM-Q-184 B REV 00 ITEM CATEGORY - CAT I		
		MAIN SUPPLIER	FOR NTPC USE	REVIEWED BY		APPROVED BY	APPROVAL SEAL	
SIGNATURE								


	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN			QP No: 4540-001-110-QVM-Q-184 C Rev. No.:00 DATE: 07.11.2023 PAGE: Page D.1 of 4	PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400
		ITEM: HEMI HEAD (HP HEATER) BHEL SPEC: HE 51170, R08				

Chandekar

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.	D*	** 10.			11.

1.0 AT SUPPLIERSWORKS														
1.1	HEMIHEAD	VERIFICATION OF MILL TC FOR IDENTIFICATION MARKS, CHEM. & MECH. PROPERTIES	CRITICAL	VISUAL TC REVIEW	100%	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		SUPPLIER TC	✓	V	V	V	Plates from NTPC agreed sources	
1.2		UT EXAM OF PLATE	MAJOR	NDE	100%	SA 435	SA 435							
1.3		VERIFICATION OF HT CHART AFTER FORMING & NORMALIZING	MAJOR	REVIEW	100 %	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		HT CHART/ REPORT	✓	V	V	V		
1.4		UT EXAM. AFTER FORMING	MAJOR	NDE	100%	SA 435	SA 435	IR	✓	P	W	W		
1.5		MT ON OUTER SURFACE AFTER FORMING	MAJOR	NDE	100%	ASME SEC.V ART.7	ASMASME SEC.VIII DIV.I , APPX.6	IR	✓	P	W	W		
1.6		MECH. PROPERTIES ON TEST COUPON	MAJOR	MECH.	AS PER SPEC	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		IR	✓	P	W	V		
1.7		DIM. CONFORMITY INCLUDING THICKNESS MEASURT. & OVALITY	MAJOR	MEASURT.	100 %	BHEL DRG.	DRG. & ASME SEC.VIII DIV.I	IR	✓	P	W	W		
1.8		LIFTING LUG ARRGT AND ORIENTATION	MAJOR	MEASURT.	100 %	BHEL DRG.	BHEL DRG.	IR	✓	P	V	V		
1.9		PT ON LIFTING LUG WELDS	MAJOR	NDE	100%	ASME SEC.V ART.6	ASMASME SEC.VIII DIV.I , APPX.8	IR	✓	P	V	V		

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 C REV 00 ITEM CATEGORY CAT I		
				MAIN SUPPLIER	FOR NTPC USE	REVIEWED BY
SIGNATURE						




	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				QP No: 4540-001-110-QVM-Q-184 C Rev. No.:00 DATE: 07.11.2023 PAGE: Page D.2 of 4	PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400			
		ITEM: HEMI HEAD (HP HEATER) BHEL SPEC: HE 51170, R08								

SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.
1.10		VERIFICATION OF TCS, IDENTIFICATION OF MATERIAL & TEST COUPON FOR COMPLETION AS PER SPECN. & QP	MAJOR	VISUAL	100 %		BHEL DRG,SPEC. & QP	BHEL DRG.,SPEC & QP	SUPPLIER TC/IR	✓	P	V	V	
1.11		PRESERVATION, PACKING & IDENTIFICATION (MARKING)	MAJOR	VISUAL	100%		P.O. & SPEC.	P.O.& SPEC	IR	✓	P	V		

NOTE -1 VALID IBR TCs AS IBR 1950 REG. SHALL BE FURNISHED FOR BHEL /BHEL TPIA REVIEW AND RECORD.

GENERAL NOTES:

- THIS QP SHOULD BE READ ALONG WITH BHEL SPEC, BHEL DRAWINGS, DATA SHEET, BOM AND PO.
- 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 AS REQUIRED.
- ALL TEST CERTIFICATES/ REPORTS REVIEWED AND CERTIFIED BY BHEL/TPI SHALL BE SUBMITTED TO BHEL AS DOCUMENTATION PACKAGE.
- MATERIAL OF CONSTRUCTION SHALL BE AS PER NTPC APPROVED GA DRAWING OF EQUIPMENT.
- IN CASE OF DIFFERING/CONFLICTING REQUIREMENTS, ANOMALIES, ANY DRAWING/SPECN SHALL PREVAIL OVER QUALITY PLAN
- THIS QP IS APPLICABLE ONLY FOR NTPC APPROVED VENDORS AS PER LOA APPROVED VENDOR LIST.
- THIS QP IS APPLICABLE FOR THE MAIN AS WELL AS SUBSEQUENT SPARE SUPPLIES.
- FOR IMPORTED VENDORS, BHEL & NTPC WITNESS SHALL BE CONSIDERED VERIFICATION
- THIS QP IS ALSO APPLICABLE FOR OTHER VENDORS APPROVED BY NTPC DURING DETAILED ENGINEERING

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M-MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 C REV 00 ITEM CATEGORY CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						

SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
					M	C/N				M	C	N	
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.		11.

MANUFACTURING QUALITY PLAN

MANUFACTURER'S NAME & ADDRESS:
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD




ITEM: **HEMI HEAD (HP HEATER)**
 BHEL SPEC: HE 51170, R08

QP No: 4540-001-110-QVM-Q-184 C
 Rev. No.:00
 DATE: 07.11.2023
 PAGE: Page D.3 of 4

PROJECT: 2X660 MW TALCHER-III
 PACKAGE: TG & AUX
 CONTRACT NO: CS-4540-001-110
 MAIN SUPPLIER: HPEP, BHEL HYDERABAD
 BHEL SALE ORDER NO: M-PA-1087
 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400

GENERAL LEGENDS

NDE	NON DESTRUCTIVE EXAMINATION	ASSLY	ASSEMBLY	CHEM	CHEMICAL
UT	ULTRASONIC TEST	QC	QUALITY CONTROL	MECH	MECHANICAL
PT	DYE PENETRANT TEST	TPIA	THIRD PARTY INSPECTION AGENCY	TC	TEST CERTIFICATES
MT/MPI	MAGENTIC PARTICLE INSPECTION	WPS	WELDING PROCEDURE SPECIFICATION	VERFN	VERIFICATION
RT	RADIOGRAPHY TEST	WQR	WELDER QUALIFICATION RECORD	IGC	INTER GRANULAR CORROSSION
MEASRT	MEASUREMENT	PQR	PROCEDURE QUALIFICATION RECORD	HT	HEAT TREATMENT
DIMN	DIMENSION	IR	INSPECTION REPORT	QA	QUALITY ASSURANCE
COC	CERTIFICATE OF COMPLIANCE	DRG /DS	DRAWING /DATA SHEET	PO	PURCHASE ORDER

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 C REV 00 ITEM CATEGORY CAT I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						

SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
					M	C/N				M	C	N	
1.	2.	3.	4.	5.	6		7	8	9.	D*	** 10.		11.



MANUFACTURER'S NAME & ADDRESS:
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

ITEM: **HEMI HEAD (HP HEATER)**
 BHEL SPEC: HE 51170, R08

QP No: 4540-001-110-QVM-Q-184 C
 Rev. No.:00
 DATE: 07.11.2023
 PAGE: Page D.4 of 4

PROJECT: 2X660 MW TALCHER-III
 PACKAGE: TG & AUX
 CONTRACT NO: CS-4540-001-110
 MAIN SUPPLIER: HPEP, BHEL HYDERABAD
 BHEL SALE ORDER NO: M-PA-1087
 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400


Approved Vendor as per LOA of NTPC Talcher Project PAGE NO 31&32 /43, SL NO 53

SL	ITEM DESCRIPTION	VENDOR	LOCATION
1	HEMI HEAD	VOEST ALPINE GIESSEREI LINZ GMBH,LTD.,	GERMANY
2		EDMONTON EXCHANGER & MFG.LTD.,	CANADA
3		DILLING-GTS VENTES,	GERMANY
4		CEREC	FRANCE
5		CEREC	VADODARA
6		KONIG & CO. GMBH	GERMANY
7		M/s RICHARDSON & CRUDDAS (1972) LTD.,	MUMBAI
8		M/s J BOWN & CO.(DUKINFIELD) LIMITED	U.K

LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA		DOC. 4540-001-110-QVM-Q-184 C		
			REV 00		ITEM CATEGORY
MAIN SUPPLIER		FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL
SIGNATURE					

Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400				
		ITEM: DISHED END (CS) BHEL SPEC: HE51370 REV 00		QP No : 4540-001-110-QVM-Q-184 D Rev. No.:00 DATE: 31.08.2023 PAGE: Page E.1 of 4						


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.	D*	** 10.			11.

1	PLATE MATERIAL	VERIFICATION OF MILL TEST CERTIFICATE AND IDENTIFICATION MARKS FOR MECHANICAL AND CHEMICAL PROPERTIES	MAJOR	VISUAL	100%		MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	TEST CERTIFICATE	✓	V	V	V	Plates from NTPC agreed source
2	WELD SEAM OF BLANKS (IF APPLICABLE)	1. PT ON WELD EDGE PREPARATION	MAJOR	NDE	100%	ASME SEC.V ARTICLE 6	ASME SEC.VIII DIVISION I APPENDIX 8	SUPPLIER TC	✓	P	V	V	
		2. RT OF WELD JOINT BEFORE FORMING	MAJOR	NDE	100%	ASME SEC.V ARTICLE 2	ASME SEC.VIII DIVISION 1 UW 51	IR	✓	P	V	V	
		3. MECHANICAL TEST ON TEST COUPON	MAJOR	VISUAL	SAMPLE		MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC	SUPPLIER TC	✓	P	W/V	V	
3	IN PROCESS	1 UT OF PLATE BEFORE FORMING	MAJOR	NDE	100%	SA 435	SA 435	SUPPLIER TC/IR	✓	P	V	V	NOTE 1
		2 DIMENSIONAL CONFORMITY INCLUDING CHECKING FOR MINIMUM THICKNESS	MAJOR	MEASUREMENT	100%	BHEL DRAWING	BHEL DRAWING	IR	✓	P	W	W	
		3 RT ON WELD SEAM AFTER FORMING (IF APPLICABLE)	MAJOR	NDE	100%	ASME SEC VIII ARTICLE 2	ASME SEC VIII DIVISION I UW 51	IR, RT FILM	✓	P	V	V	
		4 VERIFICATION OF PWHT CHARTS FOR NORMALISING AFTER FORMING	MAJOR	VISUAL	100%	ASME SEC VIII DIVISION I UCS 56	ASME SEC VIII DIVISION I UCS 56	HT CHART, IR	✓	P	V	V	
3	IN PROCESS	5 PT / MT ON ENTIRE SURFACE AFTER FORMING	MAJOR	NDE	100%	ASME SEC.V ARTICLE 6/7	ASME SEC.VIII DIVISION 1 APPENDIX 8/6	IR	✓	P	V	V	

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER / MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 D ITEM CATEGORY CAT -I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY

MAIN SUPPLIER
SIGNATURE

Chandekar




	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-III PACKAGE:TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
		ITEM: DISHED END (CS) BHEL SPEC: HE51370 REV 00		QP No : 4540-001-110-QVM-Q-184 D Rev. No.:00 DATE: 31.08.2023 PAGE:Page E.2 of 4						

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.	D*	** 10.			11.

4	IN PROCESS /FINAL	6 CHECK FOR THICKNESS AFTER REMOVAL OF SCALES	MAJOR	MEASUREMENT	100%	BHEL DRAWING	BHEL DRAWING	IR		P	V	V	
		7 MT OF WELD SEAMS ON INSIDE AND OUTSIDE SURFACES AFTER FORMING AND NORMALISATION (IF APPLICABLE)	MAJOR	NDE	100%	ASME SEC.V ARTICLE 7	ASME SEC.VIII DIVISION 1 APPENDIX 6	IR	✓	P	W	V	
		8 UT ON OUTER SURFACE AFTER FORMING	MAJOR	NDE	100%	SA 435	SA 435	IR	✓	P	W	W	
		9 LIFTING LUG ARRGT PT LIFTING LUG WELD	MAJOR	VISUAL NDE	100%	BHEL DRG, ASME SEC.V ARTICLE 6	BHEL DRG,ASME SEC.VIII DIVISION 1 APPENDIX 8	IR	✓	P	W	V	
		10 MATCHING OF DISHED ENDS DIAMETER	MAJOR	MEASRT	100 %	BHEL DRG,SPEC	BHEL DRG,SPEC	IR	✓	P	V		NOTE -5
		11 MARKING OF DISHED ENDS	MAJOR	VISUAL	100%	BHEL DRAWING,SPEC	BHEL DRAWING,SPEC	IR	✓	P	V		
		12 MECHANICAL TESTS ON TEST COUPON	MAJOR	VISUAL	SAMPLE	MATERIAL GRADE AS PER NTPC APPROVED GA DRAWING , BHEL SPEC		IR	✓	P	W	V	V

Notes:

1. NOT REQUIRED IF ALREADY UT TESTED AT MILL.
2. PROJECT SPECIFIC REQUIREMENTS, IF ANY, AS PER P.O. SHALL ALSO BE COMPLIED WITH.
3. ALL REQUIREMENTS AS PER BHEL SPECIFICATION AND DRAWING ARE TO BE COMPLIED WITH.
4. VALID IBR TC SHALL BE FURNISHED AS PER IBR 1950 REGULATION. VERIFICATION SHALL BE BY BHEL /BHEL TPIA IF WITNESSED BY IBR.
5. WHEN DISHED ENDS OF BOTH ENDS OF DEAEARATOR ARE ORDERED IN PAIRS, MATCHING OF DISHED ENDS DIAMETER SHALL BE ENSURED.

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER / MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 D ITEM CATEGORY CAT -I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						

Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN			PROJECT: 2X660 MW TALCHER-III PACKAGE:TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300,W-1032265400,W-1032265500,W-1032265600,W-1032265700,W-1032265800,W-1032266000,W-1032266100,W-1032266200,W-1032266300,W-1032266400				
		ITEM: DISHED END (CS) BHEL SPEC: HE51370 REV 00	QP No : 4540-001-110-QVM-Q-184 D Rev. No.:00 DATE: 31.08.2023 PAGE:Page E.3 of 4						


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.

- 6. IN CASE OF SPINNING METHOD IS ADOPTED, THE CENTRAL HOLE SHALL BE PLUGGED AND RADIOGRAPHED 100%. REVIEW OF RT FILMS BY BHEL TPI
- 7. VERIFICATION OF WPS, WPQ AS PER ASME SEC-IX BY BHEL TPIA.
- 8. MATERIAL OF CONSUTRCTION SHALL BE AS PER NTPC APPROVED GA DRAWING OF EQUIPMENT.
- 9. IN CASE OF DIFFERING/CONFLICTING REQUIREMENTS, ANOMALIES, ANY DRAWING/SPECN SHALL PREVAIL OVER QUALITY PLAN
- 10. THIS QP IS APPLICABLE ONLY FOR NTPC APPROVED VENDORS AS PER LOA APPROVED VENDOR LIST.
- 11. THIS QP IS APPLICABLE FOR THE MAIN AS WELL AS SUBSEQUENT SPARE SUPPLIES.
- 12. FOR IMPORTED VENDORS, BHEL & NTPC WITNESS SHALL BE CONSIDERED VERIFICATION
- 13. THIS QP IS ALSO APPLICABLE FOR OTHER VENDORS APPROVED BY NTPC DURING DETAILED ENGINEERING
- 14. ALL THE MATERIAL SHALL BE AS PER NTPC APPROVED DRG. /DATASHEET MEETING NTPC TECH. SPECIFICATION.

GENERAL LEGENDS					
NDE	NON DESTRUCTIVE EXAMINATION	ASSLY	ASSEMBLY	CHEM	CHEMICAL
UT	ULTRASONIC TEST	QC	QUALITY CONTROL	MECH	MECHANICAL
PT	DYE PENETRANT TEST	TPIA	THIRD PARTY INSPECTION AGENCY	TC	TEST CERTIFICATES
MT/MPI	MAGENTIC PARTICLE INSPECTION	WPS	WELDING PROCEDURE SPECIFICATION	VERFN	VERIFICATION
RT	RADIOGRAPHY TEST	WQR	WELDER QUALIFICATION RECORD	IGC	INTER GRANULAR CORROSSION
MEASRT	MEASUREMENT	PQR	PROCEDURE QUALIFICATION RECORD	HT	HEAT TREATMENT
DIMN	DIMENSION	IR	INSPECTION REPORT	QA	QUALITY ASSURANCE
COC	CERTIFICATE OF COMPLIANCE	DRG /DS	DRAWING /DATA SHEET	PO	PURCHASE ORDER




 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS INDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER / MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 D ITEM CATEGORY CAT -I		
				FOR NTPC USE	REVIEWED BY	APPROVED BY


Chandekar

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		MANUFACTURING QUALITY PLAN			PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400						
			ITEM: DISHED END (CS) BHEL SPEC: HE51370 REV 00		QP No : 4540-001-110-QVM-Q-184 D Rev. No.:00 DATE: 31.08.2023 PAGE: Page E.4 of 4		QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS
SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	M	C/N			M	C	N	
1.	2.	3.	4.	5.	6	7	8	9.	D*	** 10.	11.	

Approved Vendors as per LOA of NTPC Talcher Project PAGE NO 32& 33 /43, SL NO 51




SL	ITEM DESCRIPTION	VENDOR	LOCATION
1	DISHED END	METAL ENGINEERS,	HYDERABAD
2		SATYA FABRICATORS PVT LTD.	HYDERABAD
3		MAHENDRA DISH ENDS	THANE
4		CEREC	FRANCE
5		CEREC	VADODARA
6		THE ANUP ENGINEERING LTD	INDIA
7		KONIG & CO. GMBH,	GERMANY
8		ICEM ENGEENING COMPANY LTD.	THANE
9		DISH INDIA	DELHI (Vendor approval extension email dtd 19.09.2023)


 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER / MAIN SUPPLIER TPIA. N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC. 4540-001-110-QVM-Q-184 D ITEM CATEGORY CAT -I			
MAIN SUPPLIER				FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL
SIGNATURE							

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400				
		ITEM: SMALL FORGINGS AND FORGING OTHER THAN HP HEATER TUBE SHEET	QP No : 4540-001-110-QVM-Q-184 E Rev. No.:00 DATE: 31.08.2023 PAGE: Page F.1 of 2							

SL NO	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N			M	C	N			
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.

1.0 FORGING OTHER THAN HP HEATER TUBE SHEET & SMALL FORGINGS														
1.1	SMALL FORGINGS AND FORGING OTHER THAN HP HEATER TUBE SHEET	VERIFICATION OF MILL TC CHEM. & MECH. PROPERTIES OF INGOTS	CRITICAL	VISUAL	100%	SA 350 LF2/SA182 F11/SA 105, BHEL SPEC & PO	SUPPLIER'S TC	V	V	V	V			
1.2		FORGING PROCOESS – REDUCTION RATIO	MAJOR	TC REVIEW	100%	SA 350 LF2/SA182 F11/SA 105, BHEL SPEC & PO	SUPPLIER'S TC	V	V	V	V			
1.3		VERIFICATION OF HT	MAJOR	HT	100 %	SA 350 LF2/SA182 F11/SA 105, BHEL SPEC & PO	HT CHART/HT REPORT	V	P	V	V			
1.4		MECH. PROPERTIES – TS,YS,% LONGATION	MAJOR	MECH	100%	SA 370	SA 350 LF2/SA182 F11/SA 105, BHEL SPEC & PO	SUPPLIER'S TC	V	P	V	V		
1.5		DIM. CONFORMITY	MAJOR	MEASURT.	100%	BHEL DRG.	BHEL DRG. & PO	SUPPLIER'S TC	V	P	W	V		
1.6		VERIFICATION OF TCS, IDENTIFICATION & MARKING/STAMPING OF MATERIAL AS PER SPECN. & QP	MAJOR	VISUAL	100%	BHEL DRG. & QP	BHEL DRG. & QP	SUPPLIER'S TC	V	P	V			
1.7		UT EXAM. AFTER MACHINING	MAJOR	NDE	100%	SA 388	HE71045	NDE REPORT	V	P	W	V		FOR HP HEATER NOZZLE FORGING AND MANWAY FORGING,
1.8		MT ON OUTER SURFACE	MAJOR	NDE	100%	ASME Sec.V Art.7	ASME Sec.VI II Div.I , Appx.6	NDE REPORT	V	P	W	V		LP HEATER FEED WATER NOZZLE AND MAN WAY FORGING

 ALOK BEHERA MGR/ QA	 B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA . N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 E REV 00	ITEM CATEGORY	CAT II
				FOR NTPC USE	REVIEWED BY	APPROVED BY
MAIN SUPPLIER						
SIGNATURE						

	MANUFACTURER'S NAME & ADDRESS: BHARAT HEAVY ELECTRICALS LTD. HYDERABAD	MANUFACTURING QUALITY PLAN				<i>Chandekar</i> PROJECT: 2X660 MW TALCHER-III PACKAGE: TG & AUX CONTRACT NO: CS-4540-001-110 MAIN SUPPLIER: HPEP, BHEL HYDERABAD BHEL SALE ORDER NO: M-PA-1087 BHEL WO NO: W-1032265300, W-1032265400, W-1032265500, W-1032265600, W-1032265700, W-1032265800, W-1032266000, W-1032266100, W-1032266200, W-1032266300, W-1032266400				
		ITEM: SMALL FORGINGS AND FORGING OTHER THAN HP HEATER TUBE SHEET	QP No : 4540-001-110-QVM-Q-184 E Rev. No.:00 DATE: 31.08.2023 PAGE: Page F.2of 2							


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.	D*	** 10.			11.

NOTES:

- 1) IN CASE OF DIFFERING/CONFLICTING REQUIREMENTS, ANOMALIES, ANY DRAWING/SPECN SHALL PREVAIL OVER QUALITY PLAN
- 2) THIS QP IS APPLICABLE ONLY FOR NTPC APPROVED VENDORS AS PER LOA APPROVED VENDOR LIST.
- 3) THIS QP IS APPLICABLE FOR THE MAIN AS WELL AS SUBSEQUENT SPARE SUPPLIES.
- 4) THIS QP IS ALSO APPLICABLE FOR OTHER VENDORS APPROVED BY NTPC DURING DETAILED ENGINEERING AS PER ONGOING NTPC PROJECTS.

Approved Vendor as per LOA of NTPC Talcher Project PAGE NO 30 & 31 /43, SL NO 49

SL	ITEM DESCRIPTION	VENDOR	LOCATION
1	STEEL FORGING (OTHER THAN H.P HEATER, TUBE SHEETS)	ACME FORGINGS PVT LTD.,	RAJKOT
2		CHW FORGE PRIVATE LIMITED	GHAZIABAD
3		METAL FORGING	DELHI
4		M/S PUNJAB HAMMER	GOVINDGARH

<i>Alok Behera</i> ALOK BEHERA MGR/ QA	<i>B. Ashok Kumar</i> B. ASHOK KUMAR AGM/QA	LEGEND: * RECORDS IDENTIFIED WITH (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION, M.MANUFACTURER / SUB-SUPPLIER, C-MAIN SUPPLIER/MAIN SUPPLIER TPIA . N-NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION. AS APPROPRIATE "CHP" NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"		DOC.NO 4540-001-110-QVM-Q-184 E REV 00		
					ITEM CATEGORY	CAT II
MAIN SUPPLIER						
SIGNATURE			FOR NTPC USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL

Material 31750501511-00
 SHELL ASSEMBLY HPH 7A & 7B
 Group 50432257 Grp.ct 1
 LSize From 0
 Use 1

Plant P006

SHELL ASSEMBLY
 LSize To 99,999,999 EA
 Status 4 PlantP006

1-0-322 - 653 / 65900 - 17509
 1-0-322 - 654 / 66000 17510
 NTPC - Talcher

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

Shell Assembly - NTPC Talcher HP-7A/7B

Scope of work:

Ref. Std. Mfg. QP.No: HYQA/HEF/MQP/581/04 HP Heater

1. IBR Certificate in form-III / IV shall be submitted by the supplier along with equipment.
2. If the job is loaded outside of the Telangana State, get drawing approved from local IBR authorities prior to manufacture of the assembly.
3. Job should be loaded on NTPC and IBR approved vendors only.
4. All materials for the equipment will be supplied as per the part list.
5. Material will be supplied with BHEL QC, CIB and verification by NTPC attestation marks as indicated in the part list.
6. Pinching allowance is provided on shell segments, and roller pad.
7. Transfer & Attest the material attestation marks on each of the finished part
8. Manufacture all individual parts as per their individual drawings and part list dimensions.
9. Start/End plates, test coupons shall be adjusted from pinching allowance provided on shell segments. Mechanical testing of test coupons is in vendor scope. Stress relieving (SR) of test coupons will be carried out by Vendor. Mechanical test reports shall be submitted to BHEL along with shell assembly. BHEL QC shall not release the shell assembly for dispatch without test coupon mechanical test reports.
10. The equipment shall be manufactured completely as per drawing and code.
11. All notes/remarks on drawing and quality plan shall strictly be followed.
12. Stages of inspection by CIB shall be as per QP.No.HYQA/06/CIB/HPH, additional stages of inspection if desired by IBR authorities shall also be offered.
13. The holes on the flanges must be straddled w.r.t. vertical axes and equi. spaced.
14. Care should be taken to avoid distortion during cutting of openings on shell for nozzles and during welding of nozzles.
15. Bevel 20° without root of shell segment (Pos.3) should come at open end as shown in the drawing.
16. During the fit up of dished end to shell a reference line would be marked on the shell, at a distance of 100 mm, from the joint which would then be transferred back, after welding, to identify weld line.
17. Before welding of C - seam and nozzles, provide one stiffening ring 100 mm away from the open end of the shell. (stiffening ring will be removed at BHEL works)
18. Assemble all parts as shell assembly as per shell drawing.
19. Maintain/follow the heights, vertical and horizontal axes, and nozzle orientation as shown in drg.
20. Get approval of welding procedures and get qualify the welds as per ASME Sec.IX under CIB & BHEL QC. Qualified welders only shall be employed on the job.
21. Root runs of all butt and groove welds where back chipping is not possible shall be examined by PT and shall be offered to BHEL QC for inspection.
22. All completed welds shall examine with PT and shall be offered to BHEL QC for inspection.
23. All back chip welds shall examine with PT and shall be offered to BHEL QC for inspection.
24. Nozzle ends at inside the shell to be rounded off. L-seam and C-seam

- inside shell shall be flush grind.
- 25. Stress relieving of final shell assembly will be carried out at BHEL works.
- 26. Shot blasting will be done at BHEL works.
- 27. Get inspection of fit ups, PT & RT strictly as per QP.
- 28. Joints identification of L and C # seams shall be marked as per drg. for RT
- 29. Shell End ring shall not be welded to shell assembly. Only light tack welding at 4 locations to hold the ring in position shall be done.
- 30. Job shall be offered to BHEL QC, CIB and NTPC for stages of inspection strictly as per QAP's
- 31. Get final inspection with BHEL QC, CIB and NTPC for visual and dimensional conformity as per Drg. & QP.
- 33. Total documentation, packing including raw material certificates shall be furnished to BHEL.
- 34. After final inspection, send the equipment with shell end ring to BHEL works.

Ctrl Key
Base Qty

QFNL

1 EA

10.11.2023

Task List Print List

Material 31750501526-00
SHELL ASSEMBLY HPH 8A
Group 50433555 Grp.ct 1
LSize From 0
Use 1

Plant P006

LSize To 99,999,999 EA
Status 4 PlantP006

1-0-322-655/66100-17511
NTPC - Talcher

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

Shell Assembly - NTPC Talcher HP-8A/8B

Scope of work:

Ref. Std. Mfg. QP.No: HYQA/HEF/MQP/581/04 HP Heater

1. IBR Certificate in form-III / IV shall be submitted by the supplier along with equipment.
2. If the job is loaded outside of the Telangana State, get drawing approved from local IBR authorities prior to manufacture of the assembly.
3. Job should be loaded on NTPC and IBR approved vendors only.
4. All materials for the equipment will be supplied as per the part list.
5. Material will be supplied with BHEL QC, CIB and verification by NTPC attestation marks as indicated in the part list.
6. Pinching allowance is provided on shell segments, and roller pad.
7. Transfer & Attest the material attestation marks on each of the finished part
8. Manufacture all individual parts as per their individual drawings and part list dimensions.
9. Start/End plates, test coupons shall be adjusted from pinching allowance provided on shell segments. Mechanical testing of test coupons is in vendor scope. Stress relieving (SR) of test coupons will be carried out by Vendor. Mechanical test reports shall be submitted to BHEL along with shell assembly. BHEL QC shall not release the shell assembly for dispatch without test coupon mechanical test reports.
10. The equipment shall be manufactured completely as per drawing and code.
11. All notes/remarks on drawing and quality plan shall strictly be followed.
12. Stages of inspection by CIB shall be as per QP.No.HYQA/06/CIB/HPH, additional stages of inspection if desired by IBR authorities shall also be offered.
13. The holes on the flanges must be straddled w.r.t. vertical axes and equi. spaced.
14. Care should be taken to avoid distortion during cutting of openings on shell for nozzles and during welding of nozzles.
15. Bevel 20° without root of shell segment (Pos.4) should come at open end as shown in the drawing.
16. During the fit up of dished end to shell a reference line would be marked on the shell, at a distance of 100 mm, from the joint which would then be transferred back, after welding, to identify weld line.
17. Before welding of C - seam and nozzles, provide one stiffening ring 100 mm away from the open end of the shell. (stiffening ring will be removed at BHEL works)
18. Assemble all parts as shell assembly as per shell drawing.
19. Maintain/follow the heights, vertical and horizontal axes, and nozzle orientation as shown in drg.
20. Get approval of welding procedures and get qualify the welds as per ASME Sec.IX under CIB & BHEL QC. Qualified welders only shall be employed on the job.
21. Root runs of all butt and groove welds where back chipping is not possible shall be examined by PT and shall be offered to BHEL QC for inspection.
22. All completed welds shall examine with PT and shall be offered to BHEL QC for inspection.
23. All back chip welds shall examine with PT and shall be offered to BHEL QC for inspection.
24. Nozzle ends at inside the shell to be rounded off. L-seam and C-seam

- inside shell shall be flush grind.
25. Stress relieving of final shell assembly will be carried out at BHEL works.
 26. Shot blasting will be done at BHEL works.
 27. Get inspection of fit ups, PT & RT strictly as per QP.
 28. Joints identification of L and C # seams shall be marked as per drg. for RT
 29. Shell End ring shall not be welded to shell assembly. Only light tack welding at 4 locations to hold the ring in position shall be done.
 30. Job shall be offered to BHEL QC, CIB and NTPC for stages of inspection strictly as per QAP's
 31. Get final inspection with BHEL QC, CIB and NTPC for visual and dimensional conformity as per Drg. & QP.
 33. Total documentation, packing including raw material certificates shall be furnished to BHEL.
 34. After final inspection, send the equipment with shell end ring to BHEL works.

Ctrl Key
Base Qty

QFNL

1 EA

10.11.2023

Task List Print List

Material 31750501527-00
SHELL ASSEMBLY HPH 8B
Group 50433406 Grp.ct 1
LSize From 0
Use 1
Sequence 0 Seq. Cat. Std.seq.
Operation 0010 Work Ctr DA9995

Plant P006

LSize To 99,999,999 EA
Status 4 PlantP006

1-0-322-656/66200-17512
NTPC - Talcher

Shell Assembly - NTPC Talcher HP-8A/8B

Scope of work:

Ref. Std. Mfg. QP.No: HYQA/HEF/MQP/581/04 HP Heater

1. IBR Certificate in form-III / IV shall be submitted by the supplier along with equipment.
2. If the job is loaded outside of the Telangana State, get drawing approved from local IBR authorities prior to manufacture of the assembly.
3. Job should be loaded on NTPC and IBR approved vendors only.
4. All materials for the equipment will be supplied as per the part list.
5. Material will be supplied with BHEL QC, CIB and verification by NTPC attestation marks as indicated in the part list.
6. Pinching allowance is provided on shell segments, and roller pad.
7. Transfer & Attest the material attestation marks on each of the finished part
8. Manufacture all individual parts as per their individual drawings and part list dimensions.
9. Start/End plates, test coupons shall be adjusted from pinching allowance provided on shell segments. Mechanical testing of test coupons is in vendor scope. Stress relieving (SR) of test coupons will be carried out by Vendor. Mechanical test reports shall be submitted to BHEL along with shell assembly. BHEL QC shall not release the shell assembly for dispatch without test coupon mechanical test reports.
10. The equipment shall be manufactured completely as per drawing and code.
11. All notes/remarks on drawing and quality plan shall strictly be followed.
12. Stages of inspection by CIB shall be as per QP.No.HYQA/06/CIB/HPH, additional stages of inspection if desired by IBR authorities shall also be offered.
13. The holes on the flanges must be straddled w.r.t. vertical axes and equi. spaced.
14. Care should be taken to avoid distortion during cutting of openings on shell for nozzles and during welding of nozzles.
15. Bevel 20° without root of shell segment (Pos.4) should come at open end as shown in the drawing.
16. During the fit up of dished end to shell a reference line would be marked on the shell, at a distance of 100 mm, from the joint which would then be transferred back, after welding, to identify weld line.
17. Before welding of C - seam and nozzles, provide one stiffening ring 100 mm away from the open end of the shell. (stiffening ring will be removed at BHEL works)
18. Assemble all parts as shell assembly as per shell drawing.
19. Maintain/follow the heights, vertical and horizontal axes, and nozzle orientation as shown in drg.
20. Get approval of welding procedures and get qualify the welds as per ASME Sec.IX under CIB & BHEL QC. Qualified welders only shall be employed on the job.
21. Root runs of all butt and groove welds where back chipping is not possible shall be examined by PT and shall be offered to BHEL QC for inspection.
22. All completed welds shall examine with PT and shall be offered to BHEL QC for inspection.
23. All back chip welds shall examine with PT and shall be offered to BHEL QC for inspection.
24. Nozzle ends at inside the shell to be rounded off. L-seam and C-seam

- inside shell shall be flush grind.
25. Stress relieving of final shell assembly will be carried out at BHEL works.
26. Shot blasting will be done at BHEL works.
27. Get inspection of fit ups, PT & RT strictly as per QP.
28. Joints identification of L and C # seams shall be marked as per drg. for RT
29. Shell End ring shall not be welded to shell assembly. Only light tack welding at 4 locations to hold the ring in position shall be done.
30. Job shall be offered to BHEL QC, CIB and NTPC for stages of inspection strictly as per QAP's
31. Get final inspection with BHEL QC, CIB and NTPC for visual and dimensional conformity as per Drg. & QP.
33. Total documentation, packing including raw material certificates shall be furnished to BHEL.
34. After final inspection, send the equipment with shell end ring to BHEL works.

Ctrl Key
Base Qty

QFNL

1 EA

16.11.2023

Task List Print List

Material 31752300008-00
 SHELL ASSEMBLY HPH 9A/9B
 Group 50433760 Grp.ct 1
 LSize From 0
 Use 1

Plant P006

LSize To 99.999.999 EA
 Status 4 PlantP006

1-0 - 322 - 658 / 66400 - 17524
 NTPC - Talcher

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

Shell Assembly - NTPC Talcher HP-9A/9B

Scope of work:

Ref. Std. Mfg. QP.No: HYQA/HEF/MQP/581/04 HP Heater

1. IBR Certificate in form-III / IV shall be submitted by the supplier along with equipment.
2. If the job is loaded outside of the Telangana State, get drawing approved from local IBR authorities prior to manufacture of the assembly.
3. Job should be loaded on NTPC and IBR approved vendors only.
4. All materials for the equipment will be supplied as per the part list.
5. Material will be supplied with BHEL QC, CIB and verification by NTPC attestation marks as indicated in the part list.
6. Pinching allowance is provided on shell segments, and roller pad.
7. Transfer & Attest the material attestation marks on each of the finished part
8. Manufacture all individual parts as per their individual drawings and part list dimensions.
9. Start/End plates, test coupons shall be adjusted from pinching allowance provided on shell segments. Mechanical testing of test coupons is in vendor scope. Stress relieving (SR) of test coupons will be carried out by Vendor. Mechanical test reports shall be submitted to BHEL along with shell assembly. BHEL QC shall not release the shell assembly for dispatch without test coupon mechanical test reports.
10. The equipment shall be manufactured completely as per drawing and code.
11. All notes/remarks on drawing and quality plan shall strictly be followed.
12. Stages of inspection by CIB shall be as per QP.No.HYQA/06/CIB/HPH, additional stages of inspection if desired by IBR authorities shall also be offered.
13. The holes on the flanges must be straddled w.r.t. vertical axes and equi. spaced.
14. Care should be taken to avoid distortion during cutting of openings on shell for nozzles and during welding of nozzles.
15. Bevel 20° without root of shell segment (Pos.2) should come at open end as shown in the drawing.
16. During the fit up of dished end to shell a reference line would be marked on the shell, at a distance of 100 mm, from the joint which would then be transferred back, after welding, to identify weld line.
17. Before welding of C - seam and nozzles, provide one stiffening ring 100 mm away from the open end of the shell. (stiffening ring will be removed at BHEL works)
18. Assemble all parts as shell assembly as per shell drawing.
19. Maintain/follow the heights, vertical and horizontal axes, and nozzle orientation as shown in drg.
20. Get approval of welding procedures and get qualify the welds as per ASME Sec.IX under CIB & BHEL QC. Qualified welders only shall be employeed on the job.
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22. All completed welds shall examine with PT and shall be offered to BHEL QC for inspection.
23. All back chip welds shall examine with PT and shall be offered to BHEL QC for inspection.
24. Nozzle ends at inside the shell to be rounded off. L-seam and C-seam

- inside shell shall be flush grind.
25. Stress relieving of final shell assembly will be carried out at BHEL works.
26. Shot blasting will be done at BHEL works.
27. Get inspection of fit ups, PT & RT strictly as per QP.
28. Joints identification of L and C # seams shall be marked as per drg. for RT
29. Shell End ring shall not be welded to shell assembly. Only light tack welding at 4 locations to hold the ring in position shall be done.
30. Job shall be offered to BHEL QC, CIB and NTPC for stages of inspection strictly as per QAP's
31. Get final inspection with BHEL QC, CIB and NTPC for visual and dimensional conformity as per Drg. & QP.
33. Total documentation, packing including raw material certificates shall be furnished to BHEL.
34. After final inspection, send the equipment with shell end ring to BHEL works.

Ctrl Key
Base Qty

QFNL

1 EA

16.11.2023

Task List Print List

Material 31752300008-00
SHELL ASSEMBLY HPH 9A/9B
Group 50433760 Grp.ct 1
LSize From 0
Use 1

Plant P006

LSize To 99.999.999 EA
Status 4 PlantP006

1-0-822-657/66300-17523
NTPC - Talcher

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

Shell Assembly - NTPC Talcher HP-9A/9B

Scope of work:

Ref. Std. Mfg. QP.No: HYQA/HEF/MQP/581/04 HP Heater

1. IBR Certificate in form-III / IV shall be submitted by the supplier along with equipment.
2. If the job is loaded outside of the Telangana State, get drawing approved from local IBR authorities prior to manufacture of the assembly.
3. Job should be loaded on NTPC and IBR approved vendors only.
4. All materials for the equipment will be supplied as per the part list.
5. Material will be supplied with BHEL QC, CIB and verification by NTPC attestation marks as indicated in the part list.
6. Pinching allowance is provided on shell segments, and roller pad.
7. Transfer & Attest the material attestation marks on each of the finished part
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9. Start/End plates, test coupons shall be adjusted from pinching allowance provided on shell segments. Mechanical testing of test coupons is in vendor scope. Stress relieving (SR) of test coupons will be carried out by Vendor. Mechanical test reports shall be submitted to BHEL along with shell assembly. BHEL QC shall not release the shell assembly for dispatch without test coupon mechanical test reports.
10. The equipment shall be manufactured completely as per drawing and code.
11. All notes/remarks on drawing and quality plan shall strictly be followed.
12. Stages of inspection by CIB shall be as per QP.No.HYQA/06/CIB/HPH, additional stages of inspection if desired by IBR authorities shall also be offered.
13. The holes on the flanges must be straddled w.r.t. vertical axes and equi. spaced.
14. Care should be taken to avoid distortion during cutting of openings on shell for nozzles and during welding of nozzles.
15. Bevel 20° without root of shell segment (Pos.2) should come at open end as shown in the drawing.
16. During the fit up of dished end to shell a reference line would be marked on the shell, at a distance of 100 mm, from the joint which would then be transferred back, after welding, to identify weld line.
17. Before welding of C - seam and nozzles, provide one stiffening ring 100 mm away from the open end of the shell. (stiffening ring will be removed at BHEL works)
18. Assemble all parts as shell assembly as per shell drawing.
19. Maintain/follow the heights, vertical and horizontal axes, and nozzle orientation as shown in drg.
20. Get approval of welding procedures and get qualify the welds as per ASME Sec.IX under CIB & BHEL QC. Qualified welders only shall be employed on the job.
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22. All completed welds shall examine with PT and shall be offered to BHEL QC for inspection.
23. All back chip welds shall examine with PT and shall be offered to BHEL QC for inspection.
24. Nozzle ends at inside the shell to be rounded off. L-seam and C-seam

inside shell shall be flush grind.
25. Stress relieving of final shell assembly will be carried out at BHEL works.
26. Shot blasting will be done at BHEL works.
27. Get inspection of fit ups, PT & RT strictly as per QP.
28. Joints identification of L and C # seams shall be marked as per drg. for RT
29. Shell End ring shall not be welded to shell assembly. Only light tack welding at 4 locations to hold the ring in position shall be done.
30. Job shall be offered to BHEL QC, CIB and NTPC for stages of inspection strictly as per QAP's
31. Get final inspection with BHEL QC, CIB and NTPC for visual and dimensional conformity as per Drg. & QP.
33. Total documentation, packing including raw material certificates shall be furnished to BHEL.
34. After final inspection, send the equipment with shell end ring to BHEL works.

Ctrl Key
Base Qty

QFNL

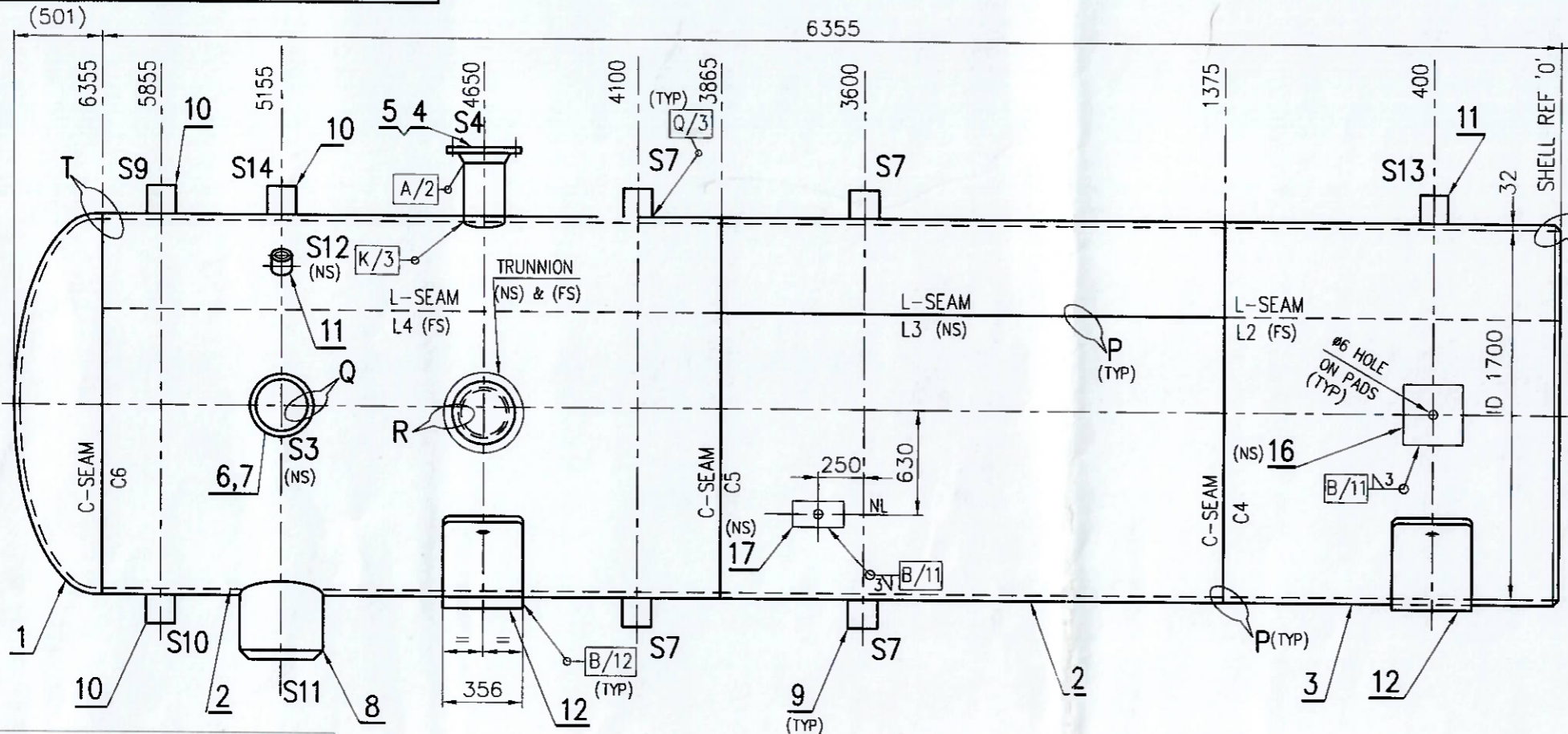
1 EA

INVENTORY NO. SIGN. AND DATE REF. DRG. NO. 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

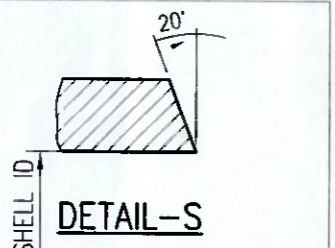
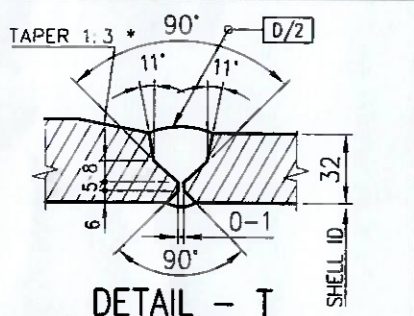
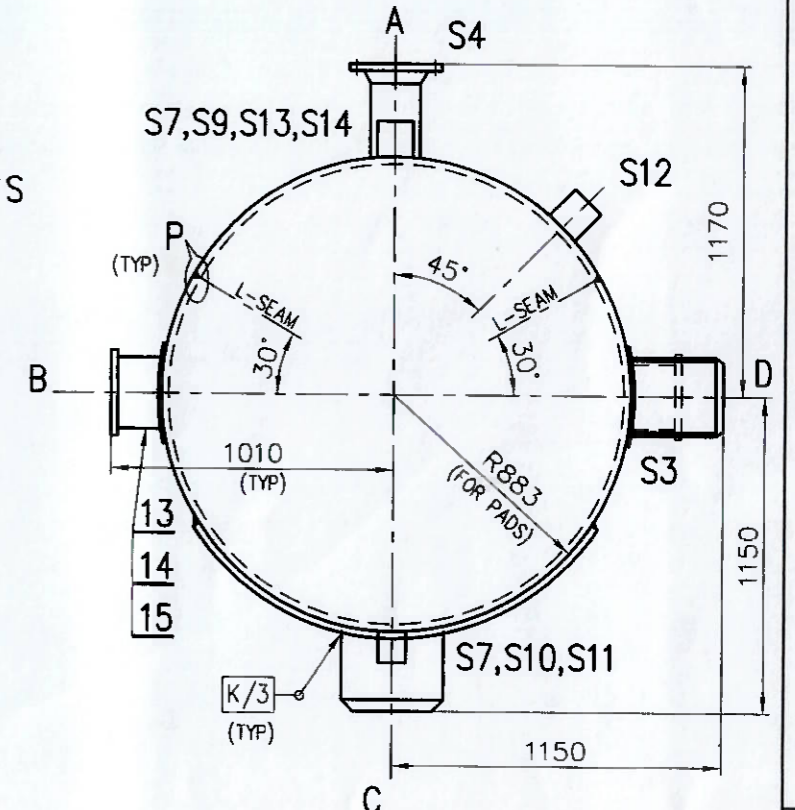
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-175-05-01511



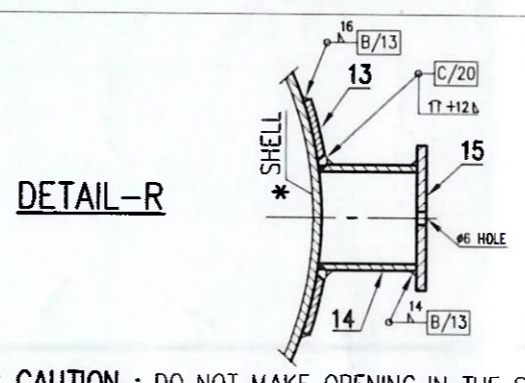
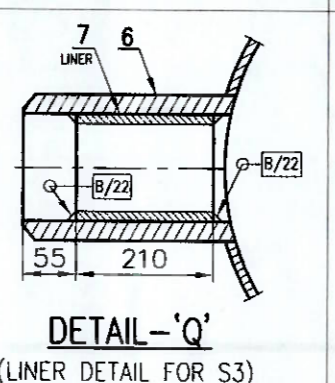
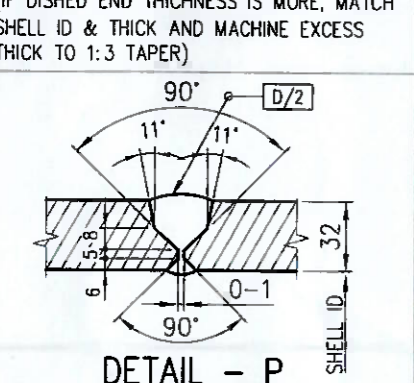
1900 MM FROM VESSEL REF. '0'



WBSE	EQUIPMENT	UNIT	VESSEL NO	SHELL SIDE
P-1032265300-17509	HPH -7A	I	2684	DESIGN PRESSURE (KG/SQ.CM (g))
P-1032265400-17509	HPH -7B	I	2685	
P-1032265900-17509	HPH -7A	II	2693	30 & FULL VACUUM
P-1032266600-17509	HPH -7B	II	2694	

NOTES: -

- a) SHELL RADIOGRAPHY : FULL
b) STRESS RELIEVING : YES
- DEVELOPED LENGTH OF POS No 2 & 3 = 5441 MM.
- FOR WELD SYMBOLS & PROCEDURES SEE DRG NO 3-17501-00544
- FOR UNSPECIFIED TOLERANCES REF PROD STD HE 7 1036
- TOLERANCES:- a). OVALITY : 0.5 % ON ID (1700 ± 8.5)
b) ON ID CIRCUMFERENCE: $\begin{matrix} +0.25\% \\ -0.00\% \end{matrix}$ (5341 $\begin{matrix} +14.00 \\ -0.00 \end{matrix}$)
- INSPECTION BY IBR.
- DURING THE FIT UP OF DISHED END TO SHELL A REFERENCE LINE WOULD BE MARKED ON THE SHELL, AT A DISTANCE OF 100MM, FROM THE JOINT WHICH WOULD THEN BE TRANSFERRED BACK, AFTER WELDING TO IDENTIFY WELD LINE.



* CAUTION : DO NOT MAKE OPENING IN THE SHELL

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PRODUCTION COPY			
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		103226590017509			
DRN.	NAME V.C.C.SAGAR	SIGN. V.C.C.S	DATE 04.07.23	NO.OF VAR.	
CHD.	A.K.SAHOO	A.K.S	04.07.23	NA	
APPD.	K.KISHORE	K.K.K	04.07.23	NA	
DEPT. HEE	GRADE OF TOL.DIM. C/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA	ITEM NO. NA
CODE 405					
TITLE SHELL ASSLY. FOR HPH-7A/7B			CARD CODE	DRAWING NO. 3-175-05-01511	REV. 00
SHEET No. 01			NO OF SHEETS 01		

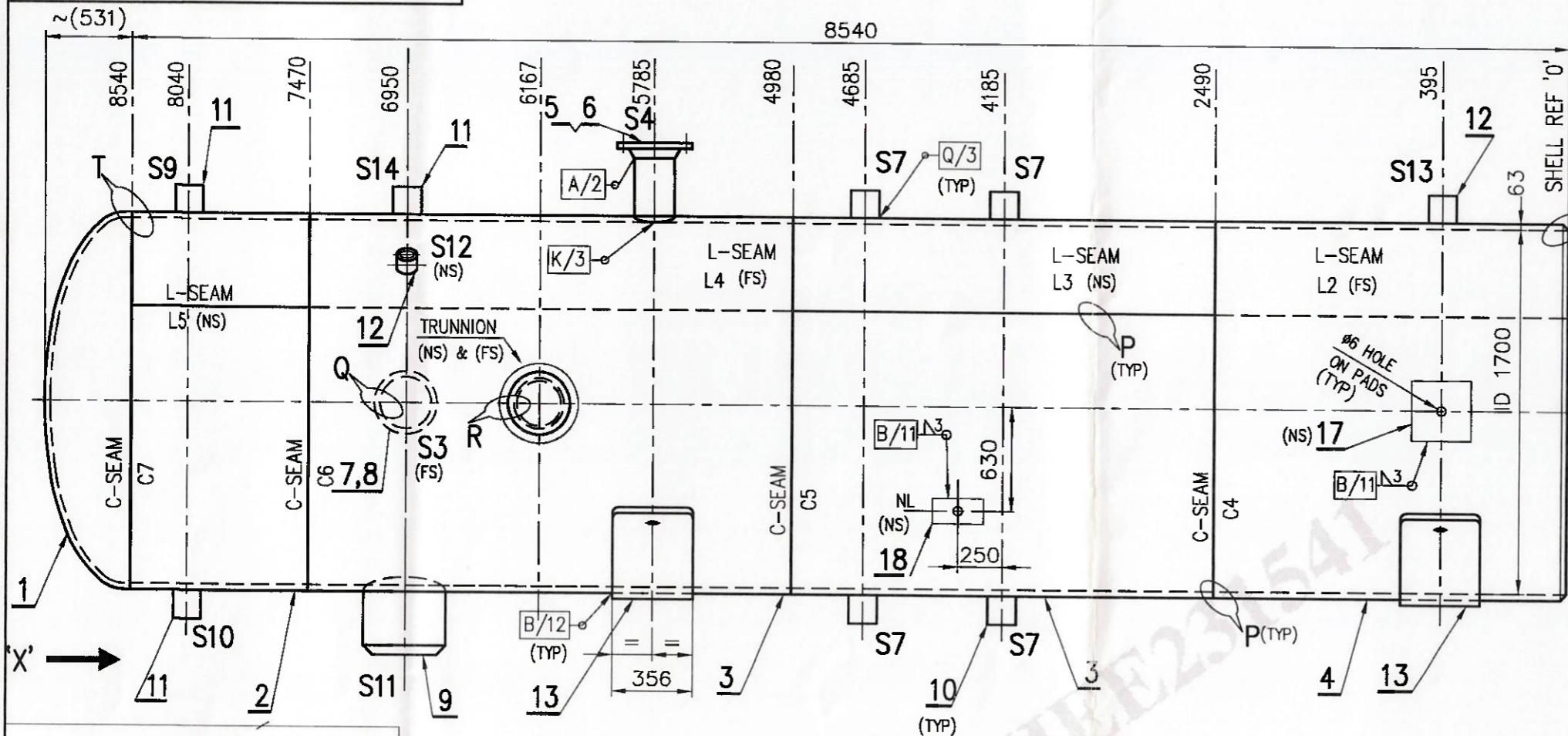
PR - 1700036561

INVENTORY NO. SIGN. AND DATE REF. DRG. NO. 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

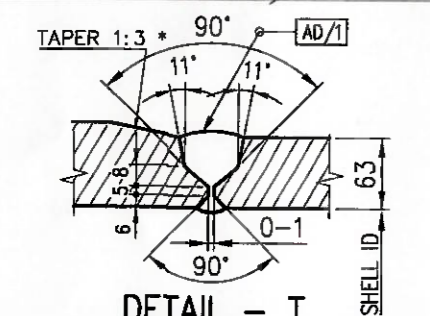
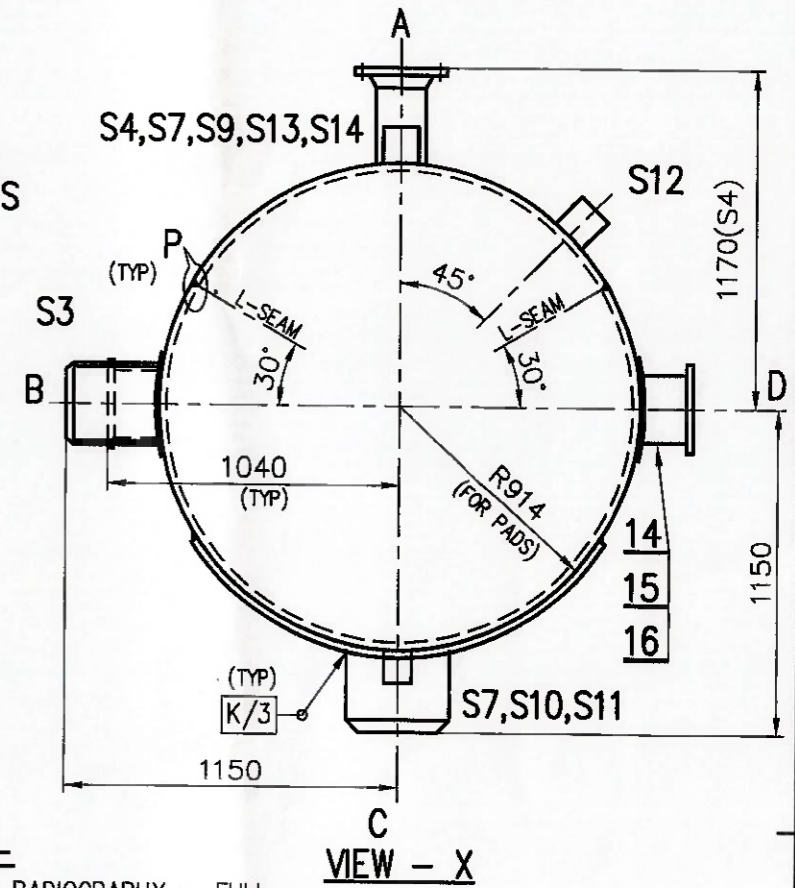
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

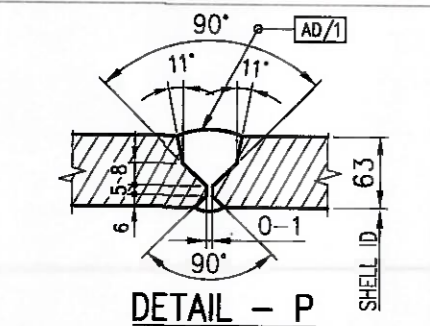
DRG. NO. 3-175-05-01526



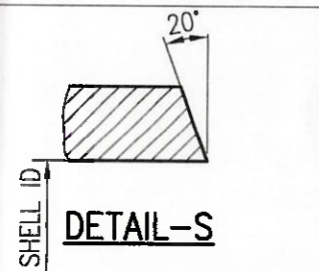
2215 MM FROM VESSEL REF. 'O'



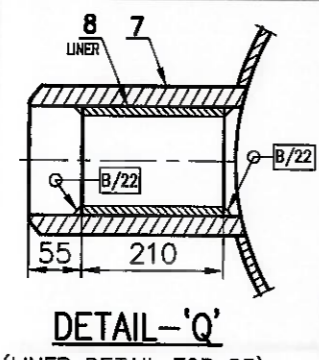
DETAIL - T
(IF DISHED END THICKNESS IS MORE, MATCH SHELL ID & THICK AND MACHINE EXCESS THICK TO 1:3 TAPER)



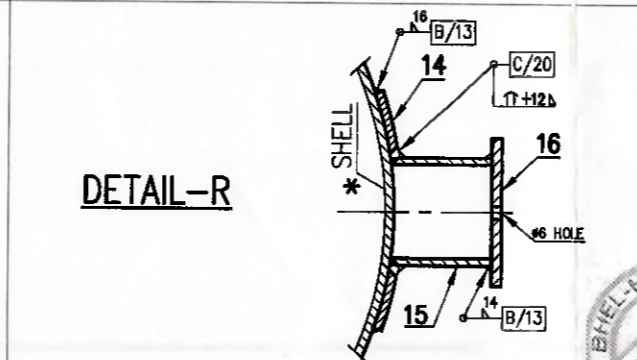
DETAIL - P



DETAIL - S



DETAIL - Q
(LINER DETAIL FOR S3)



DETAIL - R

* CAUTION : DO NOT MAKE OPENING IN THE SHELL

WBSE	EQUIPMENT	UNIT	VESSEL NO	SHELL SIDE DESIGN PRESSURE(KG/SQ.CM (g))
P-1032265500-17511	HPH -8A	I	02686	76.7 & FULL VACUUM
P-1032266100-17511	HPH -8A	II	02695	76.7 & FULL VACUUM

NOTES:-

- a) SHELL RADIOGRAPHY : FULL
b) STRESS RELIEVING : YES
- DEVELOPED LENGTH OF POS No 2,3&4= 5539 MM.
- FOR WELD SYMBOLS & PROCEDURES SEE DRG NO 3-17501-00544
- FOR UNSPECIFIED TOLERANCES REF PROD STD HE 7 1036
- TOLERANCES:- a). OVALITY : 0.5 % ON ID (1700 ± 8.5)
b) ON ID CIRCUMFERENCE: $\begin{matrix} +0.25\% \\ -0.00\% \end{matrix}$ (5341 $\begin{matrix} +14.00 \\ -0.00 \end{matrix}$)
- INSPECTION BY IBR.
- DURING THE FIT UP OF DISHED END TO SHELL A REFERENCE LINE WOULD BE MARKED ON THE SHELL, AT A DISTANCE OF 100MM, FROM THE JOINT WHICH WOULD THEN BE TRANSFERRED BACK, AFTER WELDING TO IDENTIFY WELD LINE.

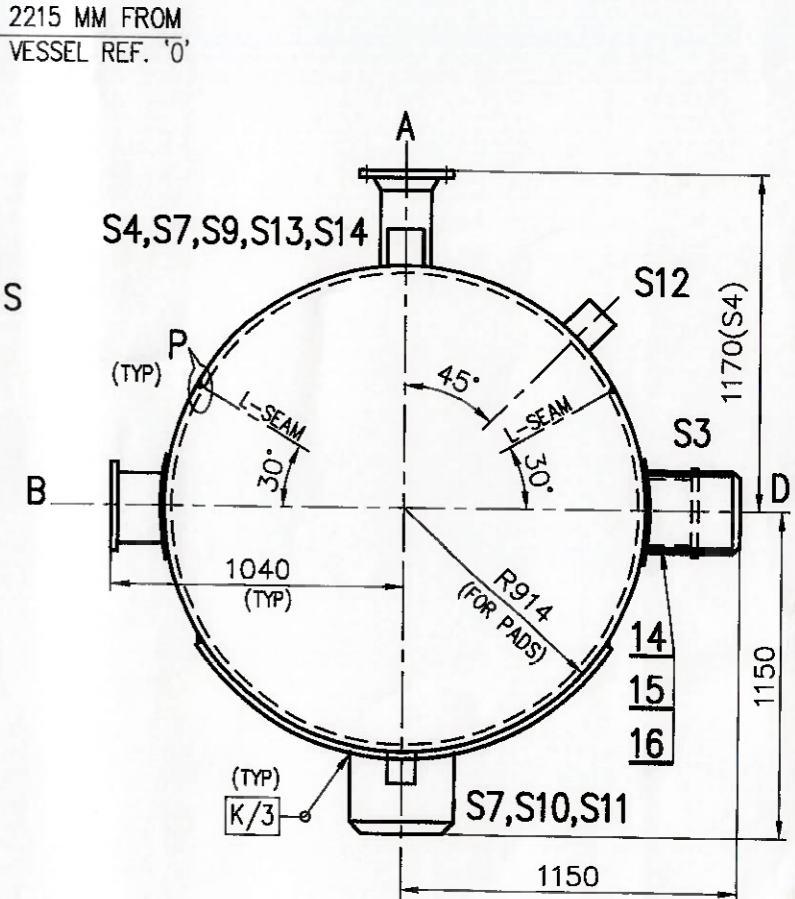
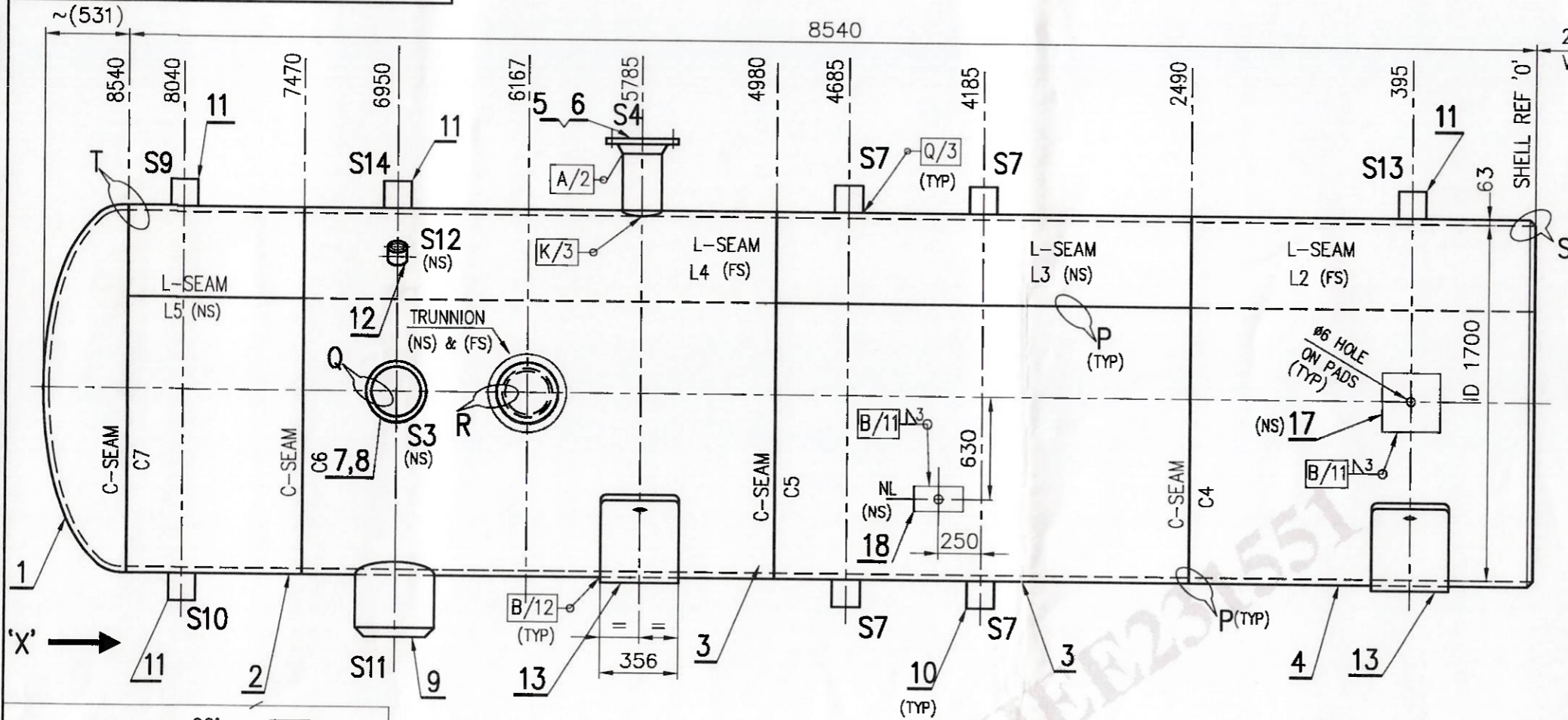
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		103226550017511 NTPC TALCHER 660 MW		PRODUCTION COPY	
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN.	NAME V.C.C.SAGAR	SIGN. V.C.C.S	DATE 22.08.23
		CHD.	A.K.SAHOO	A.K.S	22.08.23
		APPD.	K.KISHORE	K.K.K	22.08.23
DEPT. HEE CODE 405	GRADE OF TOL.DIM. C/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA	ITEM NO. NA
TITLE SHELL ASSLY. FOR HPH-8A			CARD CODE	DRAWING NO. 3-175-05-01526	REV. 00
			SHEET No. 01	NO OF SHEETS 01	

INVENTORY NO. SIGN. AND DATE REF. DRG. NO. 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

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-175-05-01527

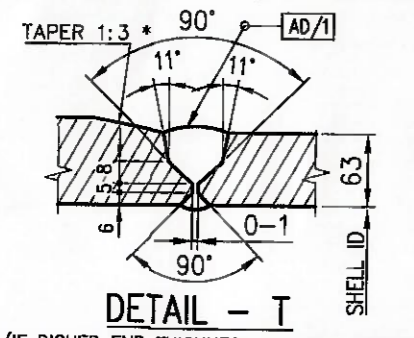


VIEW - X
PRODUCTION COPY

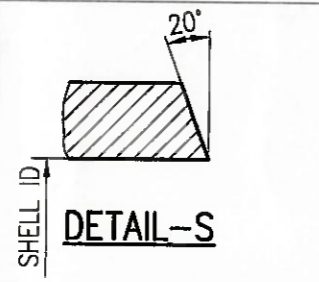
NOTES:-

- a) SHELL RADIOGRAPHY : FULL
b) STRESS RELIEVING : YES
- DEVELOPED LENGTH OF POS No 2,3&4 = 5539 MM.
- FOR WELD SYMBOLS & PROCEDURES SEE DRG NO 3-17501-00544
- FOR UNSPECIFIED TOLERANCES REF PROD STD HE 7 1036
- TOLERANCES:- a). OVALITY : 0.5 % ON ID (1700 ± 8.5)
b) ON ID CIRCUMFERENCE: $\begin{matrix} +0.25\% \\ -0.00\% \end{matrix}$ (5341 $\begin{matrix} +14.00 \\ -0.00 \end{matrix}$)
- INSPECTION BY IBR.
- DURING THE FIT UP OF DISHED END TO SHELL A REFERENCE LINE WOULD BE MARKED ON THE SHELL, AT A DISTANCE OF 100MM, FROM THE JOINT WHICH WOULD THEN BE TRANSFERRED BACK, AFTER WELDING TO IDENTIFY WELD LINE.

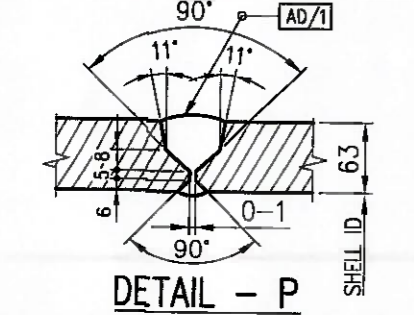
WBSE	EQUIPMENT	UNIT	VESSEL NO	SHELL SIDE DESIGN PRESSURE(KG/SQ.CM (g))
P-1032265600-17512	HPH -8B	I	02687	76.7 & FULL VACUUM
P-1032266200-17512	HPH -8B	II	02696	76.7 & FULL VACUUM



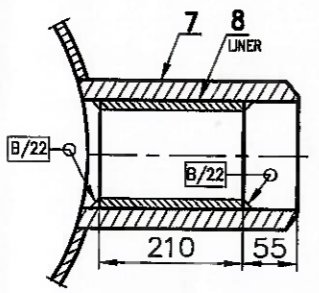
DETAIL - T
(IF DISHED END THICKNESS IS MORE, MATCH SHELL ID & THICK AND MACHINE EXCESS THICK TO 1:3 TAPER)



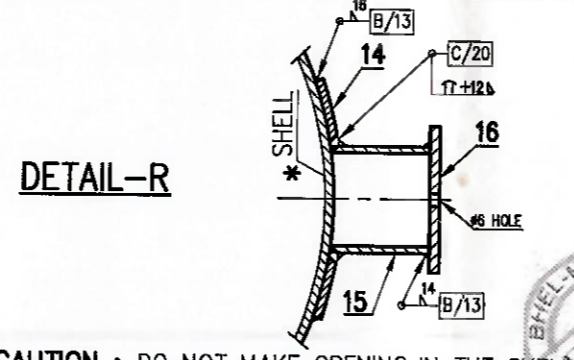
DETAIL - S



DETAIL - P



DETAIL - 'Q'
(LINER DETAIL FOR S3)



DETAIL - R

* CAUTION : DO NOT MAKE OPENING IN THE SHELL

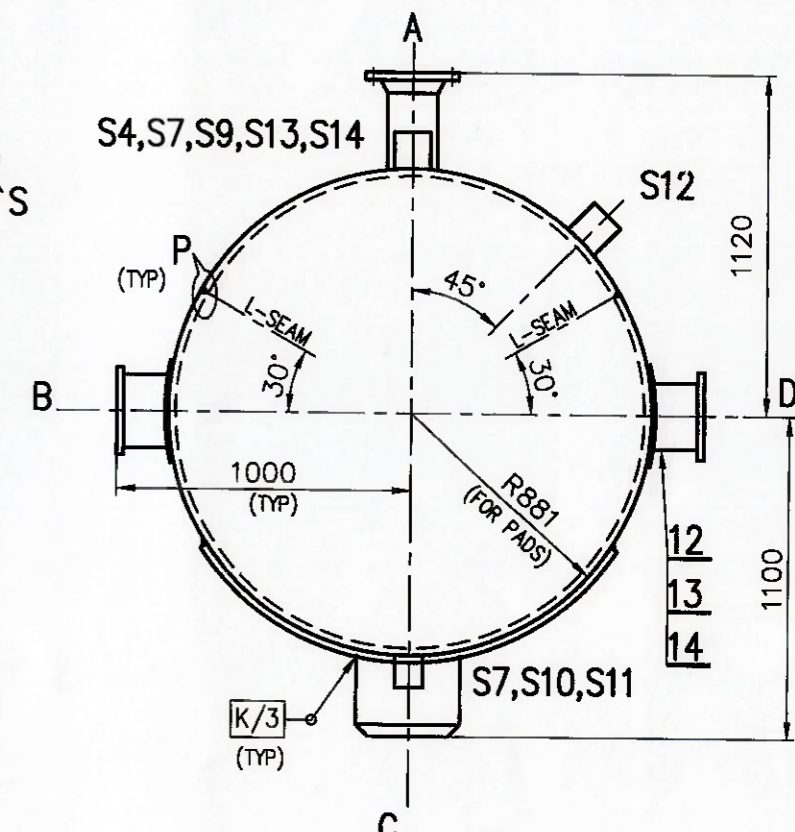
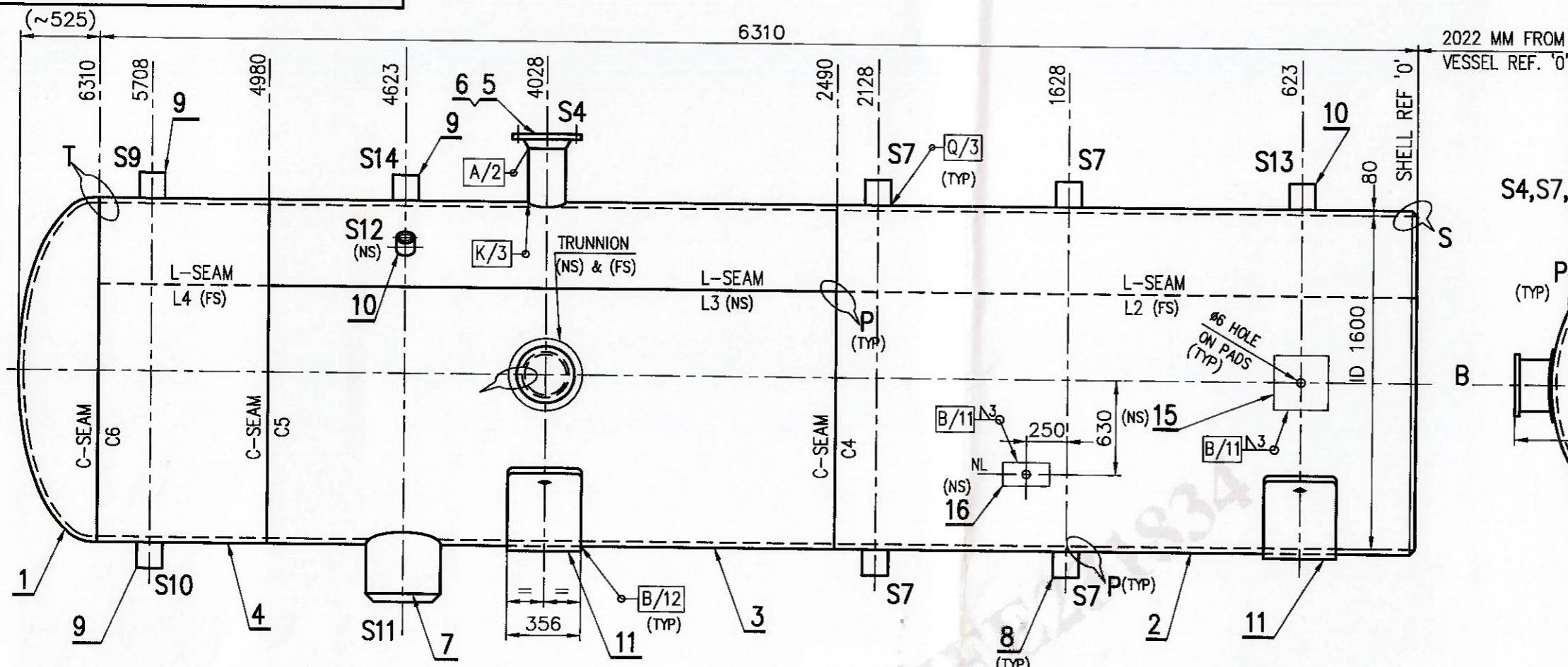
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NTPC TALCHER 660 MW			
BHARAT HEAVY ELECTRICALS LTD. HYDERABAD		DRN.	NAME V.C.C.SAGAR	SIGN. V.C.C.S	DATE 22.08.23
		CHD.	A.K.SAHOO	A.K.S	22.08.23
		APPD.	K.KISHORE	K.K.K	22.08.23
DEPT. HEE	GRADE OF TOL.DIM. C/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA	ITEM NO. NA
CODE 405					
TITLE SHELL ASSLY. FOR HPH-8B			CARD CODE	DRAWING NO. 3-175-05-01527	REV. 00
			SHEET No. 01	NO OF SHEETS 01	

PR - 1700036691

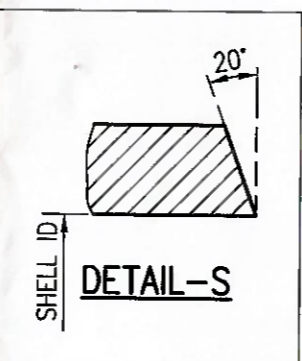
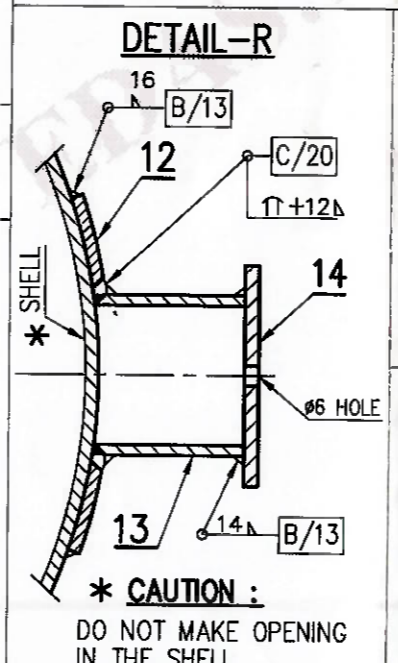
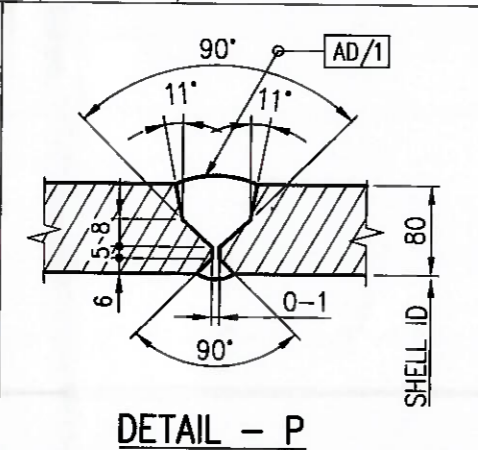
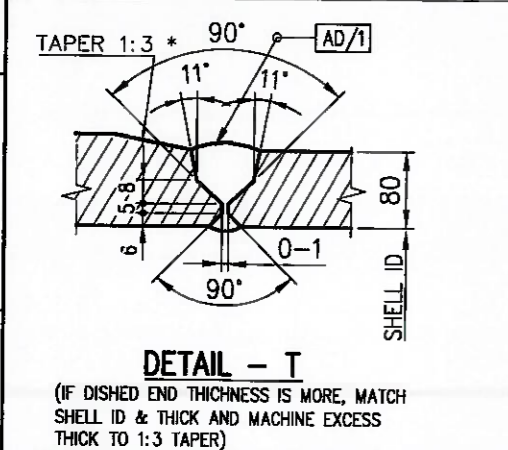
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-175-23-00008



WBSE	EQUIPMENT	UNIT	VESSEL NO	SHELL SIDE
P-1032265700-17523	HPH -9A	I	2688	DESIGN PRESSURE (KG/SQ.CM (g))
P-1032265800-17524	HPH -9B	I	2689	
P-1032266300-17523	HPH -9A	II	2697	110 & FULL VACUUM
P-1032266400-17524	HPH -9B	II	2698	



- NOTES:-**
- a) SHELL RADIOGRAPHY : FULL
b) STRESS RELIEVING : YES
 - DEVELOPED LENGTH OF POS No 2,3 & 4 = 5278 MM.
 - FOR WELD SYMBOLS & PROCEDURES SEE DRG NO 3-17501-00544
 - FOR UNSPECIFIED TOLERANCES REF PROD STD HE 7 1036
 - TOLERANCES:- a). OVALITY : 0.5 % ON ID (1600 ± 8)
b) ON ID CIRCUMFERENCE: $\begin{matrix} +0.25\% \\ -0.00\% \end{matrix}$ (5027 $\begin{matrix} +12.50 \\ -0.00 \end{matrix}$)
 - INSPECTION BY IBR.
 - DURING THE FIT UP OF DISHED END TO SHELL A REFERENCE LINE WOULD BE MARKED ON THE SHELL, AT A DISTANCE OF 100MM, FROM THE JOINT WHICH WOULD THEN BE TRANSFERRED BACK, AFTER WELDING TO IDENTIFY WELD LINE.

PRODUCTION COPY

103226580017524

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		2x660MW NTPC TALCHER			
BHEL		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD			
DRN.	NAME V.C.C.SAGAR	SIGN. V.C.C.S	DATE 28.09.23	NO.OF VAR. NA	
CHD.	A.K.SAHOO	A.K.S	28.09.23	NA	
APPD.	K.KISHORE	K.K.K	28.09.23	NA	
DEPT. HEE	GRADE OF TOL.DIM. C/M/F	SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY DRG. NA	ITEM NO. NA
CODE 405					
TITLE SHELL ASSLY. FOR HPH-9A/9B			CARD CODE	DRAWING NO. 3-175-23-00008	
				SHEET No. 01	NO OF SHEETS 01

INVENTORY NO. SIGN. AND DATE REF. DRG. NO. 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



(Attachment to Enquiry No. E9AWS00075 Due on Date 04.12.2023 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 envelops shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.	
		Non Deviatable
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.	
		Non Deviatable
H	Unsolicited offers will not be considered.	
		Non Deviatable
4	OTHER PARTICULARS (Please indicate applicable data)	



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



<p>Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site</p> <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>		Non Deviatable
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B	<p>Imports</p> <p>i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery. ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (https://hpep.bhel.com/mm) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.</p> <p>iii) AWB/BL must contain the information of BHEL GST no., and PAN no.</p> <p>iv) Air Shipments: Bidder shall ensure the following</p> <p>a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC).</p> <p>b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier.</p> <p>c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings" Cargo handed over in sound condition for Air freighting". Note: Warehouse receipt will not be considered for penalty calculations.</p> <p>d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment.</p> <p>e) Following dimensions of single package may be noted. 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.</p> <p>v) Sea Shipments:- bidder shall ensure the following</p> <p>a). Port of discharge -- Nhavaseva/Mumbai/Chennai.</p> <p>b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS.</p> <p>c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt.</p> <p>d). If the material cannot be containerised in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder. e). For CIP shipments</p> <p>1. In case of FCL shipments, Detention free period must be 14 days.</p> <p>2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment.</p> <p>3. No charges for the services rendered till place of destination will be payable by BHEL. Incase liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account.</p> <p>4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill.</p> <p>5. bidder must insure the cargo for 110% of material value including the freight amount.</p> <p>(vi). Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT.</p> <p>If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under: 1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector</p> <p>A. For FOB Sea Consignments:-</p> <p>Penalty for late submission / negotiation of documents beyond 14 days shall be as under:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sl. no</th> <th rowspan="2">Period (From Date of Bill of Lading)</th> <th colspan="3">Recoverable Charges</th> </tr> <tr> <th>Recoverable Charges</th> <th colspan="2">Recoverable Charges per day per container</th> </tr> <tr> <th></th> <th></th> <th>LCL per week/ Break bulk cargo per day</th> <th>20FT Container</th> <th>40FT Container</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">i</td> <td style="text-align: center;">Upto 14th day</td> <td style="text-align: center;">Nil</td> <td style="text-align: center;">Nil</td> <td style="text-align: center;">Nil</td> </tr> <tr> <td style="text-align: center;">ii</td> <td style="text-align: center;">15th day onward</td> <td style="text-align: center;">USD 10</td> <td style="text-align: center;">USD 110</td> <td style="text-align: center;">USD 200</td> </tr> </tbody> </table>	Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges			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	
Sl. no	Period (From Date of Bill of Lading)			Recoverable Charges																					
		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: - Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard. In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges.</p> <p>(vii)Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis.</p> <p>(viii) Bidder shall provide package details including number of packages, gross weight, net weight etc.</p> <p>(ix) The bidder shall provide the following documents at the time of submission of offer: a) No Business Connection in India declaration issued by the bidder as per the format specified. (or) b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified. (ii) Tax Residence Certificate issued by the bidder's tax authorities. (iii) Form 10F, as attached in Annexure V, to be issued by the bidder. c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.</p>		
8	Delivery Schedule		
	<p>The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/Hold on payment.</p>		Non Deviatable
9	Pricing Terms		
	<p>Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.</p>	Non Deviatable	execution of
10	PRICE VALIDITY :		
	<p>Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.</p>	Non Deviatable	opening
11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)		
A	<p>Indigenous Purchase</p> <p>i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer. ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer. iii) Bidder to quote the applicable taxes in the following manner: - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services. v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated. vi) Any other taxes & duties not covered anywhere above may be indicated separately.</p> <p>Taxes deducted at source: - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax.</p>		Non Deviatable



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



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



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

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

INDIGENOUS

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

IMPORTS

For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.

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

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

- Loading will be as per the table below

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

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

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

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

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

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

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

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

22 **Public Procurement**

A **Make in India**

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

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

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

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

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



A	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 or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied.</p> <p>Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (Lx B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.</p>
39	Contract variations; Increase or decrease in the scope of supply
	<p>Buyer may vary the contracted scope during execution due to exigencies of project requirement.</p> <p>If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication.</p> <p>In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.</p>
40	Rejected/Short shipments/ warranty/guarantee replacements
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.
41	Export Administration Regulations

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



<p>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 .</p>

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

(To be executed on Non- Judicial Stamp Paper for an appropriate value.

To be stamped as an agreement)

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

Framework Confidentiality Agreement Cum Undertaking

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

And

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

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

RECITALS

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

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

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

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

1. Definitions:

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

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

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

- 4.3 Neither party is obligated by or under this Agreement to purchase from or provide to the other party any service or product and that any such purchase / sale of any product and / or service by one party to the other party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.
- 4.4 The Supplier is / has been made well aware and acknowledges that the Technical Information being / which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.
- 4.5 The supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors /suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the supplier or its employees or sub-contractors / suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.
- 4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights / title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings / documents or other materials connected with such

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

5. Use and Non – Disclosure:

- 5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.
- 5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.
- 5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and / or service to any third party, without the prior written consent of the Company.
- 5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is / was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.
- 5.5 This Supplier undertakes and agrees not to make copies or extracts of and not to disclose to other any or all of the Technical Information in its possession, except as follows:

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

6. Exceptions:

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

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

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

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

8. Warranties & Undertakings:

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

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

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 9 (f) hereinabove, the Company shall have a right to withhold, 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:.....