

ANNEXURE-A

ENQUIRY CONDITIONS FOR ENQ NO: 1002000065 DT 19.09.2020**Note: This Annexure has to be mandatorily filled, signed & submitted the along with Technical Bid.***Any deviation to the below mentioned terms shall be stated specifically in the comments column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation. (If otherwise mentioned).*

Sl No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)
1.	Material specification: As per enquiry	
	a. Material shall be supplied as per the specification mentioned for each item.	a)
	b. Supply of materials shall be as per relevant TDC and specification mentioned against each item. Deviations if any to be indicated separately mentioning the TDC/Specn.	b)
	c. Refer Quality Control Order issued by Steel Ministry (Govt. of India). Items covered in the said Quality Control order, shall be certified and marked in dual spec (ASME Specification & grade / IS Specification & grade). Offer on ASME specification alone for the grade covered in Quality Control order is not acceptable and offer will be rejected. Pls confirm acceptance for complying with quality control order issued by GOI.	c)
	d. Supply of material shall be in Plate/Sheets only. Supply in Coil form is not acceptable and offer will be rejected.	d)
2.	Material Description	
	a. Size & Qty: As mentioned against each item in the enquiry (Ref: Annexure T). Suppliers may take cognizance of the same and quote accordingly. Deviation to the same is not acceptable.	
	b. Quantity tolerance: Ref Annexure T I (item details)	
	c. Tender evaluation: i. Tender shall be evaluated on individual item basis. ii. Supplier shall confirm for part item ordering. iii. However, BHEL reserves the right to change the evaluation criteria either in part or full (i.e., combining few or all items), at its discretion after part I bid opening, if need arises. Such changes will be communicated to all techno-commercially suitable offers/ suppliers and impact price shall be obtained if required.	
3.	Public Procurement (Preference to Make in India)	
	a. <i>For this procurement, the local content to categorize a supplier as a class I local supplier/class II local supplier/ Non local supplier and purchase preference to class 1 local supplier, is as defined in Public procurement (Preference to Make in India), order 2017 dt 04.06.2020 issued by DPIIT. In case of subsequent orders issued by nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part – II bids against this NIT.</i>	
	b. Local content certification: The bidders shall provide local content certificate as per Public Procurement (Preference to Make in India order 2017 dt 04.06.2020 issued by DPIIT) Order.	
4.	Inspection & Certification	
	a. Two set of original test certificates shall be provided as per relevant TDC/ specification mentioned against each item and shall incorporate, standard to which the material comply E.g. (SA240 TY304), Melt no, BHEL order No, Supplier name, Logo, Identification no, TC No, Size Chemical analysis and mechanical testing and bear with signature of competent authority.	
	b. For Manufacturers, Mill test Certificates are to be duly stamped and signed by the Mill's Inspection-in charge. Corresponding mill TC's should also be provided along with dispatch of Plates.	
	c. In case of Indigenous Trader/Stockist, Govt. / NABL approved Lab test certificate for the result of chemical composition and Mechanical properties shall be produced along with supply in addition to Mill test certificates.	

	d. For Indigenous Traders/Stockiest, testing in NABL approved laboratory may be witnessed by BHEL/BHEL approved TPI. Only after acceptance of the same, dispatch clearance will be provided. Suitably suppliers may raise inspection call one week in advance. Pls confirm.	
5.	Offer Submission: Indigenous:	
	1. Submit your FIRM competitive offer rate per MT (basic price & freight) with best possible delivery on FOR Destination basis only (Ref Annexure T for delivery location for each items). The quoted prices shall be inclusive of all charges (like testing charges, Freight, etc.).	
	2. Price Variation Clause (PVC) is not acceptable and offer shall be rejected.	
	3. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly mentioned in the offer. Indicate the GST registration number. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	
	For supplies after implementation of New GST Return System i.e. from 01/10/2019, the following conditions will apply and supplier shall fully comply to the below points.	
	4. Supplier shall mention their GSTN registration number in all their invoices (incl. Credit notes, debit notes) and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.	
	5. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).	
	6. Invoices will be processed only upon completion of statutory requirement and further subject to following: a) Vendor declaring such invoice in Form GST ANX-1 b) Receipt of Goods or Services and Tax invoice by BHEL	
	7. As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on dispatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2)	
	8. All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.	
	9. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month notified by BHEL	
	10. In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor.	
	11. The offer will be evaluated on total landed cost to BHEL, Trichy as below, Total landed cost = FOR Trichy + applicable taxes + commercial loading as applicable - applicable tax credits	
	Note:	
	a. Transit insurance in the scope of supplier only.	

	b. In case GST credit is denied to BHEL due to non-receipt or 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, GST amount claimed in the invoice shall be disallowed to the vendor. c. Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor. d. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contracts. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number. e. GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.	
6.	Payment terms: Indigenous	
	a) Payment term is 100% direct EFT payment after 60 days from the date of receipt and acceptance of materials.	a)
7.	Delivery Terms:	
	The offer shall clearly indicate delivery period in fixed number of weeks/Months from the date of Purchase Order. Our required delivery schedule is 60 days from PO. Supplier shall take a note of the same and specifically confirm the delivery schedule. Suppliers shall quote shortest possible delivery and shall avoid offering longer delivery period. Notwithstanding anything to the contrary, including, but not limited to, provisions relating to extension of time and compensation/or delay, time shall be the essence of the Contract.	
8.	LD Clause Confirm acceptance for	
	Liquidated damages shall be 0.5% of the undelivered portion/value per week or part thereof subject to a maximum of 10% of the total order.	
	NOTE:	
	i. Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).	
	ii. LD will be reckoned from the date of LR/RR/BL / Invoice whichever is later	
	However inordinate delay in delivering the materials will not suffice the case. Also informed that for staggered delivery and single lot delivery separate PO will be placed.	
9.	Pre-qualifying requirement:	
	In addition to the size & specification requirements, suppliers shall meet the Pre-Qualification Requirements (Ref: Annexure T) enclosed herewith. Pls submit all the required documents in line with the respective PQR. The offers of the suppliers who fail to do so will be liable for rejection.	
10.	List of Documents to be submitted along with offer (only offer of manufactures will be considered)	
	a. For Pre-qualifying requirements as per Clause-9 of this annexure and submit the relevant documents as per the same. If incorrect or part of the required documents are provided, then in that case we will not be able to evaluate and qualify the offer. Hence Pls submit documents as mentioned in Pre-qualifying requirements.	a.
	b. Along with the offer document the following documents shall be submitted in Part-I bid without fail. This is apart from Pre-qualifying requirements as mentioned in Clause-9 (Supplier submit the below mentioned documents or else offer will be liable for rejection): Manufacturers (Indigenous) i. Annual report (Balance sheet, Profit and Loss statement) for the Past 3 years or from the date of incorporation whichever is less. ii. GST registration certification Traders / Stockist (Indigenous) i. IT Returns for past three years or from the date of incorporation whichever is less ii. GST registration certification etc.	b.
11.	Defective Material replacement	
	Supplier shall replace defective material free of cost (inclusive of all Testing, Inspection, TPI, Service charges etc.) up to destination within two months from defect notification date.	

12.	Material Warranty	
	Free replacement of whole material in case of notification of defect in material within the period of One year from TC/Invoice date. Warranty certificate to be produced.	
13.	Offer validity of 60 days is required after price bid opening in case you are technically qualified. Normally price bid will be opened within 60 days from technical bid opening. Otherwise offer is liable for rejection. Thus total of 120 days is required from Part-I bid opening. Offer with shorter validity are liable for rejection.	
14.	Any other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by purchaser will not be applicable to the contract	
15.	Bidders are requested to submit their best competitive prices at the first instant itself and no revision of prices will be entertained after the tenders are opened.	
16.	The due date mentioned in the enquiry is the date of opening of techno-commercial bid. After the scrutiny of technical bids, price bids of only technically accepted offer shall be opened with prior intimation.	
17.	Offer is to be submitted in two part bids system in the E-Procurement portal. Scan copy of the filled Annexure-A, Tender documents etc., shall be uploaded in the EPS portal	
18.	BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.	
19.	Cartel Formation	
	All the firms should desist from forming cartel as the practice is prohibited under Section 3(3) (a) & (d) of the competition Act 2002. If any such instance is observed during this tender will attract disciplinary action as per BHEL policies.	
20.	Risk Purchase Clause:	
	BHEL at its option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute thereof. The supplier shall be liable for any loss which BHEL may sustain by reason of such risk purchases in addition to LD at the maximum rate mentioned in the LD clause above. Confirm your acceptance. <u>The value under Risk purchase clause shall be calculated as follows:</u> Risk & Cost Amount= [(A-B) + (A x H/100)] Where, i. A= Value of Balance scope of Work/ Supply (*) as per rates of new contract ii. B= Value of Balance scope of Work/ Supply (*) as per rates of old contract being paid to the contractor/supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any. iii. H = Overhead Factor shall be taken as 5 In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero). * Balance scope of work/ supply Difference of Tendered/Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of PO/Contract', shall be taken as balance scope of Supply for calculating risk & cost amount. Note: In case vendor fails to fulfil any of the PO / Contract obligations as per PO/Contract, PO/contract shall be cancelled and appropriate cost shall be deducted from the vendor's pending bills in BHEL Trichy (or) across the BHEL units.	
21.	Authorisation for participation in EPS portal through DSC	

a. E-Tender Participation requirements		
Either Principal or authorised agent shall register their Digital Signature Certificate (DSC) (Class 3- SHA2-2048 BIT- SIGNING & ENCRYPTION). You are advised to pls go through the FAQ available in the web portal (https://bhel.abcpocure.com/). DSC shall be registered for the authorised person and all transaction done using that DSC against our tenders shall be taken as valid communication and shall be binding on principal/agent and is valid legally.		
DSC Authorisation		
Pls intimate the authorised person name, Mail ID for registering DSC with us to participate in E-Tenders.		
22.	In the event of Force Majeure:	
	a. Notwithstanding the provisions contained in other clauses, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure. For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees , lockouts excluding by its management, freight embargoes and Acts of GOD.	a.
	b. If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty-one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.	b.
	c. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.	c.
	d. In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.	d.
23.	Documents required for Indigenous suppliers	
	1. DFT copy invoice. LR & original TC (Invoice no. & vehicle reference to be mentioned) to be sent along with each vehicle. Without T.C. Vehicle/wagon will not be unloaded. One set of photocopy of all the said documents to be sent along with vehicle. Invoice should mention the no of pieces/bundles.	
	2. One set of MTC, Original invoice (Plus one copy), LR copy shall be sent to MM/Purchase for bill processing.	
24.	Execution of the Order	
	a. BHEL will have the option to pre-inspect the materials at Supplier's works by BHEL's own inspector or by third party agency appointed by BHEL or BHEL's end customer/s. The mere act of the pre-dispatch inspection (PDI) does not absolve the Supplier from giving the specifications as agreed upon in the Purchase Order.	
	b. In the case of overseas suppliers Inspection call for carrying out the inspection shall be given 30 days before the scheduled contract delivery date. The Inspection date/s given by the Supplier shall be on firm basis. For local Suppliers the Notice period of Inspection shall be 10 working days.	
	c. In the event of any short supply, it shall be the responsibility of the supplier to deliver such short supplied/ missing items on Free-of-Cost basis at BHEL stores, including customs clearances at Indian Ports in the case of foreign suppliers.	
25.	Conditions for transportation:	

	In the event there is a delay by the Supplier in negotiating / submitting the document, any demurrage / wharfage arising out of the same shall be to the account of the Supplier and shall be deducted from the final payment. Also, in such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading". Overseas Suppliers have to give a No-Objection Certificate to BHEL, authorizing BHEL to get the Delivery Order from the Steamer Agent without producing the Original Bill of Lading. This is required to ensure avoidance of incidence of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.	
26.	Resolution of Disputes a. 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, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to the 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 of an arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the Contract. b. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. c. 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 Trichy (the place from which the Contract is issued) d. The cost of arbitration shall be borne as per the award of the Arbitrator. e. Subject to the arbitration in terms of clause as above, the courts at Trichy shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract. f. 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. g. In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable: In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.	

27.	Patent Right: The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.	
28.	Fraud Prevention Policy Bidder along with its associate /collaborators /sub-contractors /sub-vendors / 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.	
29.	Evaluation of offer a. The price bids including the impact price (if any) of the technically acceptable offers alone shall be opened. b. Offers with pre-conditions (like conditional discounts) for price are liable to be not considered / rejected. For evaluation such conditions would be removed and only the base offer would be considered for evaluation and comparison. c. BHEL reserves the right to conduct negotiations on the "Price" and "Other Commercial Terms and Conditions" with the lowest ranked offerer at any time after the bid opening but before the release of the Purchase Order. d. In case of more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly; BHEL's decision in such situations shall be final and binding. e. In the event of any change in scope / quantity arising out of the discussions, offerer would be given a chance to submit their revised offer / Impact bids. The option for the revised offer / impact offer will be triggered by BHEL. The Supplier then will have the facility to feed-in the revised price / impact price as per the provision given by BHEL. The impact price can be positive or negative (or nil). The impact price option shall contain only the price addition / deletion for such change in the scope / quantities, over and above the original scope and price quoted. The original price quoted would remain unchanged. The total price would then be computed by the arithmetic addition of the original price and the impact price. Where BHEL gives the option of submitting the revised offer, the impact would be computed as the arithmetic difference of the revised price and the original price.	
30.	General terms 1. Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be submitted / uploaded in ENGLISH language only. If the documents submitted have other than English language, translation of the same shall be provided for evaluation. 2. A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrant that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages. 3. All uploaded/submitted documents against this tender shall be signed in each page and sign shall be by principal / Mill. 4. Any clarification regarding tender shall be done before Part -I due date itself through EPS portal itself, and in case of immediate non-availability of DSC you can clarify through with the following mail id sudheer@bhel.in & mrsamy@bhel.in . The above mail id is provided for initial clarification purpose only and no further correspondences shall be entertained through this mail ids.	

5. Supplier shall mention the HSN code for each item quoted by them in the offer.	
6. Offers for part quantities on item level basis are not acceptable to BHEL. While tenderers can quote for some or all the tendered items, no supplier shall quote for partial quantity of any given enquiry item. Such partial offer would not be considered in the enquiry for that item.	
7. Unloading of the materials is in the scope of BHEL. However, Demurrages on account of delay in unloading due to improper packing, non-availability of proper dunnage, not adhering to the tender conditions and other reasons attributable to supplier shall be on supplier's accounts only.	
8. Applicable INCO term for this tender is INCOTERMS 2010	
9. The supplier shall arrange for packing suitably in all respects for normal transport by sea / rail / road and Materials shall be suitably protected against effect of tropical salt laden atmosphere in the event of shipment being delayed at ports / store yards. In case of dispatch through sea then materials shall be shipped in Sea worthy packing condition. Packing charges will be supplier's account.	
10. In case the day up to which the tenders are to remain valid falls on/ subsequently declared a holiday or closed day for the purchaser, the tender validity shall automatically be extended up to the next working day.	
11. In exceptional cases, the tenderers may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by EPS / e-Mail message. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original offer.	
12. BHEL Reserves the right to negotiate and re-float the tender if the lowest offered price is not found competitive	
13. Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the tender. Otherwise, it will be treated as that all those terms and conditions as mentioned in the tender are acceptable in Toto.	
14. Deviations shall be summarized and provided in a "Deviation Statement", listing the points and the deviation against each point.	
15. At its option, BHEL may consider extending the due date/s for the tender openings. Sufficient notice would be given by BHEL for such extensions and it will be published as corrigendum in following websites, https://bhel.abcpurchase.com/ , http://eprocure.gov.in	
16. The price break-up should be in line with technical specification / scope of the tender. (Cost of material, packing charges, forwarding charges, freight and insurance charges shall be shown appropriately, as applicable).	
17. In case, there is a discrepancy in the term quoted in techno-commercial bid and price bid, the term as per the techno-commercial bid (Part I) shall hold good and the commercial term quoted in the Price Bid (Part II) shall not be considered.	
18. In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes. Incomplete documents / offer will be rejected.	
19. If any Supplier attempts to bribe, or pay commission, gift or any advantage or bring in undue influence either by himself or on his behalf any one including a stranger to the tender, in addition to instituting legal proceedings as per the extant laws prevailing, will disqualify the supplier from this tender and all future tenders of BHEL. Decision of the Purchaser would be final in this matter.	
20. Set-off Clause: BHEL shall have the right to recover any money which in the sole opinion of BHEL is due from the Contractor from any money due to the Contractor under this Contract or any other contract or from the Security Deposit furnished by the Contractor under this Contract or any other contract.	

31. **INTEGRITY PACT:** Signed Integrity pact (IP) should be furnished along with offer. IP would be signed by authorized official of the bidder/vendor/contractor. Offer without signed Integrity Pact (IP) shall be rejected. Copy of IP should be enclosed. This tender will be monitored by Independent external monitor (IEM). For information only.

a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

Sl.No	IEM	Email
1	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2	Shri Virendra Bahadur Singh, IPS (Retd.)	ybsinghips@gmail.com

b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of contact person(s):

Name	S Anand Kumar	Sudheer. A
Dept	SDGM/MM/Raw materials	Sr.Engr MM/Steel
Address	Bldg No:24, BHEL Trichy	Bldg No:24, BHEL Trichy
Phone	0431 -2575215/ 9442502989	0431 -2576186/ 7598195371
E-Mail	sak@bhel.in	sudheer@bhel.in

32. **Suspension of Business Dealings with Suppliers/ Contractors**

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.

Integrity commitment, performance of the contract and punitive action thereof:

1. Commitment by BHEL

BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity

2. Commitment by Bidder/ Supplier/ Contractor

- The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
- The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL
- The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on www.bhel.com and/or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage:

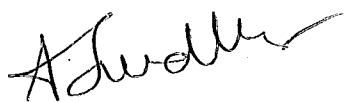
http://www.bhel.com/vender_registration/vender.php

33. **In the event of our customer order covering this tender being cancelled /placed on hold / otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender/ PO at any stage of execution.**

Caution:

34. ▶ The suppliers are severely cautioned to note that the price bid document accepts the price in figures only. It does not allow the supplier to write the value by words. Therefore, all care shall be exercised by the supplier while filling in the figures. Once the price bid is opened no option is available for the supplier to retract the offer under any grounds. If a supplier, for any reason whatsoever approaches BHEL with a request for change in the price, it would be treated as going back on the offer submitted. In such cases, action would be initiated by BHEL for suspending further business dealings with such suppliers as per policy of BHEL which prevails at that point of time.
- ▶ The language in the tender documents downloaded by the Bidders shall at no point of time be changed, altered or modified in any manner by the Tenderer. If such changes are made by any tenderer, it shall be considered as tampering with BHEL's terms and the offer shall be summarily rejected, whenever it is noticed by BHEL. Such Bidders would be disqualified from the Bidding Process and their offers would be forfeited / Bank Guarantees invoked. They would also not be allowed to participate in future tenders of BHEL.
35. Offers shall be submitted in TWO PART bids system (TECHNO-COMMERCIAL BID + PRICE BID). The bidder shall submit his response through bid submission to the tender on e-procurement platform at <https://bhel.abcprocure.com/> within 14:00 Hrs of the due date of this tender. The bidder would be required to register on the e-procurement market place <https://bhel.abcprocure.com/> and submit their bids online. SEALED COVER BIDS/ E-MAILS / FAX / MANUAL OFFERS WILL NOT BE ACCEPTED. Supplier shall upload any other tender documents in the E-Procurement Portal only.

On behalf of BHEL



SUDHEER APPIRE DDYGARI
Senior Engineer / Purchase
Materials Management / Steel
BHEL, TRICHY - 620 014.

To be filled & Signed by Original Manufacturer/Mill

Name of the mill / Principal:

Signature:

(Affix Seal)

(All conditions were read & clearly understood and agreed in
totality with the mentioned deviations only)

1002000065 dt 19.09.2020 ANNEXURE - T (Technical requirements)

Sl.No	Item description (TH x W x L in MM)	Quantity (MT)	Enq Specification	PQR	TDC/ Specn	INSPECTION & MTC	Quantity tolerance	Supply condition	Destination	Delivery reqd
BH01	PLATE 260 X 1900 X 3700 mm	201.124	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH02	PLATE 220 X 1900 X 3700 mm	121.560	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH03	PLATE 160 X 2500 X 5000 mm	125.760	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH04	PLATE 150 X 3200 X 5650 mm	42.640	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH05	PLATE 130 X 2500 X 5000 mm	204.352	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH06	PLATE 120 X 2500 X 5000 mm	235.800	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH07	PLATE 110 X 2900 X 5000 mm	100.292	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
BH08	PLATE 100 X 3000 X 5500 mm	363.132	ASTM A 537 Cl. II	PQR -General	ASTM A 537 Cl. II	As per Annexure B	+10% / -0%	Trimmed edge	BHOPAL	30-12-2020
HA09	PLATE 25 X (2000-2500) X (6000-8000) MM	3.925	16 MO3	PQR - HW10570 16Mo3	HW10570	As per TDC HW10570	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA10	PLATE 90 X (2000-2500) X (6000-8000) MM	14.130	16 MO3	PQR - HW10570 16Mo3	HW10570	As per TDC HW10570	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA11	PLATE 25 X (2000-2500) X (6000-8000) MM	7.065	16 MO3-Z15	PQR HW10564-16Mo3+ Z15	HW10564	As per TDC HW10564	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
RA12	PLATE 12 X 3500 X 7000 MM	101.548	ASTM A588 Gr.A	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA13	PLATE 16 X 3500 X 7000 MM	52.312	ASTM A588 Gr.A	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA14	PLATE 20 X 3200 X 7000 MM	151.222	ASTM A588 Gr.A	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA15	PLATE 6 X 2500 X 6500 MM	50.000	ASTM A588 Gr.A	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA16	PLATE 10 X 2500 X 9000 MM	100.000	ASTM A588 Gr.A	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA17	PLATE 5 X 1500X 7000 MM	100.140	ASTM 588 Gr A /SAILCOR - IRSM 41	PQR -General	TDC: RTG: 476 REV 01	As per TDC: RTG: 476 REV 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA18	SHEET 2.5 X 1050X 2500 MM	500.000	ASTM A242	PQR -General	TDC:RTA:404/Rev.08	As per TDC:RTA:404/Rev.08	+/-5%	Trimmed / Mill edge	RANIPET	30-12-2020
RA19	SHEET 2.5 X 1250X 4000 MM	600.000	ASTM A242	PQR -General	TDC:RTA:404/Rev.08	As per TDC:RTA:404/Rev.08	+/-5%	Trimmed / Mill edge	RANIPET	30-12-2020
RA20	SHEET 3.15 X 1250X 2500 MM	50.000	ASTM A242 /SAILCOR - IRSM 41	PQR -General	TDC:RTG:476/Rev.01	As per TDC:RTG:476/Rev.01	+/-5%	Trimmed / Mill edge	RANIPET	30-12-2020
HA21	PLATE 30 X 3400 X 6700 MM	32.188	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA22	PLATE 130 X (2000-2500) X (6000-8000) MM	15.000	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA23	PLATE 100 X 4000 X 4000 MM	50.240	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA24	PLATE 220 X (2000-2500) X (6000-8000) MM	20.724	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA25	PLATE 200 X (2000-2500) X (6000-8000) MM	25.120	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA26	PLATE 180 X (2000-2500) X (6000-8000) MM	50.868	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA27	PLATE 150 X (2000-2500) X (6000-8000) MM	75.360	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020

Sl.No	Item description (TH x W x L in MM)	Quantity (MT)	Enq Specification	PQR	TDC/ Specn	INSPECTION & MTC	Quantity tolerance	Supply condition	Destination	Delivery reqd
HA28	PLATE 140 X (2000-2500) X (6000-8000) MM	109.900	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA29	PLATE 120 X (2000-2500) X (6000-8000) MM	20.000	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA30	PLATE 110 X (2000-2500) X (6000-8000) MM	51.810	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA31	PLATE 100 X 2500 X 8000 MM	47.100	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA32	PLATE 90 X 2500 X 8000 MM	42.390	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA33	PLATE 80 X 2500 X 8000 MM	37.680	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA34	PLATE 70 X 2500 X 8000 MM	54.950	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA35	PLATE 63 X 3600 X 9000 MM	80.117	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA36	PLATE 50 X 2500 X 8000 MM	39.250	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA37	PLATE 40 X 2500 X 8000 MM	18.840	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA38	PLATE 36 X 2500 X 8000 MM	11.304	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA39	PLATE 32 X 2500 X 8000 MM	10.048	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA40	PLATE 25 X 2500 X 8000 MM	27.475	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA41	PLATE 20 X 2500 X 8000 MM	15.700	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA42	PLATE 16 X 2500 X 8000 MM	10.048	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA43	PLATE 12 X 2500 X 8000 MM	13.188	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA44	PLATE 10 X 2500 X 8000 MM	15.700	IS:2002–2009, Gr:2, Normalised	PQR-IS2002 AA10401	AA10401	As per AA10401	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA45	PLATE 12.7 X (2000-2500) X (6000-8000) MM	25.000	SA516 Gr.70	PQR SA516GR70 + ANNEXURE I	SA516 Gr.70	As per Specn	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA46	PLATE 180 X (2000-2500) X (6000-8000) MM	16.956	SA516 Gr.70	PQR SA516GR70 + ANNEXURE I	SA516 Gr.70	As per Specn	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA47	PLATE 63 X (2000-2500) X (6000-8000) MM	10.000	SA516 Gr.70	PQR SA516GR70 + ANNEXURE I	SA516 Gr.70	As per Specn	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA48	PLATE 40 X (2000-2500) X (6000-8000) MM	10.026	SA516 Gr.70	PQR SA516GR70 + ANNEXURE I	SA516 Gr.70	As per Specn	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
HA49	PLATE 25 X (2000-2500) X (6000-8000) MM	3.925	SA516 Gr.70	PQR SA516GR70 + ANNEXURE I	SA516 Gr.70	As per Specn	+10% / -0%	Trimmed edge	HARIDWAR	30-12-2020
RA50	PLATE 08 X 3000 X 6000 MM	22.608	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA51	PLATE 12 X 3000 X 6000 MM	40.694	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA52	PLATE 16 X 3000 X 6000 MM	63.302	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA53	PLATE 18 X 3000 X 6000 MM	50.868	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA54	PLATE 20 X 3000 X 6000 MM	50.868	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA55	PLATE 32 X 3000 X 6000 MM	76.867	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020

Sl.No	Item description (TH x W x L in MM)	Quantity (MT)	Enq Specification	PQR	TDC/ Specn	INSPECTION & MTC	Quantity tolerance	Supply condition	Destination	Delivery reqd
RA56	PLATE 40 X 3000 X 6000 MM	50.868	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA57	PLATE 55 X 3000 X 6000 MM	31.086	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA58	PLATE 63 X 3000 X 6000 MM	62.312	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA59	PLATE 75 X 3000 X 6000 MM	63.585	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA60	PLATE 100 X 3000 X 6000 MM	28.260	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA61	PLATE 120 X 3000 X 6000 MM	50.868	P355NH of EN 10028-3	PQR -General	TDC: 311 03	As per TDC: 311 03	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA62	SS DUPLEX STEEL PLATE 8 X 1500 X 5500 MM	10.428	ASTM A240 S32205	PQR -General	TDC:RTG:053/Rev 01	As per TDC:RTG:053/Rev 01	+/-5%	Trimmed edge	RANIPET	30-12-2020
RA63	SS PLATE 6 X 1200 X 6000 MM	50.168	ASTM A240 TY304	PQR - SA240Ty304	ASTM A240 TY304	As per Specn	+/-5%	Trimmed edge	RANIPET	30-12-2020
HA64	PLATE 5 X (1250-2000) X (4000-8000) MM	2.943	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA65	PLATE 6 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA66	PLATE 8 X (1250-2000) X (4000-8000) MM	7.610	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA67	PLATE 10 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA68	PLATE 16 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA69	PLATE 20 X1050 X 2100 MM	5.300	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA70	PLATE 25 X (1250-2000) X (4000-8000) MM	5.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA71	PLATE 32 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA72	PLATE 36 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA73	PLATE 100 X (1250-2000) X (4000-8000) MM	4.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA74	PLATE 25 X 2000 X 3400 MM	8.160	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA75	PLATE 70 X (1250-2000) X (4000-8000) MM	2.800	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA76	PLATE 80 X (1250-2000) X (4000-8000) MM	3.200	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA77	PLATE 40 X1150 X 4500 MM	9.936	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA78	PLATE 60 X (1250-2000) X (4000-8000) MM	2.400	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA79	PLATE 50 X (1250-2000) X (4000-8000) MM	2.000	ASTM 240M TP321	PQR - AA10740-SA240TY321	AA10740	As per AA10740	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA80	PLATE 5 X1500-2500 X (4000-8000) MM	15.349	SA240TY304	PQR - SA240Ty304	AA10739	As per AA10739	+/-10%	Trimmed edge	HARIDWAR	30-12-2020
HA81	PLATE 8 X (1250-2000) X (4000-8000) MM	2.000	SA240TY304	PQR - SA240Ty304	AA10739	As per AA10739	+/-10%	Trimmed edge	HARIDWAR	30-12-2020

15-09-2020

PQR – AA10740-SA240TY321

Following are the mandatory qualification requirements

PQR	Requirements	Documents to be submitted.
1.	Vendor must be approved by Bureau of Indian Standards (BIS) for manufacturing of plate of specification IS:6911, Solution Annealed.	<u>Vendor to submit:</u> Copy of valid certificate issued by BIS for material specification of IS 6911.
2.	Supplier shall confirm their acceptance to supply of Plates strictly as per BHEL specification AA10740 Rev 08. In case of any deviation, pls mention the specific clause no of AA10740 Rev 08 and the specific deviation against it.	<u>Vendor to confirm:</u> Specific confirmation to BHEL specification is required.

Note: In case of trader/stockist, vendor to submit details as per point 1 & 2 above of their principal manufacturer. Offers of trader/stockist without these details will not be considered.


K. BHUVANADEVI
Manager
MM / RM / Material Planning
BHEL, TRICHY - 620 014.

PRE-QUALIFICATION REQUIREMENT (PQR) - GENERAL.

Applicable for the following specifications:

1. ASTM 588 Gr A
2. ASTM A 537 Cl. II
3. ASTM A240 S32205
4. ASTM A242
5. P355NH of EN 10028-3

Sl.no	Description of pre-qualification requirement	Vendor's response	
		Complied / Not Complied	Supporting documents required from bidders stating compliance to clause.
1	Compliance to Tendered Specification	Yes / No.	Compliance to Tendered specification
2	Compliance to technical requirements as against each item of enquiry	Yes / No.	Item wise & point wise compliance to technical parameters
3	A. Supplying mill to provide self-declaration certificate from authorized person for following: i. Operational and functional capacity to execute the order for tendered quantity ii. List of customers / clients to whom same grade of steel is supplied of at least 5 years ending 31.12.19 indicating the quantity supplied. B. For traders / distributors / agents: i. To produce support letter from principal mill on mill's letterhead stating acceptance for supply for required grade of steel plates for current tender quantity, thickness, size and technical requirements indicating validity of letter. Vendor shall not be allowed to change principal mill after submission of offer ii. Vendor to submit all documents from Principal/ support mill as per clause 3A. iii. Should have experience (in tonnes) of supplying at least the total quantity offered in the subject tender of same material grade plates in the last 5 years. Traders / distributors / agents also	Yes / No.	Self-declaration certificate for Operational and functional capacity from authorized person & List of customers/ clients on mill's letterhead Support letter from principal mill on mill's letterhead stating acceptance for supply for required grade of steel plates for current tender quantity, thickness, size and technical requirements indicating validity of letter. Copy of unpriced valid POs (may be multiple POs with combined quantity more than or equal to total quantity of the current tender

K Bhuvadevi

K. BHUVANADEVI
Manager
MM / RM / Material Planning
BHEL, TRICHY - 620 014.

Minimum qualification requirements:

1. Vendor must have experience of manufacturing and supplying plate of Grade 16Mo3 +Z15/ ASTM A204 Gr B+Z15/ SB480M+N+Z15/ JIS G3103+Z15 or higher alloy steel. Vendor must have manufactured and executed at least one purchase order in last seven years in material grade 16Mo3+Z15/ ASTM A204 Gr B+Z15/ SB480M+N+Z15/ JIS G3103+Z15 or higher alloy steel.
Material supplied in normalised condition only will be considered for experience.

In support of above vendor to submit experience details as per format below:

Sl. No	Name of customer	Purchase order No	Size	Date of supply	Quantity

2. Vendor to submit documentary evidence like un-priced purchase order and test certificates covering chemical, mechanical properties, heat treatment, supply dimension in support of experience. These details are to be submitted for maximum plate thickness manufactured in the above referred grades.
3. Vendor must have in-house rolling and normalizing heat treatment facility to manufacture plates of enquiry dimensions. Details of manufacturing facilities like steel melting including vacuum degassing facility, rolling, heat treatment etc. are to be provided.
4. In case in-house steel melting facility is not available, vendor to provide details of steel supplier.
5. Vendor to furnish in house testing facilities to carry out testing as per the requirements of specification HW10564. In case of outsourcing of any test, vendor to agree to carry out testing at Government accredited labs only.
6. Vendor to confirm that they will meet all the requirements of specification HW10564.

Note: In case of trader/stockist, vendor to submit details as per points 1 - 5 above of their principal manufacturer. Offers of trader/stockist without these details will not be considered.

K Bhuvanadevi
K. BHUVANADEVI
Manager
MM / RM / Material Planning
BHEL, TRICHY - 620 014.

Date: 15-09-2020

Minimum qualification requirements:

1. Vendor must have experience of manufacturing and supplying plate of Grade 16Mo3/ ASTM A204 Gr B/ SB480M+N/ JIS G3103 or higher alloy steel. Vendor must have manufactured and executed least one purchase order in last seven years in material grade 16Mo3/ ASTM A204 Gr B/ SB480M+N/ JIS G3103 or higher alloy steel.

Material supplied in normalised condition only will be considered for experience.

In support of above vendor to submit experience details as per format below:

Sl. No	Name of customer	Purchase order No	Size	Date of supply	Quantity

2. Vendor to submit documentary evidence like un-priced purchase order and test certificates covering chemical, mechanical properties, heat treatment, supply dimension in support of experience. These details are to be submitted for maximum plate thickness manufactured in the above referred grades.
3. Vendor must have in-house rolling and normalizing heat treatment facility to manufacture plates of enquiry dimensions. Details of manufacturing facilities like steel melting including vacuum degassing facility, rolling, heat treatment etc. are to be provided.
4. In case in-house steel melting facility is not available, vendor to provide details of steel supplier.
5. Vendor to furnish in house testing facilities to carry out testing as per the requirements of specification HW10570. In case of outsourcing of any test, vendor to agree to carry out testing at Government accredited labs only.
6. Vendor to confirm that they will meet all the requirements of specification HW10570.

Note: In case of trader/stockist, vendor to submit details as per points 1 - 5 above of their principal manufacturer. Offers of trader/stockist without these details will not be considered.


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PQR - IS2002 (AA10401 Rev 17)

Following are the mandatory qualification requirements

PQR	Requirements	Documents to be submitted
1	Vendor must be approved by Bureau of Indian Standards (BIS) for manufacturing of plates to the specification IS:2002-2009 Gr.2.	<u>Vendor to submit</u> copy of valid BIS certificate issued by BIS for material Gr.2 of IS: 2002-2009.
2	Supplier shall confirm their acceptance to supply of Plates strictly as per BHEL specification AA10401 Rev 17. In case of any deviation, pls mention the specific clause no of AA10401 Rev 17 and the specific deviation against it.	<u>Vendor to confirm</u> Specific confirmation to BHEL specification is required.

Note: In case of trader/stockist, vendor to submit details as per points 1 & 2 above of their principal manufacturer. Offers of trader/stockist without these details will not be considered.

K Bhavathi
K. BHUVANADEVI
Manager
MM / RM / Material Planning
BHEL, TRICHY - 620 014

PQR – SA240TY304

Following are the mandatory qualification requirements

PQR	Requirements	Documents to be submitted.
1.	Vendor must be approved by Bureau of Indian Standards (BIS) for manufacturing of plate of material grade X04Cr19Ni9 of specification IS:6911.	<u>Vendor to submit</u> Copy of valid BIS certificate issued by BIS for material grade X04Cr19Ni9 of IS: 6911.
2.	Supplier shall confirm their acceptance to supply of Plates strictly as per BHEL specification AA10739 Rev 08. In case of any deviation, pls mention the specific clause no of AA10739 Rev 08 and the specific deviation against it.	<u>Vendor to confirm:</u> Specific confirmation to BHEL specification is required

Note: In case of trader/stockist, vendor to submit details as per point 1 & 2 above of their principal manufacturer. Offers of trader/stockist without these details will not be considered.


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PQR – SA516GR70

PRE QUALIFICATION REQUIREMENT (PQR) FOR PROCUREMENT OF CS PRESSURE VESSEL PLATES
AS PER SA 516 GR70.

1. Vendor should have manufactured and supplied pressure vessel plates as per SA516Gr70.
2. Vendor should have in-house rolling and normalizing heat treatment facility for plates having dimension as per the present enquiry.
3. In support of point no. 1 above, vendor to furnish the following:
 - i) Copy of one unpriced P.O. for the pressure vessel plates having details as per point no.1 above. The P.O. should not be earlier than 7 years from date of enquiry.
 - ii) Dispatch documents of the reference P.O. at point no 3(i) above.
4. In support of point no 2 above, vendor to submit signed and stamped Annexure-1 (attached)
5. Bid from representative of manufacturer is also acceptable. Agreement between manufacturer and its representative is to be furnished for such case.
6. In case PQR qualifying documents are in language other than English, signed/ stamped English translated copies of such full and complete documents should also be furnished.


K. BHUVANADEVI
Manager
MM / RM / Material Planning
BHEL, TRICHY - 620 014.

(To be furnished by vendor on its letter head)

ANNEXURE-1

Date:

This is to certify that M/s..... has following minimum in-house facilities for manufacturing of pressure vessel plates as per SA516 Gr70:

1. In-house rolling and : Y/N
normalizing heat treatment
facility for plates having
dimension as per the present
enquiry
2. Other facilities :

Signature :

Name of the Signatory :

Designation :

Phone No :

Email :

Seal & Stamp of the
Organisation :

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)	HW10570 पृष्ठ का Page 1 of 3																												
SUPERSEDES INVENTORY NO	TLV 9170 Part 04, 07/14	HEAT RESISTANT PLATE STEEL GRADE 16Mo3																													
1.0 GENERAL: This material specification governs the quality of heat resistant plate of steel grade 16Mo3, material no 1.5415 as per EN10028-2. Plates as per ASTM A204 Gr B or SB480M+N as per JIS G3103 are also acceptable for plates upto 150mm thickness subject to meeting the following additional requirements of this specification.																															
2.0 APPLICATION: The plate shall be used for manufacture of turbine and generator components.																															
3.0 CONDITION OF DELIVERY: The plate shall be supplied in normalized condition.																															
4.0 DIMENSION AND TOLERANCES: The plate shall be supplied to the dimensions as per purchase order and tolerances as per EN 10029, class C																															
5.0 HEAT-TREATMENT: Plates shall be normalized at 890 - 950°C.																															
6.0 PROPERTIES: Chemical composition and mechanical properties of plate shall be meet any one of the following three material grade (a/b/c) given below: (a) 16Mo3, material no 1.5415, EN10028 – 2																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:12.5%;">C</td> <td style="width:12.5%;">Si</td> <td style="width:12.5%;">Mn</td> <td style="width:12.5%;">Mo</td> <td style="width:12.5%;">S</td> <td style="width:12.5%;">P</td> <td style="width:12.5%;">Cr</td> </tr> <tr> <td>0.12 - 0.20</td> <td>≤ 0.35</td> <td>0.40 - 0.90</td> <td>0.25 - 0.35</td> <td>≤ 0.010</td> <td>≤ 0.025</td> <td>≤ 0.30</td> </tr> <tr> <td>Cu</td> <td>N</td> <td>Ni</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>≤ 0.30</td> <td>≤ 0.012</td> <td>≤ 0.30</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				C	Si	Mn	Mo	S	P	Cr	0.12 - 0.20	≤ 0.35	0.40 - 0.90	0.25 - 0.35	≤ 0.010	≤ 0.025	≤ 0.30	Cu	N	Ni					≤ 0.30	≤ 0.012	≤ 0.30				
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PSC	G. KRISHNAN	19.4.18	अनुवादक TRANSLATED BY																												
QAX	U. K. PANDA	19.4.18	निर्माणांक WORKED BY	SUBODH RANA																											
STE	P. K. BANSAL	19.4.18	जांचकर्ता CHECKED BY	ASHISH RANJAN																											
महामन्त्र विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY	GOPAL KRISHNAN																											
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Dt.	21.04.18		जारी ISSUED : TSX																												
CHANGE ADVICE NO.	TSX(MTE)-18-25		दिनांक DATE : 02.12.91																												

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)	HW10570 पृष्ठ का Page 2 of 3																																																		
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स्वत्वाधिकार एवं गोपनीय इस प्रवेश से दी गई सूचना भारत हेवी एलेक्ट्रिकल लिमिटेड की संपत्ति है. इसका प्रयोग एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग जो कि कंपनी के हित से हानिकारक हो न किता जाए।	Aluminium content shall be determined and reported in inspection reports for all the above three grades. Elements not listed in table above shall not be intentionally added to the steel without the agreement of the purchase except for finishing the cast.																																																				
दिनांक एवं हस्ताक्षर SIGN & DATE	मासिकी सूची संख्या INVENTORY NO. P 3126	REV. NO. 03	निर्माणकर्ता WORKED BY S.RANA जांचकर्ता CHECKED BY A. RANJAN	19.04.2018 19.04.2018																																																	

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)		HW10570	
				पृष्ठ का Page 3 of 3	
सुपरसेडस INVENTORY NO.	7.0 OUTER AND INNER QUALITY / NON DESTRUCTIVE TESTING: 7.1 SURFACE CONDITION: As per EN 10163-2, class B. Welding repair not permitted. 7.2 SCOPE OF INSPECTION: Following NDE shall be performed in delivery condition: - Verification inspection of all plates - UT inspection shall be according to EN10160. The criteria for registration and decision of quality class S1 according to EN 10160 (Table 3) shall be applied and fulfilled; where 10 clusters of heterogeneities in the square of 1m x 1m with the highest density are the maximum acceptable number.				
भारतीय सूची संख्या की अभिलेखित करना है					
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company					
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारी यंत्रोद्योग निगम की संपत्ति है, इसका प्रयोग एवं अवलोकन केवल केवल के लिए ही किया जा सकता है, जो कि कंपनी के हित में हितकारक हो न कि बाधक।	8.0 TEST CERTIFICATES: The supplier shall supply four copies of test certificates as per EN 10204, certificate 3.1 B, unless otherwise stated on the order. The test certificates shall bear the following: - BHEL References: - Specification number, Purchase order no. - Suppliers references: Name, emblem, material designation, melt no., heat treatment batch no. Results of testing - Melting process, melt analysis - Details of Heat-treatment performed - Mechanical and impact test results - U.T. Results - Confirmation of the verification inspection				
	9.0 MARKING: The marking of the materials shall be such that heat no., steel grade/specification & manufacturer name / identifications are legible.				
	10.0 CLEARANCE FOR DELIVERY: The total results of the tests carried out are the deciding factor for clearance for delivery. BHEL shall evaluate the total results taking into consideration the intended use of the material and examines accordingly the permissibility of deviation (if any) from the specified properties. The clearance however does not relieve the supplier of his responsibility for the hidden non-permissible defects, which are found later.				
दिनांक एवं हस्ताक्षर SIGN & DATE	11.0 FREEDOM FROM DEFECTS: Plate shall be free from defects such as cracks, flacks, seams, segregation, inclusion and other defects which may affect utility of the plates.				
भारतीय सूची संख्या INVENTORY NO.	12.0 CROSS REFERRED STANDARDS: EN 10028, EN 10029, ASTM A 204 , JIS G3103, EN 10160, EN 10163, EN 10204				
REV. NO. 03	निर्माणकर्ता WORKED BY		S.RANA		19.04.2018
2-31-26	जांचकर्ता CHECKED BY		A. RANJAN		19.04.2018

	CORPORATE PURCHASING SPECIFICATION	AA10401
		Rev No. 17
		PAGE 1 of 2

CARBON STEEL PLATES - INTERMEDIATE AND HIGH TEMPERATURE

1 GENERAL:

This specification governs the quality requirements of Carbon Steel Plates for Intermediate and High temperature service.

2 APPLICATION:

For intermediate and high temperature applications requiring welding, cutting and cold and hot flanging.

3 CONDITION OF DELIVERY:

Plates above 12mm thick shall be supplied in the normalized or equivalent condition. Plates of 25mm and above thickness shall be ultrasonically tested.

4 COMPLIANCE WITH NATIONAL/INTERNATIONAL STANDARDS:

Material shall comply with the requirements of IS: 2002 – 2009, Grade 2.

Material offered as per EN 10028 – 2:2017, Grade: P265GH+N (Material number 1.0425) is also acceptable.

5 DIMENSIONS AND TOLERANCES:

5.1 Sizes:

Material shall be supplied to the dimensions specified on BHEL order.

5.2 Tolerances:

The tolerance on hot rolled plates shall comply with IS/ISO 7452 Class C or EN 10029, Class C.

6 MANUFACTURE:

Material shall be manufactured from killed steel having a Carbon Equivalent of 0.44 max (melt analysed).

7 HEAT TREATMENT:

Plates above 12mm thick shall be normalized. Normalizing can be replaced by equivalent temperature control during and after hot rolling.

8 TEST SAMPLES:

As per IS: 2002 or EN 10028 – 2 as applicable.

9 ULTRASONIC TEST:

Plates 25mm and above are to be ultrasonically tested as per IS:4225/ASTM A435/ASTM A578, Level B.

Revisions:			APPROVED: INTERPLANT MATERIAL RATIONALISATION COMMITTEE – MRC(S&GPS)		
Rev No.17	Amd No.	Reaffirmed	Prepared HEEP, Haridwar	Issued Corp.R&D	Dt. of 1 st Issue August 1976
Dt:07-01-2020	Dt:	Year:			

**10 FREEDOM FROM DEFECTS:**

Plates shall be cleanly rolled to the dimensions specified. The finished material shall be free from excessive segregation of impurities and cracks, surface flaws, laminations, rough, jagged & imperfect edges and internal & surface defects.

Slight scale or shell may, however, be removed by such means as chisel, file, buff or shot blast or other suitable means provided that the thickness of the material is nowhere reduced below the specified thickness. Hammer dressing, patching or welding of defects is prohibited.

11 TEST CERTIFICATES:

Unless otherwise specified on the order, three copies of test certificates shall be supplied.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their dispatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

AA10401 Rev.17 / IS: 2002 Gr.2 or EN 10028 – 2, Gr: P265 GH+N

BHEL Order No.

Melt No., Size & Quantity,

Batch no. with heat treatment details,

Results of Chemical analysis, Mechanical test as per applicable grade and Ultrasonic tests.

Supplier's name, Identification No, TC No, Signature of competent authority, etc.

12 PACKING AND MARKING:

Plates shall be transported suitably to avoid damage during transit.

For plates below 10 mm thick, each pile (preferably of 16 plates) and each plate 10mm thick & above shall be marked with the suppliers Identification No, Melt No. AA10401, BHEL order no., Suppliers name, Size & weight, on any one corner and encircled with paint preferably of white colour.

13 REFERRED STANDARDS (Latest publications including amendments):

1. IS/ISO 7452 3) EN 10029 4) IS: 4225 5) ASTM A435 6) ASTM A578

	CORPORATE PURCHASING SPECIFICATION	AA10739 Rev No. 08 PAGE 1 of 2																		
AUSTENTIC STAINLESS STEEL SHEETS, PLATES AND STRIPS - SOLUTION ANNEALED (ASTM A240M, TYPE 304) (ORDERING DESCRIPTION)																				
1 GENERAL: The sheets, plates and strips shall conform to the latest version of ASTM A240M, Type 304 and comply with the following additional requirements. 2 APPLICATION: For general engineering purposes, where corrosion resistance is essential. 3 CONDITION OF DELIVERY: Hot/Cold rolled, solution annealed and descaled (Finish number 1 or 2 B/2D). 4 DIMENSIONS AND TOLERANCES: Material shall be supplied to the dimensions specified in BHEL order. 5 CHEMICAL COMPOSITION: As per ASTM A240M, Type 304. 6 TEST CERTIFICATES: Three copies of test certificates shall be supplied along with the following information: <u>BHEL References:</u> AA10739 -Rev. No.08 / ASTM A240M, Type: 304 BHEL order No <u>Supplier's References:</u> Name Identification No. Melt No. Process of manufacture Details of heat treatment. <u>Result of Tests:</u> Dimensional inspection. Results of chemical analysis, mechanical tests																				
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Dt:09-01-2007	Dt:	Year:2019	HEEP, Haridwar	Corp.R&D	June 1978															

7 PACKING AND MARKING:

Sheets shall be supplied in bundles or in packages each weighing up to a maximum of 3000kg. Plates shall be suitably packed to prevent damage during transit.

For plates below 25mm thick, each pile (preferably of 16 plates) shall be marked with suppliers identification mark, 'AA10739 / ASTM A240 M, Type:304, melt No., BHEL order No., on the top plate.

Each plate of 25mm thickness and above shall be stamped/painted with the suppliers identification mark, 'AA10739 / ASTM A240 M, Type:304 , melt No., BHEL order No., on the top plate.

FOR INFORMATION ONLY

CHEMICAL COMPOSITION

C	Si	Mn	Ni	Cr	S	P	N
≤ 0.08	≤ 0.75	≤ 2.0	8.0-10.5	18.0-20.0	≤ 0.030	≤ 0.045	0.10

MECHANICAL PROPERTIES

Hardness Max		0.2% PS min N/mm ²	UTS min N/mm ²	% El min	Bend Test Dia.
BHN	HRB				
201	92	205	515	40	---

	CORPORATE PURCHASING SPECIFICATION	AA10740 Rev No. 08 PAGE 1 of 2																		
AUSTENTIC STAINLESS STEEL SHEETS, PLATES AND STRIPS - SOLUTION ANNEALED (ASTM A240M, TYPE 321) (ORDERING DESCRIPTION)																				
1 GENERAL: The sheets, plates and strips shall conform to the latest version of ASTM A240M, Type 321 and comply with the following additional requirements. 2 APPLICATION: For general engineering purposes, where corrosion resistance is essential. 3 CONDITION OF DELIVERY: Hot/Cold rolled, solution annealed and descaled (Finish number 1 or 2 B/2D). 4 DIMENSIONS AND TOLERANCES: Material shall be supplied to the dimensions specified in BHEL order. 5 CHEMICAL COMPOSITION: As per ASTM A240M, Type 321. 6 TEST CERTIFICATES: Three copies of test certificates shall be supplied along with the following information: <u>BHEL References:</u> AA10740 -Rev. No.08 / ASTM A240M, Type: 321 BHEL order No <u>Supplier's References:</u> Name Identification No. Melt No. Process of manufacture Details of heat treatment. <u>Result of Tests:</u> Dimensional inspection. Results of chemical analysis, mechanical tests																				
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Sheets shall be supplied in bundles or in packages each weighing up to a maximum of 3000kg. Plates shall be suitably packed to prevent damage during transit.

For plates below 25mm thick, each pile (preferably of 16 plates) shall be marked with suppliers identification mark, 'AA10740 / ASTM A240 M, Type:321, melt No., BHEL order No., on the top plate.

Each plate of 25mm thickness and above shall be stamped/painted with the suppliers identification mark, 'AA10740 / ASTM A240 M, Type:321 , melt No., BHEL order No., on the top plate.

FOR INFORMATION ONLY

CHEMICAL COMPOSITION

C	Si	Mn	Ni	Cr	S	P	Ti	N
≤ 0.08	≤ 0.75	≤ 2.0	9.0-12.0	17.0-19.0	≤ 0.030	≤ 0.045	5(C+N)-0.70,max	0.10

MECHANICAL PROPERTIES

Hardness Max		0.2% PS min N/mm ²	UTS min N/mm ²	% El min	Cold Bend
BHN	HRB				
217	95	205	515	40	---

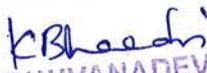
संस्थान क्रय विनिर्देश (हीप : हरिद्वार)		HW10564																																														
PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)		पृष्ठ का Page 1 of 3																																														
HEAT RESISTANT PLATE STEEL GRADE 16Mo3+Z15																																																
1.0 GENERAL: This material specification governs the quality of heat resistant plate of steel grade 16Mo3+Z15, material no 1.5415 as per EN10028-2. Plates as per ASTM A204 Gr B + Z15 or SB480M+N+Z15 as per JIS G3103 are also acceptable for plates upto 150mm thickness subject meeting the following requirements of this specification.																																																
2.0 APPLICATION: The plate shall be used for manufacture of turbine and generator components.																																																
3.0 CONDITION OF DELIVERY: The plate shall be supplied in normalized condition.																																																
4.0 DIMENSION AND TOLERANCES: The plate shall be supplied to the dimensions as per purchase order and tolerances shall be as per EN10029, class C																																																
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6.0 PROPERTIES: Chemical composition and mechanical properties of plate shall be meet any one of the following three material grade (a/b/c) given below: (a) 16Mo3+Z15, material no 1.5415, EN10028 - 2 <table border="1"><thead><tr><th>C</th><th>Si</th><th>Mn</th><th>Mo</th><th>S</th><th>P</th><th>Cr</th><th>Cu</th><th>N</th><th>Ni</th></tr></thead><tbody><tr><td>0.12 - 0.20</td><td>≤ 0.35</td><td>0.40 - 0.90</td><td>0.25 - 0.35</td><td>≤ 0.010</td><td>≤ 0.025</td><td>≤ 0.30</td><td>≤ 0.30</td><td>≤ 0.012</td><td>≤ 0.30</td></tr></tbody></table> The tensile and impact test shall be tested on specimen taken perpendicular to rolling direction and following properties shall be achieved at room temperature. <table border="1"><thead><tr><th>Thickness (t) (mm)</th><th>Yield strength N/mm²</th><th>Tensile strength N/mm²</th><th>Elongation L=5d %</th><th>Impact Energy J * (20 °C)</th></tr></thead><tbody><tr><td>t ≤ 16</td><td>≥ 275</td><td>440 – 590</td><td rowspan="6">≥ 22</td><td rowspan="6">≥ 31</td></tr><tr><td>16 < t ≤ 40</td><td>≥ 270</td><td>440 – 590</td></tr><tr><td>40 < t ≤ 60</td><td>≥ 260</td><td>440 - 590</td></tr><tr><td>60 < t ≤ 100</td><td>≥ 240</td><td>430 - 580</td></tr><tr><td>100 < t ≤ 150</td><td>≥ 220</td><td>420 - 570</td></tr><tr><td>150 < t ≤ 250</td><td>≥ 210</td><td>410 – 570</td></tr></tbody></table> * Average of 3 Charpy V notch specimens, Minimum value ≥ 70% specified value.				C	Si	Mn	Mo	S	P	Cr	Cu	N	Ni	0.12 - 0.20	≤ 0.35	0.40 - 0.90	0.25 - 0.35	≤ 0.010	≤ 0.025	≤ 0.30	≤ 0.30	≤ 0.012	≤ 0.30	Thickness (t) (mm)	Yield strength N/mm ²	Tensile strength N/mm ²	Elongation L=5d %	Impact Energy J * (20 °C)	t ≤ 16	≥ 275	440 – 590	≥ 22	≥ 31	16 < t ≤ 40	≥ 270	440 – 590	40 < t ≤ 60	≥ 260	440 - 590	60 < t ≤ 100	≥ 240	430 - 580	100 < t ≤ 150	≥ 220	420 - 570	150 < t ≤ 250	≥ 210	410 – 570
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REV.NO.		02	(SUPERSEDES)																																													
Dt.		21.04.18	निर्माण PREPARED : MTE				जारी ISSUED : TSX																																									
CHANGE ADVICE NO.		TSX(MTE)-18-24	दिनांक DATE : 07.10.91																																													

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)	HW10564 पृष्ठ का Page 2 of 3																												
SUPERSEDES INVENTORY NO. सामग्री सूची संख्या को अपडेटिंग करना है	• Through thickness tension test (quality class Z15) shall be performed according to EN 10164 per lot, where 1 lot consists of up to 4 plates of the same thickness and melt.																														
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	(b) ASTM A 204, Gr B + Z15: For thickness upto 150 mm (with additional requirements)																														
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सामग्री सूची संख्या INVENTORY NO. A-3202		जांचकर्ता CHECKED BY A. RANJAN	19.04.2018																												

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप : हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP: HARIDWAR)		HW10564 पृष्ठ का Page 3 of 3	
सामग्री सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY NO.	• Through thickness tension test shall be performed according to JIS G3199 per lot, where 1 lot consists of up to 4 plates of the same thickness and melt. Aluminium content shall be determined and reported in inspection reports for all the above three grades. Elements not listed in table above shall not be intentionally added to the steel without the agreement of the purchase except for finishing the cast.			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	7.0 OUTER AND INNER QUALITY / NON DESTRUCTIVE TESTING: 7.1 SURFACE CONDITION: As per EN 10163-2, class B. Welding repair not permitted. 7.2 SCOPE OF INSPECTION: Following NDE shall be performed in delivery condition: - Verification inspection of all plates - UT inspection shall be according to EN10160. The criteria for registration and decision of quality class S1 according to EN 10160 (table 3) shall be applied and fulfilled; where 10 clusters of heterogeneities in the square of 1m x 1m with the highest density are the maximum acceptable number. 8.0 TEST CERTIFICATES: The supplier shall supply four copies of test certificates as per EN 10204, certificate 3.1 B, unless otherwise stated on the order. The test certificates shall bear the following: - BHEL References: - Specification number, Purchase order no. - Suppliers references: Name, emblem, material designation, melt no., heat treatment batch no. Results of testing - Melting process, melt analysis - Details of Heat-treatment performed, - Mechanical and Impact test results - U.T. Results - Confirmation of the verification inspection				
	9.0 MARKING: The marking of the materials shall be such that heat no., steel grade/specification & manufacturer name / identifications are legible. 10.0 CLEARANCE FOR DELIVERY: The total results of the tests carried out are the deciding factor for clearance for delivery. BHEL shall evaluate the total results taking into consideration the intended use of the material and examines accordingly the permissibility of deviation (if any) from the specified properties. The clearance however does not relieve the supplier of his responsibility for the hidden non-permissible defects, which are found later. 11.0 FREEDOM FROM DEFECTS: Plate shall be free from defects such as cracks, flacks, seams, segregation, inclusion and other defects which may affect the utility of the plates. 12.0 CROSS REFERRED STANDARDS: EN 10028, EN 10029 ASTM A204, JIS G3103, EN 10160, EN 10163, EN 10204, ASTM A770, EN10164, JIS G3199				
सामग्री सूची संख्या INVENTORY NO.	REV. NO. 02		निर्माणकर्ता WORKED BY	S.RANA	19.04.2018
			जांचकर्ता CHECKED BY	A. RANJAN	19.04.2018

Annexure - B (Specification)

Requirements	Standard	Applicable items for enquiry
Condition	Quenched & tempered	All enquiry items
Thickness & size	As per items in table above.	All enquiry items
Dimensions and tolerances	ASTM A 20 / A 20M	All enquiry items
Charpy V – notch impact test on longitudinal specimen (see Fig. – 1 of ASTM A 370)	ASTM A 20 / A 20M Impact test at – (minus) 46 degree Celsius: 16 Joules (min. for 1 (one) specimen), 20 Joules (min. average for 3 (three) specimens)	All enquiry items
Charpy V – notch impact test as per ASTM A 20 on transverse specimen (see Fig. – 1 of ASTM A 370)	ASTM A 20 / A 20M Impact test at – (minus) 36 degree Celsius: 16 Joules (min. for 1 (one) specimen), 20 Joules (min. average for 3 (three) specimens)	All enquiry items
Hardness test	Max. 350 BHN	All enquiry items
Through thickness tension test to Quality class Z35	DIN EN 10164	All enquiry items
Bend test	As per ASTM A 20	All enquiry items
Microstructure examination for inclusions: The examination of cleanliness must be performed in one plate per lot. It should be conducted after heat treatment. The microstructure must be uniform and free from porosity, excessive segregation and in- homogeneities. Inclusion content as per ASTM E 45 / Method A – 'Thin series' inclusions: Type A, B, C, D (Max. severity level 2) – 'Heavy series' inclusions: Type A, B, C, D (Max. severity level 1.5)	As per ASTM E 45 - 13	All enquiry items
Reduction ratio	3 : 1 (Reduction ratios as low as 2 : 1 are permitted if all the limitations of clause 5.3 of ASTM A 20 / A 20 are met along with through thickness tension test to quality Z35 as per DIN EN 10164)	All enquiry items
Ultrasonic testing	ASTM A578 / A578M (acceptance level shall be B)	All enquiry items
Inspection documents as per results of tests for: • Chemical analysis • Mechanical properties • Heat Treatment • NDT • Impact testing (transverse & longitudinal) • Reduction Ratio • Through thickness tension test • Micro structure examination report	As per ASTM A 20 and relevant standards as applicable.	All enquiry items


K. BHUVANADEVI
 Manager
 MM / RM / Material Planning
 BHEL, TRICHY - 620 014.



RANIPET

QUALITY ASSURANCE**TECHNICAL DELIVERY CONDITIONS****FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH
ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS**

TDC : RTG : 476

Rev. No. 01

DATE: 13.04.2013

TECHNICAL DELIVERY CONDITIONS**FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION
RESISTANCE APPLICABLE TO GATES & DAMPERS****PREPARED BY :**

DEPARTMENT	NAME & Designation S/Shri	SIGNATURE
QA	K. Jothi Arulanandam Dy.Mgr/QA	

REVIEWED BY:

DEPARTMENT	NAME & Designation S/Shri.	SIGNATURE
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QUALITY ASSURANCE	R. Arunachalam Manager/ QA	

APPROVED & ISSUED BY

DEPARTMENT	NAME & Designation S/Shri	SIGNATURE
QA	G. Balasubramaniam Sr.DGM (QA, BE & QC (Proc.))	

QUALITY ASSURANCE
TECHNICAL DELIVERY CONDITIONS
FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH
ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS

TDC : RTG : 476

Rev. No. 01

DATE: 13.04.2013

4	TDC : RTG : 476	01	13.04.2013	TECHNICAL DELIVERY CONDITIONS FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS	Clause No. 05 - NDT Standard Changed to ASTM A435 & A578 which is applicable to steel plates & steel special plates respectively instead of ASTM A 388 which is applicable to steel forgings. Clause No. 04 - Modified based on feedback received from MM Dept.
3	TDC : RTG : 476	00	11.08.2012	TECHNICAL DELIVERY CONDITIONS FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS	1. TDC : 511 WITHDRAWN. 2. ALL THE REQUIREMENTS OF ABOVE TDC ARE COVERED IN THE TDC : RTG : 476 AND NUMBERING SCHEME OF TDC CHANGED AS PER SYSTEM PROCEDURE 3. NEW CLAUSES LIKE, DIMENSIONAL TOLERANCE, SPECIAL FLATNESS, UT REQUIREMENTS, INSPECTION & TESTING REQUIREMENT ARE ADDED AND RELEASED AS ORIGINAL ISSUE.
2	TDC : 511	00	15.11.1995	TDC FOR CORROSION RESISTANT PLATES & SHEETS TO ASTM A 588 MATERIAL	1. TDC : RTA : 006 WITHDRAWN. 2. ALL THE REQUIREMENTS ARE COVERED IN THIS TDC AND NUMBERING SCHEME OF TDC CHANGED AS PER SYSTEM PROCEDURE. 3. TDC RELEASED AS ORIGINAL ISSUE.
1	TDC : RTA : 006	04	15.04.1993	TDC FOR CORROSION RESISTANT PLATES & SHEETS TO ASTM A 588 MATERIAL	ORIGINAL RELEASE
SL NO	TDC / CLAUSE NO	REV. NO.	EFFECTIVE DATE	TITLE OF DOCUMENT	REVISIONS MADE

HISTORY OF RECORD OF REVISIONS



QUALITY ASSURANCE
TECHNICAL DELIVERY CONDITIONS
FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH
ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS

TDC : RTG : 476

Rev. No. 01

DATE: 13.04.2013

1.0 SCOPE :

- 1.1 This Technical Delivery Conditions (TDC) specifies the requirements for supply of high strength low alloy plates with weathering or atmospheric corrosion resistance to various specifications mentioned below applicable to Gates & Dampers.
- 1.2 a) COR – TEN B or ASTM A 588 Gr. A
b) EN 10025-5 GR. S355J2W + N (Matl. No. 1.8965)
c) SAILCOR IRSM 41

2.0 MATERIAL & MANUFACTURE :

- 2.1 The Chemical and Mechanical properties of the material shall be as per respective specifications mentioned in clause 1.2 above.
- 2.2 The steel shall be fully killed with fine grain structure
- 2.3 Sheets and Plates shall be either hot rolled or cold rolled and shall be supplied in a Normalized condition.

3.0 DIMENSIONAL TOLERANCES :

Clause Sl. No.	Tolerance on	Allowable or Acceptable Limits
3.1.1	Thickness for Sheets & Plates of 1.6 mm to 12 mm	Class B of EN 10029 (Fixed Minus Tolerance)
3.1.2	Thickness for Plates of 16 mm and more	Class A of EN 10029 (for minus thickness tolerance depending on the nominal thickness)
3.2	Width	+ 20 to + 30 mm depends on thickness of the plates
3.3	Length	+ 50 mm for a length of 8000mm to 12000mm
3.4	Edge Camber – Length wise	Max 10mm permitted for a length of 8000 to 12000mm
3.5	Out of Squareness or diagonal difference	1% of Width size permitted

4.0 SPECIAL TOLERANCES ON FLATNESS – ON BOTH AXIS :

- 4.1 For Plate thickness of 5 mm to 8 mm – For a span length of 4000mm the maximum flatness permitted shall be 10 mm.
- 4.2 For Plate thickness of 10 mm to 12 mm – For a span length of 4000mm the maximum flatness permitted shall be 6 mm.
- 4.3 For Plate thickness of 16 mm and up to 25 mm – For a span length of 4000mm the maximum flatness permitted shall be 4 mm.
- 4.4 For Plate thickness of more than 25 mm – Flatness shall be as per the respective specification / standard.

 RANIPET	QUALITY ASSURANCE TECHNICAL DELIVERY CONDITIONS FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS	TDC : RTG : 476 Rev. No. 01 DATE: 13.04.2013
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5.0 NON DESTRUCTIVE TESTS :

- 5.1 The material shall be free from scales, laps, piping, cracks, laminar imperfection (single / multi plane inclusion bands or cluster) and any other injurious defects to raw materials.
- 5.2 All the plates of thickness 40mm and above (100%) shall be Ultrasonic Tested (UT) by Straight-Beam Ultrasonic Examination method for steel plates as per ASTM A-435 or ASTM A 578.
- 5.3 Supplier may choose any of the following method for UT and its corresponding acceptance norms, as applicable.

5.3.1 ACCEPTANCE NORMS:

5.3.1.1 As per clause no. 6.1 of ASTM A-435 (or)

5.3.1.2 As per clause no. 7.1 of ASTM A-578 (Acceptance Standard – Level A)

6.0 INSPECTION & TESTING

- 6.1 The verification of chemical composition shall be carried out by each cast wise or heat no wise and TCs shall be submitted for BHEL verification.
- 6.2 The verification of mechanical properties shall be carried out by each cast wise or heat no wise and testing units are as follows:
 - 6.2.1 One Tensile Test for every 40 MT of plates from each heat or part thereof.
 - 6.2.2 One Notched Bar Impact Test (3 Specimens) for every 40 MT of plates from each heat or part thereof.
- 6.3 In case of indigenous supplier the testing of materials shall be carried out either at works or at any of the NABL approved Labs, as per the clause no. 6.1 & 6.2 – subject to the Purchase Order Qty and test reports shall be shown to BHEL / BHEL's Authorized Inspection Agency (AIA) who will conduct the inspection at their works.
- 6.4 In addition to above clause no.6.3, the BHEL / BHEL's Authorized Inspection Agency (AIA) will witness the test, as per the clause no. 6.1 and 6.2 on random basis subject to 10% of offered qty – either at supplier's works or at NABL approved Labs and the physically witnessed test reports shall be sent to BHEL for verifications.
- 6.5 In case of foreign supplier the testing of materials shall be carried out either at works or at any of the internationally accredited Labs, as per clause no. 6.1 and 6.2 - 100% subject to the Purchase Order Qty and the test reports shall be sent to BHEL for their verification. These test reports shall be sent to BHEL well in advance – minimum 15 days advance prior to the actual dispatch of the materials from the country of origin.

 RANIPET	QUALITY ASSURANCE TECHNICAL DELIVERY CONDITIONS FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS	TDC : RTG : 476
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7.0 MARKING, LABELLING AND PACKAGING :

- 7.1 Each of sheet and plate shall be stenciled and hard stamped & bordered with white paint with the following details on top surface of the each plates.
- Purchase Order No.
 - Size & Quantity
 - Specification
 - Melt / Heat Number
 - Maker's / Mill's Identification / Logo / emblem
- 7.2 **Colour code :** One coat of yellow colour painting – minimum 100mm width shall be applied on each of stack of sheets and plates on both axis – on thickness side - viz., length wise and width wise at any preferable locations. If the plate is of single one then the yellow colour shall be applied through out the length on the thickness side.
- 7.3 The Coils and Sheets shall be coated with a suitable rust preventive fluid on both sides which can withstand marine corrosion and covered with polyethene sheets – thickness more than 20 microns shall be wrapped over the coil / sheet bundle, subsequently these bundles shall be again wrapped with HDPE sheets with suitable metal band at minimum four locations to avoid transit loss / damage to bundles.
- 7.4 The Plates shall be coated with rust inhibitive paint on both sides which can withstand marine corrosion and shall be bundled suitably for easy handling during shipment. Bundling of plates or delivering of plates separately both is acceptable.

8.0 INSPECTION DOCUMENTATION :

- 8.1 The supplier shall send the test certificates (in .pdf format) in English only to reach BHEL Ranipet minimum 15 days advance - before the physical receipt of materials at BHEL stores and it shall contain the following documents /information's:
- Purchase Order Number and Date
 - TDC Number with Rev. no and Date
 - Material Specification and Grade
 - Size, Number, Qty and Weight
 - Chemical Composition – Each Melt wise
 - Mechanical Properties – as per clause no. 6.0
 - Random Witness Test Report by BHEL / BHEL's AIA
 - Ultrasonic Testing Report for the plates > or = 40 mm thickness of plates
 - Heat Treatment Particulars if any.,

	QUALITY ASSURANCE TECHNICAL DELIVERY CONDITIONS FOR HIGH STRENGTH LOW ALLOY SHEETS AND PLATES WITH ATMOSPHERIC CORROSION RESISTANCE FOR GATES & DAMPERS	TDC : RTG : 476
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9.0 AUDIT CHECK AT BHEL :

- 9.1 BHEL reserves the right, at their discretion to carry out audit checks for chemistry, heat treated condition and mechanical properties on the delivered plates..
- 9.2 If any plate is found to be defective during audit check test as per clause 9.1 or during subsequent processing at BHEL, such plates delivered against the PO are liable for rejection and has to be replaced at the risk and cost of supplier.

10.0 End Use :

- 10.1 These Sheets & Plates are intended for use in Gates & Dampers which are coming under Boiler Auxiliaries Products.

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 Ranipet	Technical Delivery Condition(TDC) For Cold rolled corrosion resistant Coils/ sheets/ Plates	Doc Ref:	TDC:RTA:404
		Rev.No.	08
		Date:	10 01 2020
		Page No	Page 1 of 4

1. Scope

- 1.1 This TDC specifies the requirement of Cold rolled coils, sheets of CORTEN A/ASTM A 606 Type 4 and equivalent material specification & Plates of CORTEN A/ASTM A242 CORTEN B/ASTM A 588 GR A and equivalent material specification used in APH. Steel shall be in fully killed condition.

2. Chemical & Mechanical properties:

2.1 Chemical Properties (melt wise)

Specification	C	Mn	Si	P	S	Cu	Cr	Ni	V
CORTEN A/ ASTM A 242 & EQUIVALENT	0.12 Max	0.20- 0.50	0.25- 0.75	0.07- 0.15	0.05 Max	0.25- 0.55	0.35- 1.25	0.65 Max	--
CORTEN B / ASTM A588 GR A & EQUIVALENT	0.19 Max	0.80- 1.25	0.30- 0.65	0.04 Max	0.05 Max	0.25- 0.40	0.40- 0.65	0.40 Max	0.02- 0.10
ASTM A606 Type 4	0.12 Max	0.20- 0.50	0.25- 0.75	0.07- 0.15	0.04 Max	0.25- 0.55	0.35- 1.25	0.65 Max	--

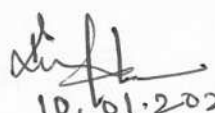
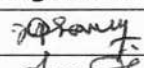
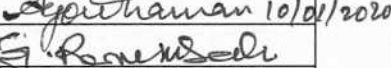
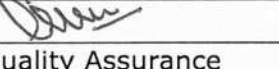
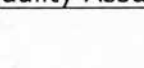
2.2 Mechanical Properties (melt wise/ HT batch wise)

Specification	Yield point (Mpa) Min.	T S (MPA)	% Elongation (Min) 5.65√ So
CORTEN A/ ASTM A 242 & EQUIVALENT	310	445	20
CORTEN B / ASTM A588 GR A & EQUIVALENT	≤16 thick 355 > 16 thick 345	490 – 630	20
ASTM A606 Type 4	310	450	22

- 2.3 Bend test shall be conducted for coils as per JIS 3125 SPA – C.

3. Supply Condition (Coils)

- 3.1 The coils shall be free from slit edges, scales and rust etc.
- 3.2 The tolerance thickness and width shall be as follows:
On width: Plus 0.00 to Minus 1.5 mm.
On Thickness: Plus 0.07mm to minus 0.00mm
- 3.3 The camber, out of flatness, bend shall be permitted only to the extent specified in the applicable standard.

Prepared by  10.01.2020	Reviewed by	Signature	Approved by  (Head/QA)
	Engineering (APH)		
	Purchase		
	MPL		
	QC/proc.		
Issued by : Quality Assurance			

	Technical Delivery Condition(TDC) For Cold rolled corrosion resistant Coils/ sheets/ Plates	Doc Ref:	TDC:RTA:404
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- 3.4 The ID of the coil shall be 500 mm $\pm$ 20mm, OD of the coil shall be 1500 mm (Max). Coil weight: 2 to 5 MT for coil width of $\leq$ 503 mm and 5-to10 MT for coil width > 503 mm.
- 3.5 Surface condition shall be cold rolled with matt finish with an oil coat to protect from rusting.

4. Supply conditions (Plates and Sheets)

- 4.1 Tolerance for the plates is as per ASTM A6.
- 4.2 Tolerance for thickness of sheets is plus 0.15mm to minus 0.00mm.
- 4.3 The plates / sheets shall be free from scales and rust.
- 4.4 Plates thickness 12 mm and above shall be ultrasonically tested and accepted as per ASTM A435.

5. Packing and preservation (for coils)

- 5.1 Before packing, the coils shall be given a sufficient coat as rust preventing fluid on the outer part to prevent rusting.
- 5.2 Three binding strips through eye of the coils at equal spacing shall tightly be secured.
- 5.3 Polythene sheet (thickness more than 20 microns) shall be wrapped over the coil.
- 5.4 Subsequently coil shall be wrapped with Hessian cloth.
- 5.5 ID rings shall be provided at both the sides of the coils to protect the coil edges.
- 5.6 Entire circumference of the coil shall be covered with GI sheet / painted sheet. Subsequently, both the faces shall be protected with metal sheets i.e. full coil is to be covered.
- 5.7 Three cross strapping shall be tightly secured through the ID of the coil at equal spacing.
- 5.8 Two more strapping along the periphery shall be provided ensuring tight strapping. The outer label containing details as in 7.1 shall be pasted on the packed OD of the coil.
- 5.9 A metal label containing the details as in 7.1 shall be secured at one of the outer cross strapping.

6 Packing and preservation (for sheets / plates)

- 6.1 The sheets shall be coated with a coat of rust preventive fluid on both sides and polythene sheets (thickness more than 20 microns) shall be wrapped over the sheet bundle, subsequently sheets shall be wrapped with Hessian cloth and suitable metal belt.
- 6.2 The plates shall be suitably bundled for withstanding the handling during loading and unloading.




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7. Identification

7.1 **For coils** the following details shall be stenciled with paint / pasted with sticker on the ID of the coils and **for sheets** on the bundle.

- a. Vendor's Name
- b. P.O. No.
- c. Coil No. / Sheet No. / Plate No.
- d. Specification & Grade.
- e. Net Weight.

For Plates, the details a, c, d, in clause 7.1 are to be hard stamped and bordered with paint and b & e are to be painted.

7.2 For coils two more labels containing all the details as in 7.1 shall be pasted, one on the eye and another on the outer surface of the packed coil.

8. Test certificate

8.1 The TC shall be in English and containing the following details.

- i. PO No.
- ii. Specification and Grade
- iii Coil No..
- iv. Nominal thickness and width.
- v. Chemical composition – melt wise.
- vi. Mechanical properties – melt wise / HT batch wise.
- vii. Gross and Net weight.

8.2 BHEL reserves the right to carry out test and reject the items wherever nonconformance to the contract is noticed.

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00	20 05 96	TDC RTA 004 / 00 is revised and re-numbered as RTA 404 Rev. 00
01	18 07 96	i. Cl.2.3. table and sketch modified ii. Cl. 6.2, Cl.7.9.1 modified iii. Cl.9.5 deleted.
02	27 11 96	i. Cl. 8.0 deleted ii. Cl. 9.0 re-numbered as 8.0
03	28 03 98	i. Cl. 2.2 min yield strength changed to 310 MPA in line with corten coil specification.
04	22 06 98	Scope of sheets taken out of the purview of the TDC. Please see TDC: RTA: 425/001 dt 22 06 98 for corten sheets.
05	10 05 02	TDC totally reviewed and revised. Requirements of TDC RTA 405 (Corrosion resistant plate) TDC RTA 425 (Corrosion resistant sheets) are merged to form this, TDC: RTA: 405,425 deleted.
06	07 02 03	Class 2.1 chemistry details revised. In addition, Cl. 3.2 modified. Clause 2.2-gauge length specified for %age of elongation. Cl. 3.4 revised based on supplied feedback. Cl. 7.1 modified for better clarity.
07	26 11 11	Cl. 1.1, 2.1 and 2.2: ASTM A 242 and ASTM A 588 GR A included.
08	09012020	ASTM A606 added based on Engineering feedback(Email dated:16.12.2019 and supplier confirmation through purchase email dated:08.01.2020)




 Ranipet	Technical Delivery Condition(TDC) FOR WELDABLE FINE GRAIN STEEL PLATES NORMALISED (P355NH OF EN 10028-3)	Doc Ref:	TDC:RTF:311
		Rev.No.	03
		Date:	15 05 09
		Page No	01 of 02

1.0 SCOPE

- 1.1 This TDC is applicable for weldable fine grain steel plates in normalized Condition to grade P 355 NH of EN 10028 Part 3.
- 1.2 Plates shall be supplied as per EN 10028-3. Only special requirement are specified in this TDC.

2.0 CHEMICAL& MECHANICAL PROPERTIES

- 2.1 Impact Test: This test shall be conducted at + 20° C.
- 2.2 Hot Tensile Test: This test shall be done at + 300°C
- 2.3 Through thickness Property: Z 35, test for reduction of area Perpendicular to plate's surface shall be done as per EN 10164 for Thickness > 15 and < 63 mm alone.

- 2.3.1 Chemistry shall be as per spec.

3.0 TOLERANCES

- 3.1 Tolerances on thickness shall be as per the table given below & other Tolerance shall be as per EN 10029.

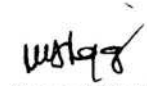
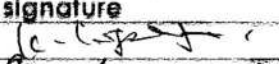
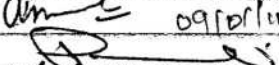
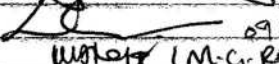
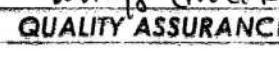
Thickness(mm)			Tolerances(mm)	
3	to	5	-0	to + 1.2
5	to	8	-0	to + 1.5
8	to	15	-0	to + 1.7
15	to	25	-0	to + 1.9
25	to	40	-0	to + 2.2
40	to	80	-0	to + 2.8

4.0 SOUNDNESS

- 4.1 All the plates shall be ultrasonically examined on surface and edge as Per EN 10160 and acceptance norms is E1 & S1 of EN10160.

5.0 PAINTING

- 5.1 Plates shall be painted with rust inhibitive painting to withstand marine corrosion
- 5.2 Melt No., plate no., specification and maker's emblem shall be hard stamped and stenciled on every plate.

Prepared by 	Reviewed by	signature	Approved by  (Head/QA) (M.C. RADASANICAR)
	Engg (Fns)		
	QC(Proc)		
	MPL		
	PUR		
	QA	 (M.C. RADASANICAR)	
Issued by QUALITY ASSURANCE			

 Ranipet	Technical Delivery Condition(TDC) FOR WELDABLE FINE GRAIN STEEL PLATES NORMALISED (P355NH OF EN 10028-3)	Doc Ref:	TDC:RTF:311
		Rev.No.	03
		Date:	15 05 09
		Page No	02 of 02

6.0 SURFACE REQUIREMENTS:

- 6.1 Surface conditions shall be class B and repair Condition shall be class B3 as per EN 10163-2.

7.0 INSPECTION & TEST CERTIFICATE

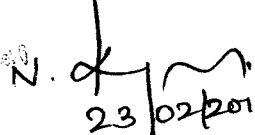
- 7.1 The items manufactured within India, shall be subjected to inspection by BHEL or authorized agency.
- 7.2 Test certificate for the following properties shall be submitted as per 3.1 Of EN 10204.

a	Chemistry	Melt wise
b	Tensile properties	Melt wise and heat treatment batch wise.
c	Impact properties	
d	Internal soundness	As per cll no 4.1
e	Elevated temperature (+ 300 deg C) yield strength)	As per cl 2.2

Rev No	Clause revised	Revision made	Date
00	--	Original issue	29 05 95
01	5.0	Amendment requirements included & painting requirements added	17 01 00
02	--	Totally modified	02 05 02
03	5.1,5.2	Modified based on discussions	15 05 09

QUALITY ASSURANCE		
Amendment to Quality Work Instruction(QWI):Technical Delivery Conditions(TDC)		
Amendment No: A1		Date:20.02.2017
TDC No: TDC: R :T:G053	Rev : 01	Dated:22/07/1993
Title: TDC For Austenitic stainless steel plates		

Clause No:	Details of Amendment	Basis for Amendment
Refer page 3 of 3, Clause 1.1	<u>Clause 1.1 as existing:-</u> The Technical delivery condition specifies the requirements of Austenitic stainless steel plates and sheets to the specifications types 304, 316 of ASTM A240 and type 310 of ASTM A 167. <u>Clause 1.1 is amended as follows:-</u> The Technical delivery condition specifies the requirements of Austenitic stainless steel plates and sheets to the specifications types 304, 316, S32205(Duplex stainless steel) of ASTM A240 and type 310 of ASTM A 167.	Request mail from Engineering EDC-G&D.

Prepared By	Reviewed By	Approved By
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BHARAT HEAVY ELECTRICALS LIMITED
QUALITY ASSURANCE & CONTROL
RANIPET 632 406

TDC:R:T:G 053/01
PAGE 01 OF 03
DATED:22-07-93

TECHNICAL DELIVERY CONDITIONS
FOR

AUSTENITIC STAINLESS
STEEL PLATES

APPLICABLE SPECIFICATION

TYPES 304,316 OF ASTM A 240
AND TYPE 310 OF ASTM A 167

DEPARTMENT	NAME	SIGNATURE
EDC/AQCS	B BHARATHARAJAN	
PURCHASE	S GURUSWAMY	
MATERIAL PLANNING	N BALASUBRAMANIAN	
QUALITY CONTROL	H ANANTHANARAYANAN	
QUALITY ASSURANCE	V. JAYARAMAN	

ISSUED BY

QUALITY ASSURANCE

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Dt.22 07 93

RECORD OF REVISIONS

REV NO.	CLAUSES REVISED	DATE
00	Original Issue	26 08 87
01	Controlled copy No. and record of revision Pages added	22 07 93

1.0 SCOPE

1.1 The Technical delivery condition specifies the requirements of Austenitic stainless steel plates and sheets to the specifications types 304, 316 of ASTM A 240 and type 310 of ASTM A 167.

1.2 Th size, quantity, grade and other details shall be as per the Purchase order.

2.0 TECHNICAL REQUIREMENTS

2.1 The material shall meet the requirements of the specification in all respects of steel making, chemistry, mechanical properties, heat treatment and dimensional tolerances.

3.0 MARKING

3.1 Sheets upto 6mm thickness are to be supplied with steel cover in bundles. The top and bottom sheets shall be stenciled with the information as called for in 3.3.

3.2 Each plate of thickness more than 6mm shall be hard stamped and bordered with white paint with the information as called for in 3.3.

3.3 The following information shall be furnished on the sheet/plates as listed in 3.1/3.2.

- | | |
|--------------------------|---------------------|
| a)Purchase order number | b)Size and quantity |
| c)Specification | d)Melt Number |
| e)Maker's identification | |

4.0 PACKING

4.1 The sheets shall be suitably packed with steel covers, facilitating easy handling at harbour, shipping, stores etc.

5.0 TEST CERTIFICATE

5.1 The supplier shall furnish the test certificate in English. It shall contain the following information:

- a) Purchase order number and date
- b) TDC number
- c) Specification and grade
- d) Size, number and weight
- e) Chemical composition - Meltwise
- f) Mechanical properties-Meltwise/heat treatment batchwise
- g) Dimensional report.

5.2 BHEL may choose to inspect the manufacturing or testing.

5.3 BHEL reserves the right to carry out tests and to reject the items wherever nonconformance to the contract is noticed.

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for **Eng no: 1002000065 dt 19.09.2020 for Alloy steel and Stainless steel Plates & Sheets**

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to

demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

S. Anand
 For & On behalf of the Principal
एन. आनंद कुमार S. ANAND KUMAR
वरिष्ठ उप महाप्रबंधक
Sr. Deputy General Manager
सामग्री प्रबंधन / आरएम
Materials Management / RM
 (Office Seal)
बीएचईएल, तिरुचि / BHEL, Trichy - 620 014

For & On behalf of the Bidder/
 Contractor
 (Office Seal)

Place Trichy - 14.
 Date _____

Witness: A. Sudheer
 (Name & Address) A. SUDHEER,
BHEL, TRICHY.
SUDHEER APPIRE DDYGARI
Senior Engineer / Purchase
Materials Management / Steel
BHEL, TRICHY - 620 014.

Witness: _____
 (Name & Address) _____