

**ANNEXURE B - PACKAGE DETAILS**

<b>Sl.No</b>	<b>Description</b>	<b>Nos</b>	<b>Qty MT)</b>	<b>QUOTED/ NOT QUOTED</b>
1	PL. 40 X 2000 X 5000 MM - 8 Nos / S355J2 and as per TDCAT:4. Rev.01	<b>8</b>	25.12	
2	PL. 85 X 2000 X 5000 MM - 4 Nos / S355J2 and as per TDCAT:4. Rev.01	<b>4</b>	26.692	
3	PL. 100 X 1800 X 5400 MM - 32 Nos / S355J2 and as per TDCAT:4. Rev.01	<b>32</b>	244.16	
<b>Package (S355J2 Plates and as per TDCAT: 4 Rev.01)</b>			<b>295.972</b>	

ANNEXURE-A

**ENQUIRY CONDITIONS FOR SUPPLY OF PLATES TO SPECN S355J2**

**Note: This Annexure has to be mandatorily filled & signed by the manufacturer (or) mill and submitted 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).**

<b>Sl No</b>	<b>BHEL Requirements</b>	<b>Supplier Comments (Acceptance or otherwise for each point to be given)</b>
1.	<b>Material specification:</b>	
	<b>Specification</b>	<b>Technical delivery Condition (TDC)</b>
	CS Plates to the specn S355J2	As per TDCAT:4. Rev.01
	a) Supply of plates shall be strictly as per TDC for the grade as mentioned above. Confirm your point wise acceptance to the respective TDC for all the clause.	
	i. S355J2 - Confirm your point wise acceptance to TDCAT:4. Rev.01	
	b) <b>In case of deviation, pls mention the specific clause no of TDC (Technical delivery conditions) and the specific deviation against it.</b> Pls avoid mentioning any additional points other than what is required as per the TDC. For deviations separate sheet may also be attached.	
	c) All plates shall be supplied in trimmed edge condition only. Pls confirm	
	d) Supplier shall submit their QMS documents (QA/Quality manual) for BHEL/NPCIL review along with the offer	
2.	<b>Material Description</b>	
	a) Size & Qty: As per enquiry. (ref .Annexure B)	a)
	b) Quantity tolerance: Nil and ordered no of pieces to be supplied.	b)
	<b>c) Tender evaluation:</b>	
	1. Tender will be evaluated in Package basis as per as per Annexure-B. All items in the each package are to be quoted without fail, else offer will not be considered. Pls confirm your acceptance to package evaluation as per Annexure-B.	1.
	2. Offers will be considered for price bid opening subject to the fulfilment of PQR requirement, techno-commercial suitability and approval of vendor by BHEL & NPCIL	2.
	<b>Note:</b> 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.	
d) No of pieces shall be indicated in invoice/TC.	d)	
e) Invoicing shall be on theoretical weight basis only with density factor of, <b>7.85gm/cc.</b> <b>Supplier shall quote only on theoretical weight basis and deviation not acceptable</b>	e)	
3.	<b>Inspection:</b>	
	a. <b>Indigenous :</b> Inspection agency for Indigenous supply are BHEL & NPCIL	a.
4.	<b>Delivery Terms:</b>	
	The offer shall clearly indicate delivery period in fixed number of weeks/Months from the date of Purchase Order and our required delivery schedule is <b>120 days</b> from PO and approved QAP & test procedures. <b><u>Supplier shall take a note of the same and specifically confirm the delivery schedule.</u></b> <b>Suppliers shall quote shortest possible delivery and shall avoid offering longer delivery period.</b> 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.	
5.	<b>Pre-qualifying requirement:</b>	
	In addition to the TDC requirements, suppliers shall meet the Pre-Qualification Requirements for the above procurement 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.	
6.	<b>List of Documents to be submitted along with offer (only offer of manufactures will be considered)</b>	

	a. Pre-qualifying requirements are as per <b>Clause- 5</b> of this annexure and submit the relevant documents as per the same.	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 <b>Clause-4. Mandatory requirements (Supplier must submit the below mentioned documents or else offer will be rejected):</b> i. Indigenous supplier shall submit Audited copies of annual reports (Balance Sheet), Profit & Loss statement for the last four years (or from the date of incorporation whichever is less) and GST Certificate	b.
7.	<b>Offer Submission:</b>	
	<b>7.1 Indigenous:</b>	
	1. Submit your FIRM competitive offer rate per MT (basic price & freight) with best possible delivery on FOR BHEL-Trichy basis ONLY. 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.	
	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/Warrantee 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	
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>Transit insurance in the scope of supplier only.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol>	
8.	<b>Payment terms:</b>	
	<b>Indigenous</b>	
	a) Payment term is 100% direct EFT payment after 60 days from the date of receipt and acceptance of materials.	a)
9.	<b>Acceptance of materials supplied:</b>	
	<ol style="list-style-type: none"> <li>The supply shall strictly as per the specifications in the tender /purchase order.</li> <li>Delivery of the ordered items as per the delivery terms in the Purchase Order does not automatically constitute acceptance of the delivered items.</li> <li>Acceptance of the materials supplied will be based on the inspection and certification documents by the supplier as stipulated in the Purchase order. However, BHEL reserves the right to test the material supplied, if required, at BHEL Lab or any other approved/accredited lab and the result will be binding on the supplier.</li> <li>The acceptance or otherwise of the delivered items will be separately communicated to the supplier by BHEL either through B2B portal or through e-mail within 120 days from the delivery of items or delivery of the required test certificates /other documents whichever is later.</li> <li>In case of rejection of the delivered items, either part or full, the vendor shall replace the rejected items as per the specification in the Purchase order/tender at their cost within 60 days of communication of rejection to the supplier. The supplier shall be given maximum two opportunities to replace the rejected items.</li> <li>After the clearance of the 1<sup>st</sup> lot, in case of rejection of the delivered items, either part or full, if the supplier fails to replace the rejected items within 90 days of communication of the rejection, the same shall be treated as failure to execute the contract and actions as per the Guidelines for Suspension of Business Dealings with Suppliers /Contractors available in the webpage: <a href="http://www.bhel.com/vender_registration/vender.php">http://www.bhel.com/vender_registration/vender.php</a>. would be taken against such supplier.</li> </ol>	
10.	<b>Liquidated Damages</b>	
	<ol style="list-style-type: none"> <li>Time is the essence of the contract.</li> <li>The ordered items shall be delivered as per the delivery period mentioned in the Purchase Order.</li> <li>In case the supplier supplies the ordered items beyond the delivery period specified, Liquidated Damages -LD - as detailed below shall be will be levied from the supplier without prejudice to any other relief /compensation available to BHEL, Tiruchirappalli under any other condition of the contract/applicable legal provisions.</li> <li>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.</li> </ol>	
	<b>NOTE:</b> 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).	
	<b>For Info. :</b>	<ul style="list-style-type: none"> <li>☞ <b>Imports:</b> CFR order- LD will be reckoned from B/L date</li> <li>☞ <b>Indigenous:</b> FOR order - LD will be reckoned from the date of LR/RR/BL / Invoice /eway bill whichever is later</li> </ul>
11.	Service charges, commission charges and any other incidentals will NOT be paid extra.	

12.	Indicate the Mill (Name, Location) & Country of origin	
13.	Offer validity of 90 days from Part-I bid opening date is required. Pls confirm specifically	
14.	<b>Cartel Formation</b>	
	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.	
15.	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	
16.	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.	
17.	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.	
18.	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	
19.	BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.	
20.	<b>Documents required for Indigenous suppliers</b>	
	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.	
21.	<b>Risk Purchase Clause:</b>	
	<ol style="list-style-type: none"> <li>1. In the event of any successful Tenderer's failure to fulfil any of the tender / Contract obligations including supply of whole or any part of the ordered items as per Contract / Agreement, BHEL has the right to terminate the contract and purchase from elsewhere ,at the risk and cost of the defaulted supplier, either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated in the contract or if the same were not available, the best and nearest available substitute thereof. The supplier shall be liable for the additional expenditure/difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the Purchase order/contract.</li> <li>2. The decision of BHEL with regard to the additional expenditure / difference in cost and consequential losses incurred by BHEL shall be final and binding on the supplier.</li> <li>3. The amount recoverable under risk purchase shall be recovered from the defaulted supplier in all or any of the following manners: <ol style="list-style-type: none"> <li>i) From dues available in the form of Bills payable to defaulted supplier, SD, BGs against the same contract.</li> <li>ii) from the dues payable to defaulted supplier against other contracts in the same Region/Unit /any other region/unit</li> <li>iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier.</li> </ol> </li> </ol>	
22.	<b>Fraud Prevention Policy</b>	
	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 <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	
23.	<b>In the event of Force Majeure:</b>	
	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	a.

	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.	
	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.
24.	<b>Authorisation for participation in EPS portal through DSC</b>	
	<b>a. E-Tender Participation requirements</b>	
	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 ( <a href="https://eprocurebhel.co.in">https://eprocurebhel.co.in</a> ). 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.	
	<b>DSC Authorisation</b>	
	Pls intimate the authorised person name, Mail ID for registering DSC with us to participate in E-Tenders.	
25.	<b>Execution of the Order</b>	
	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. For Indigenous Suppliers the Notice period of Inspection shall be 14 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.	
26.	<b>Reverse Auction</b>	
	BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on <a href="http://www.bhel.com">www.bhel.com</a> ) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.	
27.	<b>Evaluation of offer</b>	
	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.	

	<p>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.</p>	
	<p>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.</p> <p>e. Incase 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).</p> <p>f. Ranking will be done accordingly, BHEL's decision in such situations shall be final and binding.</p>	
	<p>g. 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.</p>	
28.	<b>General terms</b>	
	<p>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.</p>	
	<p>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 warrantee 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.</p>	
	<p>3. All uploaded/submitted documents against this tender shall be signed in each page and sign shall be by principal / Mill.</p>	
	<p>4. Supplier shall mention the HSN code for each item quoted by them in the offer.</p>	
	<p>5. 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.</p>	
	<p>6. Any clarification regarding tender shall be done before Part -I due date itself through EPS portal alone and in case of immediate non-availability of DSC, clarifications can be sought through the following mail id <a href="mailto:rmega@bhel.in">rmega@bhel.in</a>. The above mail id's are provided for initial clarification purpose only and no further correspondences shall be entertained through <a href="#">these</a> mail ids.</p>	
	<p>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.</p>	
	<p>8. Applicable INCO term for this tender is INCOTERMS 2010</p>	
	<p>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.</p>	
	<p>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.</p>	
	<p>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</p>	

	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, <a href="https://eprocurebhel.co.in">https://eprocurebhel.co.in</a>																						
	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. <b>Set-off Clause:</b> 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.																						
	18. 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.																						
	19. Indigenous suppliers should submit the prices in Indian Rupees only.																						
	20. 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.																						
	21. In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes. Incomplete documents / offer will be rejected.																						
29.	<p><b>INTEGRITY PACT:</b> 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.</p> <p>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.</p> <table border="1"> <thead> <tr> <th>Sl.No</th> <th>IEM</th> <th>Email</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Shri Arun Chandra Verma, IPS (Retd.)</td> <td><a href="mailto:acverma1@gmail.com">acverma1@gmail.com</a></td> </tr> <tr> <td>2</td> <td>Shri Virendra Bahadur Singh, IPS (Retd.)</td> <td><a href="mailto:ybsinghips@gmail.com">ybsinghips@gmail.com</a></td> </tr> </tbody> </table> <p>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.</p> <p>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.</p> <p><b>Note:</b> 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:</p> <p><b>Details of contact person(s):</b></p> <table border="1"> <tbody> <tr> <td>Name</td> <td>P Samuthirapandi</td> <td>R Meganathan</td> </tr> <tr> <td>Dept</td> <td>AGM/MM/BOI&amp;ATP</td> <td>Manager / Purchase/ATP</td> </tr> <tr> <td>Address</td> <td>Bldg No:24, BHEL Trichy</td> <td>Bldg No:24, BHEL Trichy</td> </tr> <tr> <td>Phone</td> <td>0431 -2574074</td> <td>0431 -2575458</td> </tr> </tbody> </table>		Sl.No	IEM	Email	1	Shri Arun Chandra Verma, IPS (Retd.)	<a href="mailto:acverma1@gmail.com">acverma1@gmail.com</a>	2	Shri Virendra Bahadur Singh, IPS (Retd.)	<a href="mailto:ybsinghips@gmail.com">ybsinghips@gmail.com</a>	Name	P Samuthirapandi	R Meganathan	Dept	AGM/MM/BOI&ATP	Manager / Purchase/ATP	Address	Bldg No:24, BHEL Trichy	Bldg No:24, BHEL Trichy	Phone	0431 -2574074	0431 -2575458
Sl.No	IEM	Email																					
1	Shri Arun Chandra Verma, IPS (Retd.)	<a href="mailto:acverma1@gmail.com">acverma1@gmail.com</a>																					
2	Shri Virendra Bahadur Singh, IPS (Retd.)	<a href="mailto:ybsinghips@gmail.com">ybsinghips@gmail.com</a>																					
Name	P Samuthirapandi	R Meganathan																					
Dept	AGM/MM/BOI&ATP	Manager / Purchase/ATP																					
Address	Bldg No:24, BHEL Trichy	Bldg No:24, BHEL Trichy																					
Phone	0431 -2574074	0431 -2575458																					

	E-Mail	pspanidi@bhel.in	<a href="mailto:rmega@bhel.in">rmega@bhel.in</a>
30.	<p><b>Special Provisions for Micro and Small Enterprises (MSE) bidders registered as per MSME act:</b> (Subject to participating MSE vendors meeting the tender requirements of BHEL)</p> <p>a) As per Gazette Notification no. S.O. 2119(E) dated 26.06.2020 issued by Ministry of MSME applicable/existing Micro and small suppliers are requested to get registered with Udyam Registration portal and share us the Udyam registration No. along with Udyam registration certificate. MSE suppliers can avail the intended benefits only if they submit Udyam registration certificate along with the offer.</p> <p>b) 25% of the tendered quantity is earmarked for MSE suppliers in this tender, subject to participating MSE Vendors should meet the tender requirements of BHEL. In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE vendor within the "L1+15% price band", the supply shall be shared proportionately.</p> <p>c) In the event of Non MSE supplier becoming L1 and MSE supplier quotes within the price band of L1+15% and it is not possible to split the tendered quantity on account of reasons like customer contract requirement/technical requirements, then 100% of the quantity will be offered to MSE suppliers subject to acceptance of L1 price by MSE supplier.</p> <p>d) Counter offering of L1 rate will not be made with any MSE vendor whose quoted rate is more than the price band of L1+15%.</p> <p>e) Payment to MSE vendor will be as per the applicable provisions of the MSMED Act 2006.</p> <p>f) If L1 offer is from a Micro / Small enterprise, the 25% earmarking provision is not applicable.</p> <p>g) Out of the 25% tendered quantity reserved for MSE suppliers, 6.25% shall be earmarked for procurement from MSE owned by SC/ST entrepreneurs. Apart from this 3% shall be earmarked for procurement from MSE owned by Women entrepreneurs.</p> <p>h) In case of any change in the MSE status of the bidder, it shall be the responsibility of the bidder to notify the change as a part of the bid document. If at a later date it comes to the knowledge of BHEL, that the change in the status has not been intimated by the bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the bidder as per the procurement policy of BHEL.</p> <p>i) MSE suppliers can avail the intended benefits if they submit Udyam registration certificate along with the offer. In line with gazette notification No. S.O. 2347(E) dated 16.06.2021 regarding extension of validity of earlier MSME certificates (i.e. UAM, EM-II etc.) upto 31.12.2021, MSE suppliers can also avail the intended benefits if they submit Valid EM-II certificate or valid NSIC certificate or UAM certificate along with attested copy of a CA certificate (Format enclosed along with the tender) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non-submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. Documents should be notarized or attested by a Gazetted officer. However, credentials of all MSE suppliers will be verified before considering the intended benefits for MSE suppliers at the time of tender evaluation. Non-submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.</p>		
31.	<p><b>Preference to Make in India:</b> 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 I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent Orders issued by the respective 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.</p>		
32.	<p><b>Restrictions for Procurement from a country sharing its land border with India</b> For this procurement, Public procurement order dated 23.07.2020 regarding restrictions under rule 144 (xi) of general financial rules 2017 and clarification dt 08.02.2021 from DoE is applicable. In case of subsequent Orders issued, the same shall be applicable even if issued after issue of this NIT.</p>		
33.	<p><b>Patent Right:</b> 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 &amp; 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</p>		

	same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.
34.	<p><b>Resolution of Disputes</b></p> <p>The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the contract/ tender which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.</li> <li>2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.</li> </ol> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Annexure X to this Enquiry Conditions.</p> <p>The Annexure together with its appendices will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in these Enquiry Conditions</p> <p>Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract ; or , in any manner touching upon the Contract, then, either Party may , by a notice in writing to other Party refer such dispute or difference to sole arbitration of an arbitrator appointed as per the Arbitration and Conciliation Act, 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force .</p> <p>The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties. Subject as aforesaid, the provision of Arbitration &amp; Conciliation Act 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.</p> <p>The seat of arbitration shall be Trichy, Tamil Nadu, India.</p> <p>The cost of arbitration shall be borne as per the award of the Arbitrator.</p> <p>Subject to arbitration in terms of clause above, the Courts at Trichy, Tamil Nadu, India shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.</p> <p>Notwithstanding the existence or any dispute or difference and/or reference for the arbitration, the vendor shall proceed with and continue without hindrance the performance of its obligation under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.</p> <p><b><u>In Case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:</u></b></p> <p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts <i>inter se</i> and also between CPSEs and Government Departments/Organizations (Excluding disputes concerning Railways, Income Tax, Customs &amp; Excise Departments, such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013 –DPE (GM)/FTS-1835 dated 22-05-2018.</p>
35.	<p><b>Suspension of Business Dealings with Suppliers/ Contractors</b></p> <p>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 <a href="http://www.bhel.com">www.bhel.com</a>.</p> <p><b>Integrity commitment, performance of the contract and punitive action thereof:</b></p> <p><b>1. Commitment by BHEL</b></p>

<p>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</p>	
<p><b>2. Commitment by Bidder/ Supplier/ Contractor</b></p>	
a	<p>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.</p>
b	<p>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</p>
c	<p>The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms &amp; conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL</p>
<p>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, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on <a href="http://www.bhel.com">www. bhel.com</a> and/or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: <a href="http://www.bhel.com/vender_registration/vender.php">http://www.bhel.com/vender_registration/vender.php</a></p>	
36.	<p><b>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.</b></p>
37.	<p><b>Caution:</b></p> <ul style="list-style-type: none"> <li>➤ 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.</li> <li>➤ 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.</li> </ul>
38.	<p>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 <a href="https://eprocurebhel.co.in/">https://eprocurebhel.co.in/</a> within 14:00 Hrs of the due date of this tender. The bidder would be required to register on the e-procurement market place <a href="https://eprocurebhel.co.in/">https://eprocurebhel.co.in/</a> 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.</p>
<p>On behalf of BHEL</p> <p><b>MEGAN</b> Digitally signed by <b>ATHAN R</b> MEGANATHAN R Date: 2022.05.21 17:17:06 +05'30'</p>	
<p>To be filled &amp; Signed by Original Manufacturer/Mill Name of the mill / Principal: Signature: (Affix Seal)</p>	

	<p>(All conditions were read &amp; clearly understood and agreed in totality with the mentioned deviations only)</p>
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**SPECIAL CONDITION ANNEXURE - A**

**PR No. 131443561**

1. The indented items are required for NPCIL/Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP)-1&2 and Fleet 700MWe Steam Generator Project.
2. Two-part bid. Open tender to be floated.
3. End Use and End User Certificates will not be provided.
4. Supply of structural steel plates – ASME Sec III-NF Class-1 support, as per DIN EN 10025-2: S355 J2 +N and technical specification TDCAT:04 Rev 01. Supplier to confirm.
5. Supplier to give clause by clause confirmation for all clauses mentioned in TDCAT:04 Rev 01. Deviations shall be mentioned in the offer itself.
6. For offer acceptance suppliers should have the capability and experience to produce structural steel material as per EN 10025. Supplier should have supplied the structural steel material (EN 10025) for nuclear application / Nuclear Power Corporation of India Limited / any Thermal Power station/ Industrial boiler application.
7. **As a documentary proof of supplier's experience** in manufacturing the structural steel material as per EN 10025, supplier shall submit the unpriced P.O., Signed Test Certificates (Signed by Customer/TPI), Shipping release document/ supply invoice copy with specifications and details of customer shall be submitted along with the offer.
8. Due to stringent quality requirements, offers from traders/dealers/distributors/stockist shall not be entertained and will not be considered for evaluation.
9. Offers received will be evaluated by BHEL and NPCIL. Final acceptance of the offers will be based on NPCIL recommendation.
10. Supplier shall submit their QA Manual/Quality Manual in line with ISO 9001 (Latest version) for review and acceptance by BHEL.
11. Supplier has to submit the following Quality documents for review and approval from BHEL and NPCIL.
  - Quality Assurance Plan(QAP) in the format provided as “Sample Format of QAP “.
  - Manufacturing Process Plan(MPP) & Heat Treatment Plan (HT Plan)
  - Material Sampling and Testing Plan(MSTP) & Preservation and Packing Plan
  - NDE Procedures and Technique sheets
  - Report Formats
12. The actual production of material is permitted only after approval of all documents required for manufacturing / inspection / testing activities by BHEL and NPCIL.

*N.K.*  
13/05/2022

Engineering  
**NITHIN K. KRISHNAN**  
Sr. Product Engineer  
Engg. / Advanced Technology Products  
BHEL, TRICHY - 620 014.

*N.R.*  
13/05/2022

Quality Assurance  
O.R. NITHIN  
Deputy Manager  
Quality Assurance  
BHEL, TRICHY - 620 014

*Ashwin*  
13-05-2022

Material Planning  
**ASHWIN KUMAR MAROLI**  
Manager - MP & SC  
Advanced Technology Products  
BHEL, TRICHY - 620 014.

**SPECIAL CONDITION ANNEXURE - A**

**PR No. 131443561**

13. Inspection agency for imports are "BHEL" & "NPCIL or NPCIL approved third party inspection (TPI agency)". Inspection agency for indigenous supply are BHEL and NPCIL.
14. Chemical and mechanical tests shall be carried out in In-house labs or Labs meeting the requirements as per National/ International standards like ISO 9001 or ISO/IEC 17025 etc. or Government approved labs.
15. Supplier shall submit Test Certificates of finished material for our review. Dispatch clearance will be given after acceptance of Test Certificates by BHEL & NPCIL.
16. Documentation: Three sets of documents containing (i.) Test Certificates and respective test reports (ii.) copies of the approved quality documents and test procedure, (iii.) design change requisitions (if any) and (iv.) Drawing etc. to be provided along with the supply of items.
17. Tolerance in total weight to the extent of +/- 5% is acceptable in order to meet specific requirement given in PR line item as the weight is based on theoretical calculations.
18. Supplier to submit his technical and commercial bid conforming to the above points as given in this annexure.

\*\*\*\*\*

*Nithin*  
13/05/2022

Engineering

**NITHIN K. KRISHNAN**  
Sr. Product Engineer  
Engg. / Advanced Technology Products  
BHEL, TRICHY - 620 014.

*N.R. Nithin*  
13/05/2022

Quality Assurance

O.R. NITHIN  
Deputy Manager  
Quality Assurance  
BHEL, TRICHY - 620 014

*Ashwin*  
13.05.2022

Material Planning

**ASHWIN KUMAR MAROLI**  
Manager  
Advanced Technology Products  
BHEL, TRICHY - 620 014.

**SPECIAL CONDITION ANNEXURE - B**

**PR No. 130939811**

Requirements of Financial Soundness:

1. Import suppliers shall submit latest report from any reputed third party business rating agency like Dun &Bradstreet, Credit reform etc.
2. Indigenous supplier shall submit audited copies of annual reports (Balance Sheet), Profit & Loss statement for the last three years (or from the date of incorporation whichever is less) and GST Certificate.

This Special Condition Annexure-B (Financial Soundness) along with Special Condition Annexure-A (Technical Qualification requirements) together will form the Pre-Qualification requirements for this PR.

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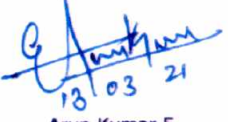
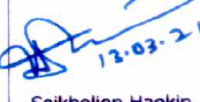

ASHWIN  
KUMAR  
MAROLI

Digitally signed  
by ASHWIN  
KUMAR MAROLI  
Date:  
2022.03.05  
15:30:02 +05'30'

→ BHEL Tmct

**Specification for Steel Plates for Girder beam of SG Supports (Class-1 support as per ASME Sec III-NF) - DIN EN 10025-2: S355 J2 +N**

(W.O: D157 - D160 – 700MWe SG)  
 NPCIL Project: GHAVP-1&2  
 (NPCIL PO No: CMM/FTP/10-33-1-1158/e-PO/22549 dated 08/03/2018)

Rev No	Date	Reviewed				Approved
		Prepared QA	QA	Engg/ATP	MP/ATP	QA
00	06.11.2019	Nithin.O.R	S.Lakshmi	S.Lakshminarasimhan	R. Ananthkrishnan	JVV Aruna Kumar
01	13-03-2021	 Nithin.O.R	 Arun Kumar E	 Seikhohien Haokip	 S.Lakshmi	S.Lakshmi

Rev 00: First Issue  
 Rev 01: Modified: Heading, Clauses:1.0, 2.0, 3.0, 4.0, 5.0, 7.0 & 9.2 Modified & Added: Clauses: 9.1, 11.0 & "Annexure-1 of TDC:AT03" for NDE requirements.

**न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड**  
**NUCLEAR POWER CORPORATION OF INDIA LTD.**


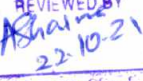
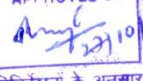
अनुमोदित / APPROVED

टिप्पणी के अनुसार अनुमोदित / APPROVED AS NOTED

सविस्तर को आगे बढ़ाएं / रोकें।  
**PROCEED WITH / HOLD FABRICATION**

अतिरिक्त ट्रांसपेरेंसी एवं प्रिंटिंग भेजें।  
**SEND FINAL TRANSPARENCIES & PRINTS**

संशोधन करें एवं अनुमोदन के लिए पुनः प्रस्तुत करें।  
**REVISE AND RESUBMIT FOR APPROVAL**

जांचकर्ता CHECKED BY  15/09/21	समीक्षकर्ता REVIEWED BY  22/10/21	अनुमोदनकर्ता APPROVED BY  22/10/21
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निर्माता जिम्मेदार कार्यों का अनुमोदन आपूर्तिकर्ता को विनिर्देशनों के अनुसार करने से मुक्त नहीं करता।  
 Responsibility of the work to be done does not relieve the supplier of the quality of supply according to specifications.



## 1.0 MATERIAL

Material Specification : DIN EN 10025-2: S355 J2 +N  
Additional Requirements: As listed below (Supplementary to the above material specifications)  
Size and Quantity : As per Purchase Order (PO)

This specification is intended for ASME Sec III-NF Class-1 Supports material. In case of any conflict between standard/code & requirements in this specification, the requirements which are most stringent will govern. However, for UT, requirements of this TDC will govern.

## 2.0 CHEMICAL COMPOSITION & PROCESS

- All plates shall be of Fully Killed steel.
- Heat analysis shall be as per DIN EN 10025-2: S355J2+N
- Material shall be melted to fine grain melting practice & Vacuum Degassed. The grain size shall be of  $\geq 5$  at 100X magnification
- C<0.22%(Ladle) & C<0.24%(Product) for Plates having nominal thickness > 100 mm.
- C.E < 0.43%

## 3.0 SUPPLY CONDITION (DELIVERY CONDITION):

- DIN EN 10025-2/S355 J2 +N: Delivery condition shall be Normalised Condition (+N) as per Specification with trimmed edges. Heat Treatment shall be done in calibrated furnace.

## 4.0 MECHANICAL TEST:

- For 'DIN EN 10025-2/S355 J2 +N': All mandatory mechanical tests including impact test shall be carried out as per Material Specification.
- Charpy V Notch Impact test shall be done as per SA370 (Specimen shall be as per SA370 Figure-11, Type A on 3 full size 10x10x55 mm specimen at -20°C. Orientation of specimen is longitudinal. Location of specimen shall be as per material specification). Impact Cv energy shall be minimum 34J (Avg of three specimens) & Minimum 27J (any one of three). Impact testing machine shall be a calibrated machine as per ASTM E23 with standard specimen(NIST)
- Additionally, through thickness tension test shall be carried out on specimen from coupons meeting acceptance of SA770.

## 5.0 NON DESTRUCTIVE TEST

For Non Destructive Examination, refer **Annexure-1 of TDCAT:4 Rev 01**

## 6.0 DIMENSIONAL CHECKS

All dimensions shall be as per PO. Tolerance on thickness of plates shall be as per Class-C of DIN EN 10029

## 7.0 REPAIRS AND FINISH

Plates shall be free of mill scales, edge crack & other injurious defects. Repairs by welding are prohibited. Mechanical removal of defects is permitted subject to availability of min. thickness & smooth surface. All non-conformities shall be recorded and reported to Purchaser to determine their disposal. Final disposal will be based on NPCIL's decision.

## 8.0 MARKING

Specification, grade, Melt number, Size, Plate number, Maker's emblem/code are to be stamped on each plate.

## 9.0 DOCUMENTATION

### 9.1 Procedures & Plans.

Supplier has to submit following documents for review & approval from BHEL & NPCIL after awarding the contract. No manufacturing activity shall start unless written approval of following Procedure and Plans are obtained.

- QAP – Indicating sequence of operations & testing, characteristics, acceptance, Quantum of check, witness, hold points etc.



- b) Manufacturing Process Plan.
- c) Heat Treatment Plan.
- d) Material Sampling and Testing Plan (MSTP).
- e) NDE Procedures, NDE Technique sheets & NDE Report formats.

#### 9.2 Reports

Test certificate shall contain

- a) Chemical analysis (Ladle & Product), Carbon equivalent
- b) Mechanical tests including impact values
- c) Non-destructive examination report.
- d) Supply condition.
- e) Visual and dimensional inspection report.
- f) Heat Treatment Report

#### 10.0 PACKING AND SHIPMENT

Before shipment, suitable easily removable rust preventive coating shall be applied on the entire surface of the product.

#### 11.0 Quality Surveillance

- 11.1 Material shall be subjected to quality surveillance by Purchaser.
- 11.2 Purchaser/Inspection agency will witness tests at various stages.
- 11.3 Stages to be identified in QAP for witness are HT, NDE, Mechanical, Metallurgical & Chemical Testing, Test coupon and Specimen identification, Final Visual, dimension check, Marking.

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**Document No.: Annexure-1(NDE Requirements) of TDCAT:4 Rev 01****1.0 NON DESTRUCTIVE EXAMINATION(NDE):**

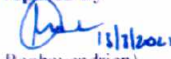
Non-destructive examination shall be performed with a detailed written qualified (for all essential variables of ASME Section-V & Section III NF) procedure, which shall, as a minimum contain the requirements of this specification & ASME Section-V, item specific scan plan/technique sheets/instruction sheets, demonstration records (for all essential variables), reporting format, equipment calibration, personnel qualification/certification details, consumable details, extent of coverage, drawing & dimensional records of the reference/calibration/specimens/standards, retention & control of standard specimen/blocks.

Supplier shall prepare the above specific documents pertaining to the items mentioned under this TDC and obtain the purchaser's approval prior to the commencement of manufacturing. NDE shall be performed by using approved Procedures only (approved by BHEL & NPCIL). Personnel shall be qualified as per IS 13805/ ISO 9712-3/ SNT-TC-1A. A detailed report of the examinations shall be made. The report shall include above records and records indicated in T-590 of Article 5 ASME Section V. Other general & reporting requirements shall be as per SA578/577 & Article-5 of ASME Section V. A sample report format in line with the above requirement shall be attached with the procedure for approval.

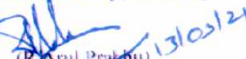
**1.1 Ultrasonic Examination:**

- a) **General:** Ultrasonic (pulse echo reflection method) Examination of plate shall be performed after rolling to final size & Heat treatment. Straight beam UT shall be carried out as per SA578 (with supplementary S1). However, for further investigation of observed recordable indications in straight beam (particularly if straight beam examination result is inconclusive), then in that case SA577 shall also be used as a supplement at suspected location.
- b) **Scanning & Coverage:** Scanning shall be continuous over 100% of the plate surface along parallel paths, transverse or parallel to the major plate axis, with not less than 10% overlap between each path. Scanning side(s) and selection of the transducer/probes shall ensure the 100% of the plate thickness volume coverage. Dead zone (double transducer) /Near filed zone (single transducer) of the transducer/probe shall be suitably taken care by selection/combination of TR(transmitter/Receiver) Dual/double transducer/probe (such as delay line probes) and single transducer/probe. When double transducer probes are used, the orientation of the barrier separating the two transducers shall be perpendicular to the scanning direction. The focusing zone of the double transducer probes shall be adopted to the thickness of the plate. Single probes shall be such that their near zone is as small as possible, i.e. 15% of the plate thickness or 15 mm whichever is smaller. The time base shall be adjusted in such a way that at least two back wall echo should be displayed.
- c) **Calibration & Acceptance Standard:**
  - i) **For Plates having nominal thickness(t)  $6\text{mm} \leq (t) < 25\text{ mm}$ :** Calibration for Straight beam shall be  $80\% \pm 5\%$  FSH of back wall echo and acceptance standard shall be as per SA578-Level C. Calibration for angle beam {if required as per clause (a) above} with a notch depth of 3% of the plate nominal thickness, shall be used to calibrate the ultrasonic examination. The notch shall be at least 25 mm long & 3 mm wide. Acceptance for angle beam shall be as follows: Any discontinuity indication that equals or exceeds the 100% reference shall be considered unacceptable unless additional exploration by the longitudinal method indicates it is laminar in nature.
  - ii) **For Plates having nominal thickness(t)  $\geq 25\text{ mm}$ :** Calibration for Straight beam shall be 6mm diameter FBH (flat-bottomed hole) of at one-fourth, one-half, and three-fourths of the thickness of the member being examined from which a distance amplitude curve shall be established. Acceptance standard shall be as follows: any indication detected in the material which is of laminar type is unacceptable if the indication cannot be contained within a circle having a diameter equal to one half of the thickness of the plate. Calibration for angle beam (if required as per clause c above) with a notch depth of 3% of the plate nominal thickness, shall be used to calibrate the ultrasonic examination. The notch shall be at least 25 mm long & 3 mm wide. Acceptance for angle beam shall be as follows: Any discontinuity indication that equals or exceeds the 100% reference shall be considered unacceptable unless additional exploration by the longitudinal method indicates it is laminar in nature.

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