

BHARAT HEAVY ELECTRICALS LIMITED – TRICHY
PURCHASE / MM / STEEL

Ref: FB-960/STCBM&STABM/9602200001

Date: 15-10-2022

ANNEXURE-A

ENQUIRY CONDITIONS FOR SUPPLY OF CARBON STEEL & ALLOY STEEL ROUNDS AS PER TDC: BAR: GEN:CA:02

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).

Sl No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)																		
1.	<p>Material specification: Supply of Alloy steel Rounds of Dia 200 mm as indicated below,</p> <table border="1"> <thead> <tr> <th align="center" colspan="2">Specification/ Grade</th> <th align="center">Qty (MT)</th> </tr> </thead> <tbody> <tr> <td align="center">I.</td> <td>AS Round Bar Dia 200MM - SA213T11</td> <td align="center">750</td> </tr> <tr> <td align="center">II.</td> <td>AS Round Bar Dia 200MM - SA213T22</td> <td align="center">750</td> </tr> <tr> <td align="center">III.</td> <td>CS Round Bar Dia 200MM - SA210GrA1</td> <td align="center">2900</td> </tr> <tr> <td align="center">IV.</td> <td>CS Round Bar Dia 200MM - SA210GrC</td> <td align="center">700</td> </tr> <tr> <td align="center" colspan="2">Total</td> <td align="center">5100</td> </tr> </tbody> </table>	Specification/ Grade		Qty (MT)	I.	AS Round Bar Dia 200MM - SA213T11	750	II.	AS Round Bar Dia 200MM - SA213T22	750	III.	CS Round Bar Dia 200MM - SA210GrA1	2900	IV.	CS Round Bar Dia 200MM - SA210GrC	700	Total		5100	
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	a. Please specify the supply condition of blooms – As Rolled/ As cast/ As Forged	a)																		
	b. Supply shall confirm to the above specification and strictly as per TDC: BAR: GEN: CA:02 Rev 10 dt 23.01.2021	b)																		
	c. In case of deviation, pls mention the specific clause no of TDC (Technical delivery conditions) and the specific deviation against it. Pls avoid mentioning any additional points other than what is required as per the TDC. For deviations separate sheet may also be attached.	c)																		
	d. Quantity tolerance: - 1/ + 3 % on each grade.	d)																		
2.	<p>Tender evaluation:</p> <p>1. Evaluation of offers will be on individual item basis.</p> <p>2. Supplier shall confirm for part item ordering.</p> <p>Note: 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.</p>	1. 2.																		
3.	<p>Supply condition:</p> <p>a. Length of the rounds shall be as per Annexure C (Length loading factor) enclosed. Pls take the cognizance of the same and submit your offer accordingly. Signed copy of the same shall be submitted.</p> <p>b. Length tolerance shall be +150mm/-Nil.</p> <p>c. Supplier shall submit report for lengths of rounds with each consignment. Length of each round bar shall be indicated at the face of the round excluding the taper cut edges and also without any errors of measurements.</p> <p>d. No of pieces shall be indicated in invoice/TC.</p>	a. b. c. d.																		
4.	<p>Invoicing:</p> <p>Invoicing shall be done on theoretical weight basis only. Calculated theoretical weight only will be taken for material accounting and payment. Theoretical weight will be calculated as 246.62 kg/meter (Dimensional tolerances will not be considered for theoretical weight calculation). Supplier shall quote only on theoretical weight basis. Offers with deviation is not acceptable and such offers will not be considered for evaluation.</p>																			
5.	<p>Inspection & Testing:</p> <p>a. Inspection and certification shall be carried out as per TDC: BAR: GEN:CA:02 Rev 10 dt 23.01.2021 and documents shall be submitted along with the supply in line with the above TDC.</p>																			

6.	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.	
7.	Pre-qualifying requirement: In addition to the TDC requirements, suppliers shall fill and submit the Pre-Qualification Requirements (Pre-Qualification requirements (PQR) for the procurement of Carbon steel and Alloy Steel Round Bars Specifications through Open Tender (As per TDC: BAR: GEN:CA:02 Rev.:10 dt 23.01.2021) dt. 23.04.2021) 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.	
8.	Public Procurement (Preference to Make in India) a. 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 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. Offer from indigenous sources is only acceptable and offer from import sources will be rejected. 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.	
9.	Payment terms: Indigenous a) Payment term is 100% direct EFT payment after 90 days from the date of receipt and acceptance of materials. b) In case of suppliers not registered with BHEL Trichy, Supplier shall supply 1 st lot of mutually agreed quantity within 60 days from the date of purchase order. After acceptance of 1 st lot of materials by BHEL, clearance for supply of the balance quantity shall be given. c) Payment for MSE Indigenous vendors will be as per MSMED Act, 2006 1. Micro & Small Suppliers – within 45 days from the date of receipt and acceptance of materials. 2. Medium Suppliers – 60 days from the date of receipt and acceptance of materials.	
10.	Offer Submission: Indigenous 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).	

<p>6. Invoices will be processed only upon completion of statutory requirement and further subject to following:</p> <ul style="list-style-type: none"> a) Vendor declaring such invoice in Form GST ANX-1 b) Receipt of Goods or Services and Tax invoice by BHEL 	
<p>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)</p>	
<p>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.</p>	
<p>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</p>	
<p>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.</p>	
<p>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>	
<p>Note:</p> <ul style="list-style-type: none"> 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. 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. e. Demurrage charges and other related railway charges if any, to be borne by the supplier (In case of delivery through railway wagons). 	
<p>11. Liquidated Damages:</p>	
<ul style="list-style-type: none"> a) Time is the essence of the contract. b) The ordered items shall be delivered as per the delivery period mentioned in the Purchase Order. c) 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. 	

	d) 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.	
	<p>NOTE:</p> <p>1. Indigenous: FOR order - LD will be reckoned from the date of LR/RR/BL / Invoice /eway bill whichever is later. If the goods are delivered through trans-shipment, the delivery documents of the 1st shipment from the factory works, will be considered for calculation of LD.</p> <p>2. 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).</p>	
12.	<p>Acceptance of materials supplied:</p> <p>1. The supply shall strictly as per the specifications in the tender /purchase order.</p> <p>2. Delivery of the ordered items as per the delivery terms in the Purchase Order does not automatically constitute acceptance of the delivered items.</p> <p>3. 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.</p> <p>4. 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.</p> <p>5. 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.</p> <p>6. After the clearance of the 1st 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: http://www.bhel.com/vender_registration/vender.php. would be taken against such supplier.</p>	
13.	Offer validity of 90 days from Part-I bid opening date is required. Pls confirm specifically	
14.	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.	
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.	Documents required for Indigenous suppliers	
	1. DFT copy invoice, LR, E-Way bill & original MTC (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.	<p>Risk Purchase Clause:</p> <ol style="list-style-type: none"> 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. 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. 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"> i) From dues available in the form of Bills payable to defaulted supplier, SD, BGs against the same contract. ii) from the dues payable to defaulted supplier against other contracts in the same Region/Unit /any other region/unit iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier. 4. GST will be applicable to the amount recoverable under risk purchase clause 	
22.	<p>Fraud Prevention Policy</p> <p>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.</p>	
23.	<p>Authorisation for participation in EPS portal through DSC</p> <p>a. E-Tender Participation requirements</p> <p>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://eprocurebhel.co.in). 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.</p> <p>DSC Authorisation</p> <p>Pls intimate the authorised person name, Mail ID for registering DSC with us to participate in E-Tenders.</p>	
24.	<p>In the event of Force Majeure:</p> <p>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.</p> <p>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</p>	<p>a.</p> <p>b.</p>

	<p>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.</p>	
	<p>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.</p>	c.
	<p>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.</p>	d.
25.	Evaluation of offer	
	<p>a. The price bids including the impact price (if any) of the technically acceptable offers alone shall be opened.</p>	
	<p>b. 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>c. 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.</p>	
	<p>d. 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>	
	<p>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.</p>	
26.	Execution of the Order	
	<p>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.</p>	
	<p>b. 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.</p>	
27.	Reverse Auction	
	<p>BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) 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.</p>	

28.	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 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.	
3.	All uploaded/submitted documents against this tender shall be signed in each page and sign shall be by principal / Mill.	
4.	Supplier shall mention the HSN code for each item quoted by them in the offer.	
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.	
6.	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.	
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.	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.	
10.	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.	
11.	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.	
12.	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.	
13.	BHEL Reserves the right to negotiate and re-float the tender if the lowest offered price is not found competitive	
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://eprocurebhel.co.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.	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.	

	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.	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
	1	Shri Otem Dai, IAS (Retd.)
	2	Shri Bishwamitra Pandey, IRAS (Retd.)
	3	Shri Mukesh Mittal, IRS (Retd.)
	Email	
		iem1@bhel.in
		iem2@bhel.in
		iem3@bhel.in
	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.	
	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 Dy.Manager/ 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
30.	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.	

31. **Special Provisions for Micro and Small Enterprises (MSE) bidders registered as per MSME act:**

(Subject to participating MSE vendors meeting the tender requirements of BHEL)

- 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.
- 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.
- 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.
- 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%.
- e) Payment to MSE vendor will be as per the applicable provisions of the MSMED Act 2006.
- f) If L1 offer is from a Micro / Small enterprise, the 25% earmarking provision is not applicable.
- 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.
- 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.
- i) MSE suppliers can avail the intended benefits by submission of documents as per the latest notification of Ministry of Micro, Small and Medium Enterprises. 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.

32. **Resolution of Disputes**

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.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
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.

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.

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

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 .

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 & 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.

The seat of arbitration shall be Trichy, Tamil Nadu, India.

The cost of arbitration shall be borne as per the award of the Arbitrator.

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.

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.

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

33. 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


a 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.

b 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

c 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/vendor_registration/vendor.php

34.	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.
35.	<p>Caution:</p> <ul style="list-style-type: none"> ➤ 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.
36.	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://eprocurebhel.co.in/ 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://eprocurebhel.co.in/ 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>On behalf of BHEL</p>  <p>SUDHEER APPIREDDYGARI Dy. Manager / Purchase / Steel Materials Management Bharat Heavy Electricals Limited Tiruchirappalli, Tamil Nadu - 620 014</p>	<p>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)</p>



BHARAT HEAVY ELECTRICALS LIMITED
SEAMLESS STEEL TUBE PLANT
TIRUCHIRAPALLI - 620 014

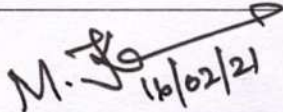
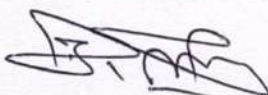
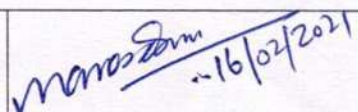
Operations, Planning and Control/SSTP

Dt:16-02-2021

Sub: Loading factor for length of Carbon steel (SA192, SA210GrA1, SA210GrC) and Alloy steel (SA213 T11, SA213 T12, SA213 T22) round bars for SSTP requirements.

The following points were taken into consideration to obtain the competitive offers

1. Preferred length of round bars for our operation is 12mtr max. However, considering that each steel mill will have different manufacturing capability, round bars Supply shall be in any one fixed length with in the range of 10m to 12m. Length tolerance shall be +150mm/-Nil. Theoretical Weight shall be calculated for the length without tolerance only. If round bars supplied exceeding the above tolerance on quoted fixed lengths, only the quoted length shall be considered for theoretical weight calculation.
2. Suppliers are requested to indicate the length of each round bars at the face of the round bars excluding the taper cut edges and also without any errors of measurements
3. Irrespective of mode of transport by road/rail, only calculated/theoretical weight will be taken into account for weight calculation with 200 mm nominal round bar diameter without considering dimensional tolerance at 246.62 Kg per meter. Offers quoted with actual weight shall be rejected.
4. For other than quoted fixed length of round bar, random short length round bars having length from 5.1 meters to the quoted fixed length is acceptable up to 5% of order quantity and the same will be accepted with a price discount of 15% of ordered rate (excluding freight if indicated separately) for the grade and will be final and binding on supplier.
5. **Short length round bars less than 5.10 meters are not acceptable in any case.** For random short length round bars, theoretical weight shall be calculated on the actual length supply.

 16/02/21		 16/02/2021
M.KANNAN	K.ATHIMOOLAM	K.MAHENDRAN
DM	SDGM	AGM
OP&C,TE,SFW/SSTP	OP&C,TE,SFW,CMP/SSTP	Operations/SSTP

BHARAT HEAVY ELECTRICALS LIMITED TRICHY**SSTP/OP&C**

REF: SSTP: BLOOMS

DT: 23.04.2021

Pre-Qualification requirements (PQR) for the procurement of Carbon & Alloy Steel Round Bars Specifications through Open Tender (As per TDC: BAR: GEN:CA:02 Rev.:10 dt 23.01.2021)

A) Organizational Capability:

S.No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)
1.	Only Original Manufacturers/Mill (import or indigenous) need to respond this enquiry. Offer from traders/Stockist will not be considered. In case of foreign suppliers representing through their Indian/foreign agents, AGENCY AGREEMENT should be submitted, along with offer documents else offer is liable for rejection.	
2.	All activities in manufacturing such as Steel making, casting/rolling/ Forging, UT testing (if applicable) & other testing (if applicable) shall be in house only. Outsourcing of any or part of the above process is not acceptable. Please confirm whether all the above is done in house or not.	
3.	Details of the mill with production equipment & facilities.	
4.	Process flow chart	
5.	Chemical, Mechanical testing shall be done in house or at Labs certified as per ISO 17025 or Government approved labs.	
6.	Suppliers shall submit a valid ISO 9001 certificate or Quality Assurance Manual or Written down procedure.	
7.	BHEL/End customer reserve the right to inspect the item ordered at any stage at vendor's works and if found not meeting the stipulated conditions, material is liable for rejection.	
8.	BHEL/End customer reserves the right to inspect the sample at vendor's works for giving clearance before bulk production.	

B) Technical Competence:

S.No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)																
9.	Acceptance to all the relevant clauses of TDC:BAR:GEN:CA:02 Rev.:10 dt 23.01.2021 the for the quoted grade. Note: Deviation to TDC requirement is not acceptable.																	
10.	As confirmation of acceptance to the TDC requirement, signed TDC copy (should be signed by Mill only) to be submitted along with the offer.																	
11.	Creep test report for the quoted Alloy Steel grades as per the requirement mentioned below to be submitted.																	
	<table border="1"> <thead> <tr> <th>Specification/ Grade</th> <th>Test duration in Hrs.</th> <th>Temp in ° C</th> <th>Stress in MPa. (min.)</th> </tr> </thead> <tbody> <tr> <td>SA213 T11/T12</td> <td>1000</td> <td>550</td> <td>100</td> </tr> <tr> <td>SA213 T22</td> <td>1000</td> <td>625</td> <td>55</td> </tr> <tr> <td>SA213 T91</td> <td>1000</td> <td>665</td> <td>75</td> </tr> </tbody> </table>	Specification/ Grade	Test duration in Hrs.	Temp in ° C	Stress in MPa. (min.)	SA213 T11/T12	1000	550	100	SA213 T22	1000	625	55	SA213 T91	1000	665	75	
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SA213 T11/T12	1000	550	100															
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M. J. 24/04/21
M. KANNAN
 DY. MANAGER
 TOOL ENGINEERING & OP & C
 SSTP / BHEL / TRICHY - 620 014

S. MANOJ KUMAR
 DY. MANAGER
 QA&C / SSTP
 BHEL, TRICHY-14

Pre-Qualification requirements (PQR) for the procurement of Carbon & Alloy Steel Round Bars Specifications through Open Tender (As per TDC: BAR: GEN:CA:02 Rev.:10 dt 23.01.2021)

C) Past Experience/ Performance:

S.No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)
12.	Supplier should have manufactured the quoted grades and supplied to any reputed customer, preferably for tube/pipe manufacturing. As proof of having manufactured and supplied the quoted grades, supplier shall submit MTC copy, unpriced PO copy, Bill of Lading copy etc. In case, the supplies in the quoted grades were of some other dia. i.e. other than dia. 200 mm, then proof for having manufactured rounds in dia. 200 mm (in any other grade) to be provided.	

D) Financial Soundness:

S.No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)
13.	Indigenous suppliers shall submit copies of annual reports (Balance Sheets), Profit & Loss statement for last three years (or from date of incorporation whichever is less) and GST certificate.	
14.	Import suppliers shall submit latest audited report from any reputed third party business rating agency like D&B / Credit reform for both principal & mill.	
15.	In case of Branch office / Liaison office in India bidding against this tender on behalf of their principal RBI clearance letter to be submitted.	

Necessary supporting documents shall be submitted for meeting each of the above Pre-Qualification Criteria for evaluation of the offers along with technical Bid (Part-1 bid) or else offer will be liable for rejection.

Additional details required: (not mandatory and these shall be submitted additionally for establishing the credentials)

1. Approval certificates issued by international agencies such as Lloyds, TUV etc.
2. Well known steel maker certificate issued by IBR.
3. List of customer name and quantum supplied in the past 3 years for this grade shall be submitted.

BHEL reserves the right to consider/Not-consider the offers based on the evaluation of documents submitted for the above Pre-Qualification Criteria. If required, BHEL also reserves the right to have on-site assessment of the facilities at supplier's works during the bid evaluation.

M. Kannan
24/04/21
M. KANNAN
DY. MANAGER
TOOL ENGINEERING & OP & C
SSTP / BHEL / TRICHY - 620 014

S. Manoj Kumar
24/04/21
S. MANOJ KUMAR
DY. MANAGER
QA&C / SSTP
BHEL, TRICHY-14.



1. MATERIAL:

- a) Specification : ASME {Latest on date of Purchase Order (PO)}:
CS: SA 106 Gr.B & Gr.C, SA 179, SA 192, SA 210 Gr.A1 & Gr.C, SA 333 Gr6
AS: SA 209 T1, SA 213 T11, T12, T22, T91
- b) Additional Requirement : As listed below (Supplementary to Specification)
- c) End Product : For Manufacture of Hot and Cold finished Seamless Steel Tubes / Pipes as per Indian Boiler Regulations (IBR)
- d) Material Source : Supply of Alloy Steel grades shall be from IBR approved overall Creep Resistance Steel makers. The creep testing shall have been done in National Metallurgical Laboratory at Jamshedpur or BHEL corporate R&D at Hyderabad or well known steel makers or any other material testing laboratory recognised by the Central Boilers Board for creep testing of alloy steel produced indigenously or from a Nationally recognised or accredited testing laboratory for creep testing in the country of manufacture for alloy steel produced out side India.

Table -1: Creep Property requirements: For Both Indian and Foreign Manufacturers.

Specification & Grade	Test Duration in Hrs.	Temp. in° C	Stress in MPa (min.)
SA 213 T 11	1,000	550	100
SA 213 T12	1,000	600	70
SA 213 T 22	1,000	625	55
SA 213 T 91	1,000	665	75

2. CHEMICAL COMPOSITION AND PROCESS OF MANUFACTURE:

Fully Killed, Vacuum de-gassed Bars in Concast / Rolled or Forged form. Ladle analysis to suit end product.
Max. Carbon 0.25% for SA 210 A1 and 0.30% for SA 210 Gr C.
Product analysis and maximum trace elements: Al: 0.02%, Cu: 0.25%, Total: 0.50% for CS and 0.30% for AS.
SA 213 T12: Si : 0.20% min.
SA 213 T91: Ti:0.01%,Zr:0.01%,Cu:0.10%,Sb:0.003%, Sn:0.010%, As:0.010%, B:0.001%

3. DIMENSIONS AND TOLERANCES:

- a) Diameter : 200 mm. + 4.0 mm - 2.0 mm; Ovality : < 4.0 mm
- b) Length : As per Enquiry /Purchase Order.
- c) Straightness : Permissible deviation is 2.5 mm / meter or 25 mm on the entire length of the bars which ever is less.
- d) End Surface : 3.0 mm from the perpendicular

4. SUPPLY CONDITION:

As Cast / As Rolled.

In every despatch schedule , the lot Quantity shall be atleast 20 MT per Melt/ Heat Number.
Each consignment of bloom despatches shall have the quantity bulked melt/Heat wise.

Forged.

Material is to be forged to ensure uniformity of structure & strength

In every despatch schedule , the lot Quantity shall be atleast 20 MT per Melt/ Heat Number.

Each consignment of bloom despatches shall have the quantity bulked melt/Heat wise.

Material supply in cast/rolled/forged condition shall be heat treated to ensure uniformity of structure & strength for T91 specification requirement.

5. FINISH AND REPAIR:

Free from mill scales and defects like laps, seams, folds, cracks, undue segregation, piping etc. Repairs by welding is prohibited. The Surface defects can be removed mechanically subject to meeting minimum diameter.

6. NON-DESTRUCTIVE TESTING:

Ultrasonic testing shall be carried out for Rolled or Forged round bars as per ASTM A 388.

Acceptance Standard in accordance with Clause 3.3.4 of ASME Sec VIII Div.2.

Test shall be certified by NDT Level II qualified personnel as per SNT-TC-1A

7. METALLURGICAL TEST:

7.1 MACRO ETCH TEST: (CONCAST & ROLLED BLOOMS)

1) One sample of complete cross-section of a bloom (Bar) for each Heat / Melt Number shall be examined in accordance with ASTM E 381. The reference plates shall be as follows.

- a) For the blooms made by Concast Method (Plate – II &III) and
b) For the blooms made by Rolled & Forged Method. (Plate I & II).
c) The Macro structure shall be better than or equal to C2 R2 S2 of ASTM E381 (Plate I & II)



2) Injurious defects of any category like Surface cracks, Pipe/center void, Star crack, center unsoundness, Dark center, Pin holes, White bands, Chill structure, and Dendritic structure (strong) - are not allowed.

3) Photo of Macrograph shall be provided along with test certificates per Heat/ Melt.

7.2 MICRO EXAMINATION FOR ROLLED BLOOMS.

The Specimen for Testing shall be taken on longitudinal plane, midway between the center and surface of the material. The 'Inclusion content of the steel,' measured as per ASTM E 45 shall not exceed the following.

Table - 2

Classification							
Type 'A'		Type 'B'		Type 'C'		Type 'D'	
Thin	Heavy	Thin	Heavy	Thin	heavy	Thin	Heavy
2	1	2	1	2	1	2	1

7.3 MICRO EXAMINATION FOR FORGED BLOOMS

1. Thick series 0.5 allowed.
2. Thin series 2 max.
3. Grain size shall be 6 or finer.

8.0 MARKING:

- a) On each bar longitudinal color coding to be done by paint for entire length by a band of 50.0 mm width and also both End faces.
- b) Melt number & Specification shall be paint stenciled with white color on both the faces.

Table-3

Specification. & Grade	Color	Specification. & Grade	Color
SA 192	WHITE	SA 333 Gr 6	BLUE, GREEN, RED
SA 210 Gr. A1	YELLOW	SA 209 Gr. T1	BROWN, RED
SA 210 Gr. C	BLUE	SA 213 Gr. T11	BROWN, WHITE
SA 106 Gr. B	RED	SA 213 Gr. T12	BROWN, YELLOW
SA 106 Gr. C	BLUE	SA 213 Gr. T22	GREEN, RED
SA 179	GREEN	SA 213 Gr. T91	GREEN, YELLOW

9. INSPECTION AND CERTIFICATION:

FOREIGN SUPPLIERS:

a. IBR Well Known Steel Makers:

Product shall be inspected at works and certification shall be IBR Form IV signed by both maker & maker's representatives.

b. IBR Approved Steel Makers:

Product shall be inspected at works and certification shall be IBR Form IV countersigned by Inspecting authority approved by IBR for the country of origin. (To be concurred by BHEL before placing PO).

INDIAN SUPPLIERS:

a. IBR Well Known Steel Makers:

Product shall be inspected at works and certification shall be IBR Form IV signed by both maker & maker's representatives.

b. IBR Approved Steel Makers:

Product shall be inspected at works and certification shall be IBR Form IV countersigned by Boiler inspectorate / Directorate of respective State.

TC shall essentially contain:

1. BHEL Order No., TDC No. & Test certificate number, Size & Quantity- Heat / Melt No wise
2. Specification and Grade with year of code, Heat Number, Steel & bar making process.
3. Chemistry including trace elements - Ladle and Product analysis.
4. Metallurgical Test results, NDE results with reference and acceptance standards as applicable.
5. Identification Mark on the Product.
6. Photo of Macro Etch Test.
7. The size of ingot used and forging reduction ratio for forged blooms
8. Reference to Creep test results performed as per Table-1 of this TDC.



Quality Assurance and Control / SSTP





No.: **TDC: BAR: GEN:CA:02** Rev.: 10

Product: **Carbon and alloy steel round bars**

Technical Delivery Conditions

Effective date: **23/01/2021**

Page 3/3

			
S. Manojkumar DM/QA&C	K. Athimoolam Sr.DGM/OP&C/SSTP	M. Nadanakumar AGM/MM/RM	R. Kaliappan AGM/QA&C
Prepared By	Reviewed By		Approved By

Revision Records:

Revision Record: rev:00: Re-numbered and re-written from TDC:E :S: 04/00

Revision Record: rev: 01: Modified: Cl. 1.0, 3.0, 4.0, 7.0, 8.0 & 9.0.

Revision Record rev 02; Modified: Cl 1.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 & 9. 0.

Metallurgical Test introduced .in Cl no 7 instead of Mechanical Test

Revision Record rev 03; Deleted: Cl 3.0(d)

Revision Record: Rev. 04: Modified Cl.: 1.a), 2.0, 3.0 a), c) & 8.0 to included SA 213 T23 & T91 & T92

Revision Record: Rev. 05: Modified Cl.: 1.d), 3.0, 4.0, 8.0 & 9.0 included Cl.3 (d)

Revision Record: Rev. 06: Modified Cl.: 1.a), d), 2.0, 3.0 a), c), 8.0 b), 9.0, & included Creep test requirements for alloy steel.

Revision Record: Rev. 07: Modified Cl.: 4.0, 6.0, 7.1, 7.3, 9.0

Revision Record: Rev. 08: Modified Cl.: 3.0 a), 6.0

Revision Record: Rev. 09: Modified Cl.: 1.0 creep value for T91

Revision Record: Rev. 10: Modified Cl.: 1.0, 2.0, 4.0, 8.0 & 9.0
