



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)
Tiruchirappalli – 620014, TAMIL NADU, INDIA

TITLE ALLOY STEEL ROUNDS TO SPECIFICATION SA182F91 WANTED	Phone: +91 431 2574247/ 4354 Fax : +91 431 252 0719 Email : kjoe@bheltry.co.in
--	--

	Reference Number: Enquiry 1301600012	Enquiry Date: 14.12.2016	Due date for submission of quotation: 04.01.2017
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

Tenders are invited by the MM / Steel for 22 MT of Alloy Steel Rounds confirming to Spec SA182F91 and as per TDC:0:309 Rev 09.

BHEL commercial terms & conditions and all annexure can be downloaded from BHEL web site http://www.bhel.com or from the Government tender website http://tenders.gov.in (public sector units) Bharat Heavy Electricals Limited) or from https://bheleps.buyjunction.in under enquiry reference "1301600012 "	
Offers shall be submitted in TWO PART bids system. The suppliers shall submit their offer on e-procurement platform at https://bheleps.buyjunction.in within 14:00 Hrs (GMT +05:30) of the due date of this tender. SEALED COVER BIDS/ E-MAILS / FAX / MANUAL OFFERS WILL NOT BE ACCEPTED.	Yours faithfully, For Bharat Heavy Electricals Limited DGM/ MM / Steel 4th Floor, Bldg 24, BHEL, Tiruchirappalli-620014 Ph: 0431- 2574247/ 4354, Fax: 0431- 2520719 Email: kjoe@bheltry.co.in

BHARAT HEAVY ELECTRICALS LIMITED
PURCHASE / MM / STEEL
BHEL / TRICHY

Ref: FB960/SRF91/2016/OT

ANNEXURE-A

ENQUIRY TERMS AND CONDITIONS FOR SUPPLY OF AS ROUNDS

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 & condition and 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	BHEL Requirements						Supplier Comments (Acceptance or otherwise for each point to be given)
1	Material Specification, Diameter, Length & Quantity Supply of Alloy steel rounds shall be made as per Specification, Diameter, Weight and as per TDC indicated below.						
	Specification	Diameter (MM)	Length (MM)	Rolled/Forged	IBR / Non IBR	Weight (MT)	
	SA182F91	40	6000	Rolled	IBR	5	
		80				7	
		140	2000 to 4000	Forged		5	
		200				5	
	TOTAL					22	
* Note: Refer clause 39 of this "Annexure - A" for Special Provisions for Micro and Small Enterprises (MSE) bidders registered as per MSME act.							
2	a) TDC for Rolled rounds: Rolled rounds of diameter 40mm & 80mm shall be supplied as per TDC:0:309 Rev 09. Note: API 6D and PED 97/23/EC are not applicable to this requirement.						
	b) Confirm your acceptance to TDC 0:309 Rev 09 for all the clauses						
	c) In case of deviation against TDC:0:309 Rev 09, pls mention the specific clause number of TDC and the specific deviation against it. For deviations separate sheet may also be attached.						
3	a) TDC for forged rounds: forged rounds of diameter 140mm & 200mm shall be supplied as per TDC:0:404 Rev 15. Note: API 6D and PED 97/23/EC are not applicable to this requirement.						
	b) Confirm your acceptance to TDC 0:404 Rev 15 for all the clauses						
	c) In case of deviation against TDC:0:404 Rev 15, pls mention the specific clause number of TDC and the specific deviation against it. For deviations separate sheet may also be attached.						
4	Tolerance on Length: +100mm/-0.						
5	Delivery: Rounds Shall be supplied within 8 weeks from the date of PO/LOI						
6	Quantity Tolerance: +/- 10 % on each size.						
7	Inspection and Certification: Inspection and Certification shall be carried out as per clause 10 of applicable TDC. Three sets of Mill TC, Applicable IBR Forms & Photomicrographs shall be issued.						
8	Invoicing : Invoicing shall be done on theoretical weight basis. Invoice & TC shall indicate Number of pieces & weight (Theoretical). Theoretical weight shall be calculated as given below.						
	Diameter (MM)			Weight per Metre (kg)			
	40			9.859			
	80			39.500			
	140			120.780			
	200			246.600			
9	Length Report: Supplier shall submit report for lengths of rounds along with each consignment						
10	Liquidated Damage Liquidated damages shall be 0.5% of the Total order value per week of the delay or part thereof subject to a maximum of 10% of the total order value.						
	For Info: ➤ 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).						
	Imports: ➤ CFR/CIF order- LD will be calculated based on the B/L date.						

	Indigenous: FOR order - LD will be reckoned from the date of LR/Invoice whichever is later. However inordinate delay in delivering the materials will not suffice the case.	
11	Pre-Qualification Criteria	
	a)	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.
	b)	The activities Hot finishing and cold finishing, rolling/ Forging, Heat treatment, UT testing, Wet MPI and other testing as per applicable TDC shall be carried out in-house only. Outsourcing of any or part of the above process is not acceptable. Pls confirm whether all these done in house or not.
	c)	For New suppliers (not registered with BHEL, Trichy for supply of Alloy steel rounds to specn:SA182F91)
	1	Supplier should have manufactured SA182F91 grade rounds and supplied to any reputed customer. As proof of having manufactured and supplied this grade, supplier shall submit MTC copy, unpriced PO copy, Bill of Lading copy etc. Also the list of supplies in the past 3 years for this grade with customer name and quantum shall be submitted.
12	2	a. Mandatory requirements (Supplier must submit the below mentioned documents along with technical Bid (Part-1 bid) or else offer will be liable for rejection). 1. Details of the mill with equipments & facilities. 2. Unpriced PO copies of any other customer along with MTC for the quoted grades by the supplier. 3. Quality manual - Table of contents. 4. Process flowchart. 5. List of testing equipment's and instruments with valid calibration details. 6. Past 3 year audited financial report. 7. Agency agreement (in case of Foreign or Indian agents). 8. Recent D&B or Credit reform reports (In case of import vendor) of mill, foreign agent or principal. 9. In case of Branch office / Liaison office in India bidding against this tender on behalf of their principal RBI clearance letter to be submitted. 10. Valid ISO 9001 certificate
		b. Additional details required (not mandatory and these shall be submitted additionally for establishing the credentials) 1. Recent D&B or Credit reform reports (In case of import vendor) of mill, foreign agent or principal. 2. Approval certificates issued by international agencies such as Lloyds, TUV etc. 3. Well known steel maker certificate issued by IBR (in case products made from the supplied raw material are going to be sued for IBR application)
	Payment terms for Indigenous suppliers	
	a)	Payment term is 100% direct EFT payment after 45 days from the date of receipt and acceptance of materials.
	For Infn: 1. Any deviation in the above payment term will attract loading as mentioned below. ➤ "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders. 2. Offers of indigenous Suppliers with payment terms as LC / Advance Payment/ BOE are liable for rejection.	
	b)	For new suppliers not registered with BHEL, Trichy for supply of AS rounds to specn:SA182F91: payment shall be made after 45 days from the date of receipt and acceptance of materials after testing at BHEL lab.

13	Payment terms for Import suppliers	
1	BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account. For Information: a) Any deviation in the above payment term will attract loading as mentioned below. "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders." b) In the case of Usance LCs (45 days from the date of receipt of documents, specified in PO, at BHEL bank) the loading will be considered @ 1.5% on the offered Value. c) For LC at sight the loading will be considered @ 3.5% on the offered Value. d) Normally CAD at sight and Confirmed LC's are liable for rejection.	
2	If the LC payment is insisted, TWO sets of original TCs to be submitted prior to dispatch and a certificate to that effect from BHEL should form a part of the documents to be negotiated. If this condition is not complied by the vendor, the offer is liable for rejection. For Information: LC will be opened one month prior to material readiness. Hence supplier shall intimate the material readiness accordingly for opening of LC. LC validity period will be 90 days and for any extension applicable charges will be deducted from your bills.	
3	For new suppliers not registered with BHEL, Trichy for supply of AS rounds to spcn:SA182F91:: a) payment shall be made after 45 days from the date of receipt and acceptance of materials after testing at BHEL lab. b) In case of foreign supplier, quoting for LC payment, first lot of mutually agreed quantity shall b`e supplied with payment as CAD basis after 45 days from the date of receipt & acceptance of material after testing at our Lab. After acceptance of first lot, LC may be opened for the remaining lot.	
14	Offer submission(for Indigenous & Import suppliers) 1) General a) Offers shall be submitted in TWO PART bids system (TECHNO-COMMERCIAL BID + PRICE BID) in the E-Procurement portal. Scan copy of the filled Annexure-A, Tender documents etc., shall be uploaded in the EPS portal. b) Submit your FIRM competitive offer rate per MT with inclusive of all charges if any (like inspection (TPI), UT charges, etc). c) Price Variation Clause (PVC) is not applicable. Offers with price variation clause will be rejected. d) 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. e) 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. f) The offers of the bidders who are under suspension and 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. g) Evaluation of offer is on individual item basis, hence part item ordering to be confirmed. Note: BHEL reserves the right to change the evaluation criteria on package basis either in part or full (i.e., combining few or all items), at its discretion after part 1 opening. Such changes will be communicated only to techno commercially suitable offers/bidders. Suppliers may take cognizance of the same and quote accordingly. h) E.Tender Participation requirements 1. Either Principal or authorized agent shall register their Digital Signature Certificate (DSC) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION) with us. DSC shall be registered for the authorized 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. 2. In case of Principal (being foreigner) they may apply for DSC through Indian embassy at their country and can register with us for participating in E-tenders. 3. In case of agents participating/registering their DSC (of authorized person), it will be at the sole authorization of principal to their agents to participate on their behalf and all transactions done using that DSC against our tenders shall be known as valid communication and shall binding on principal and is legally valid. 4. Pls intimate the authorized person name, Mail ID for registering DSC with us to participate in E-Tenders	

14	2) For New suppliers (Not registered with BHEL, Trichy for supply of AS rounds to spcn:SA182F91:		
	a)	Supplier Shall register on line (for the material group item code "SRF91") at our web page: https://suppliers.bheltry.co.in/	
	b)	Specify the Application registration ID generated in the new supplier registration portal.	
	c)	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. Agency agreement requirements attached as separate file and full compliance to it shall be ensured while submitting the same.	
	d)	Indicate the Quantity per Heat/Melt of the mill in MT.	
	e)	Indicate monthly production capacity of the mill in MT.	
	f)	If the supply of AS rounds to spcn SA182F91 is first time to BHEL/Trichy, then supplier has to supply minimum quantity on mutually agreed basis. After acceptance of material at our end after testing by BHEL, clearance for the balance quantity shall be given.	
	g)	New Suppliers for supply of AS rounds to spcn:SA182F91 to BHEL, Trichy has to submit Draft Mill Test Certificates and Draft IBR FORM (as applicable as per TDC) for BHEL approval before supply of material	
	h)	Indicate whether the supplier is recognized by IBR as a "Well known Steel maker"	
	i)	In case of foreign supplier and if the supplier is not recognized by IBR as a "Well known Steel maker", Indicate the name of the TPI.	
15	Offer Submission (for Import suppliers)		
	1.	Bidders should submit their offer for CFR / Chennai Port basis with freight break up details and Place of delivery – INTVT6 – CONCOR ICD . Note: Offer on CFR without price breakup/ FOB only is not acceptable. BHEL will finalize order on either FOB or CFR keeping its commercial interest.	
	2.	Port of Discharge should be CHENNAI and PLACE OF DELIVERY should be- INTVT6 – CONCOR ICD	
	3.	Port of Loading should be indicated without fail. Specify Port of shipment.	
	4.	Type of Loading Specify type of Loading: Break Bulk/Container	
	5	1. Bidders shall refer to Government of India notification on Minimum Import Price(MIP) published in Director general of Foreign Trade website (www.dgft.gov.in) under link http://dgft.gov.in/exim/2000/NOT/NOT15/Notificaiton%20No.38(E).pdf which is applicable to many of the steel products/grades. For latest notification on Minimum Import Price (MIP) please check with http://dgft.gov.in website. Also Please check with the same for its applicability to the enquired product while submitting the offer.	
		2. Specify the HS code of Rounds offered. Please note that this HS code to be mentioned in shipment documents.	
	6	CONTAINERIZED CARGO	
	a.	For CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. 14 FREE DAYS FOR Container detention shall be provided. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total landed Cost.	
	b.	In case of shipment through Containers on CFR basis, the BL should bear the endorsement that "14 free days for Container Detention is applicable" .	
	c.	The place of delivery "CONCOR INTVT6" should be mentioned in BL and the charges for the inland transportation of Containers (Chennai Port to CONCOR INTVT6) shall be borne by Supplier by inclusion of same in the CFR rate.	

15	6	d. In the case of non-acceptance of any Supplier to include the charges for the inland transportation of Containers (Chennai Port to CONCOR INTVT6), the same shall be paid by BHEL. But an amount of INR 300 per MT (in equivalent foreign currency as per the SBI TT selling exchange rate prevailing on the date of opening of technical bid) shall be loaded while commercial evaluation of the offer. However the Supplier shall ensure that the place of delivery "CONCOR INTVT6" is mentioned in BL	
	7	<u>BREAKBULK CARGO</u> a. For CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis. Supplier shall quote the freight charges on LILO (LINER IN LINER OUT) basis. The place of delivery "CONCOR INTVT6" need not be mentioned in BL. The materials will be Custom cleared from Port itself.	
	8.	Indicate the Mill (Name, Location)	
	9.	Indicate the country of origin	
	10.	Specify the quoted currency	
	11.	Service charges, commission charges and any other incidentals will NOT be paid extra.	
	12.	Agency commission, if any should be clearly given in the offer (% on FOB, % on CFR Chennai inclusive).	
	13.	Agency commission, if any, payable to their agents in India, shall invariable be shown separately in the Performa invoice and this will be paid by us in India, in Indian rupees, on satisfactory completion of the contract. For calculation of rupee equivalent agency commission, exchange rate as prevailing on the date of order will be taken.	
	14.	One Indian agent can represent one foreign principal only and submit one offer for these tender items. Note: In order to maintain sanctity of the tender system it is mandatory that one agent cannot represent two suppliers or quote on their behalf in a particular tender enquiry. If any agent represents more than suppliers all such offers will be rejected.	
	15.	Not more than one offer shall be submitted against the same supplier. Suppliers shall not submit offers by more than one agent.	
	Information:		
	a) BHEL strongly discourages the engagement of Agents in India by foreign principals, to deal with BHEL, in BHEL's tenders.		
	b) In view of the requirement of BHEL, it is strongly suggested that in their own interest, foreign principals may desist from engaging any Indian agent and deal with BHEL directly and it is stressed that any Main producer proposing to deal with BHEL by engaging and through an Indian Agent does so at their own risk. BHEL shall in no way be responsible for any consequences that may arise to the foreign principal on account of the antecedents / actions of their Indian Agent.		
	c) BHEL, due to business reasons would ban, would have banned Indian agents from dealing with BHEL. Any foreign principal who engages such a banned agent, or an employee of the banned agency, or any other person connected with the banned agency, at any time during the tender proceedings, would be disqualified from the tender proceedings. The decision of BHEL in this regard shall be final and be binding on the OEM. Hence in their own interests, prospective tenderers may check with BHEL. The list of banned firms is available on BHEL website www.bhel.com .		
	16.	<u>Anti-dumping duty</u> a) With respect to Antidumping Duty (ADD), declaration by Import supplier's Mill/principal (only) is to be submitted for the applicability of ADD for each item with size detail. If ADD is applicable, Pls indicate the quantum of ADD. b) Anti-dumping duty, if any declared by Import Mill/principal as per (a) above, will be loaded for arriving at landed cost. c) In case any new ADD comes into effect at the time of execution of order, BHEL may short close the balance quantity with mutual consent	
	17.	The offer will be evaluated on total landed cost to BHEL-Trichy as below : Total landed cost = [CFR Chennai (or) (FOB + BHEL Freight)] + Customs duty & other duty (including ADD) as applicable + LC Charges (In case LC payment) + 22% loading on Freight in case of deviation mentioned in point (15.6.a) above + Import Incidentals + Commercial loading as applicable - applicable tax credits.	

	Note : ❖ For conversion of foreign currency into INR, foreign exchange rate (TT selling rate of SBI) on the date of technical bid opening will be considered. ❖ Multiple PO may also be placed considering the applicable duty structure of the respective requirement/Qty.	
16	<u>Offer Submission(for Indigenous suppliers)</u> a) BHEL will deal directly with indigenous manufacturers only. Offers from Traders & Stockist will not be considered. b) Submit your FIRM competitive offer rate per MT (basic price & Freight) with best possible delivery on FOR - BHEL, Trichy basis ONLY with inclusive of all charges if any (like inspection (TPI), UT charges, etc). c) Confirm your acceptance for incoterms: FOR-BHEL,Trichy d) Service tax, Octroi, Entry tax etc to be indicated in offer and is payable extra only on submission of documentary proof. e) Any other extra charges like ED, CST/VAT etc. are to be indicated clearly. f) 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. For Information: For inter-state supplies C-Form will be issued.	
17	<u>Defective Material replacement</u> Supplier shall replace defective material free of cost (inclusive of all Testing, Inspection, TPI, Service charges etc.) up to destination within two months from defect notification date.	
18	<u>Material Warranty</u> Free replacement of whole material in case of notification of defect in material within the period of One year from TC/Invoice date. Warranty certificate to be produced.	
19	<u>Pre Despatch inspection</u> If required, BHEL will have pre-despatch inspection and quality audit of the mill with prior intimation.	
20	<u>Demurrage charges (for indigenous suppliers)</u> Demurrage charges if any (In case of delivery through railway wagons) is to be borne by the supplier.	
21	<u>Offer Validity</u> Offer validity of 30 days is required after priced bid opening (normally price bid will be opened within 60 days from technical bid opening) in case you are technically qualified.	
22	<u>Risk Purchase Clause:</u> BHEL at its option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute thereof. The supplier shall be liable for any loss which BHEL may sustain by reason of such risk purchases in addition to LD at the maximum rate mentioned in the LD clause above. Confirm your acceptance.	
23	The bidders, While submitting documents in response to this NIT/Tender shall ensure that 'Documents submitted with the offer shall be signed and stamped in each page by authorised representative of the bidder'.	
24	<u>Documents required for Import suppliers</u> a. Bill of Lading. b. Invoice. Invoice should show the description of the goods and the unit rate of each item as in the purchase contract. Against each item in the invoice and packing list, the serial number of the corresponding item in the purchase contract or as per order acknowledgement should be indicated. c. Detailed packing list. d. Country of origin Certificate e. Mill test certificate, Applicable IBR Form (as per TDC) certification from IBR/IBR approved TPI, Photomicrograph as per TDC & Report for length of the rounds along with each consignment. Note: All the above documents should be submitted in triplicate & in all documents Contract No., L.C. No. and Import License No. are to be indicated.	

25	<u>Documents required for Indigenous suppliers</u> 1. "Duplicate for Transporter" copy invoice, LR, original Mill TC & Applicable IBR Forms, Photomicrograph & Report for length of the rounds are to be sent along with each vehicle. One set of photocopy of all the said documents to be sent along with vehicle. Invoice should mention the number of pieces/bundles. 2. One set of MTC & Applicable IBR Forms, Original invoice (In case of VAT - Plus two copies + VAT declaration form & In case of CST – Plus one copy), LR copy, Photomicrograph shall be sent to MM/Purchase for bill processing.	
26	<u>Conditions for transportation:</u> In the event there is a delay by the Supplier in negotiating / submitting the document, any demurrage / wharfage arising out of the same shall be to the account of the Supplier and shall be deducted from the final payment. Also, in such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading". Over-seas Suppliers have to give a No-Objection Certificate to BHEL, authorizing BHEL to get the Delivery Order from the Steamer Agent without producing the Original Bill of Lading. This is required to ensure avoidance of incidence of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.	
27	<u>Cartel Formation</u> 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.	
28	<u>Fraud Prevention Policy</u> Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	
29	<u>Resolution of Disputes</u> a. If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations. b. If the parties fail to resolve their dispute or difference by such mutual consultation within 30 days of its occurrence, then, unless otherwise provided in the contract, either the Purchaser/Consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India. In the case of a dispute or difference arising between the Purchaser/Consignee and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of an officer in BHEL Trichy, appointed to be the arbitrator by the General Manager/MM / BHEL /Trichy. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One lakhs (Rs. 1,00,000/-) c. Venue of Arbitration: The venue of arbitration shall be the place from where the contract has been issued, i.e., BHEL Trichy. d. Jurisdiction of the court will be from the place where the tender enquiry document has been issued, i.e., Trichy, India	
30	<u>In the event of Force Majeure:</u> 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.	

30	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.	
	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.	
	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	
31	<u>Execution of the Order</u> 1. 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. 2. 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.	
32	BHEL will consider the ranking after the technical and commercial factor is applied as referred above wherever deviations are observed.	
33	BHEL reserves the Right to order either in full or part thereof or short close the tender at our discretion without assigning any reasons considering BHEL's commercial Interest. This is for information.	
34	BHEL Reserves the right to negotiate and re-float the tender if the lowest offered price is not found competitive.	
35	Any other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the Enquiry/Annexure-A and which have not been specifically accepted in by purchaser will not be applicable to the contract.	
36	<u>Evaluation of offer</u> 1) The price bids including the impact price (if any) of the technically acceptable offers alone shall be opened. 2) 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. 3) In the event of any change in scope / quantity arising out of the discussions, offerers 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 4) For suppliers within Tamil Nadu state, as per prevailing VAT Act, VAT input credit is currently 5%. For suppliers from other than Tamilnadu 2% CST will be paid against C-Form. 5) Unless otherwise specified, evaluation will be on individual line item basis only and ordering will be on respective L1 vendors. 6) 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.	
37	<u>Patent Right</u> 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.	

38	<u>Integrity commitment, performance of the contract and punitive action thereof:</u>	
	1. <u>Commitment by BHEL</u> 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. <u>Commitment by Bidder/ Supplier/ Contractor</u> 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	
39	d) 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	
	Special Provisions for Micro and Small Enterprises (MSE) bidders registered as per MSME act (Subject to participating MSE vendors should meet the tender requirements of BHEL)	
	a) 20% of the tendered quantity is earmarked for MSE suppliers in this tender.	
	b) Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC/ST entrepreneurs.	
	c) 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.	
	d) MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. 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.	
	e) 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.	
	f) In case after the bid opening, it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items / quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like tendered items being a system etc., then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1.	
	g) If the L1 vendor happens to be a MSE vendor against any item code, then 100% of the qty (for the respective item code) shall be proposed to order on the L1 (MSE) vendor, even though there may be other MSE vendors within the "L1+15%" price band.	

40	General Notes a. Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be submitted / uploaded in ENGLISH language only. If the supporting documents submitted are in other than English language, translation of the same shall be provided for evaluation. b. 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 c. All uploaded/submitted documents against this tender shall be signed in each page and sign shall be by principal / Mill. d. 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. e. 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 ids kjoe@bheltry.co.in or govindaraj@bheltry.co.in. The above mail id is provided for initial clarification purpose only and no further correspondences shall be entertained through this mail ids. f. In the case of two bid tender system, clarification on Technical points will be sought for if not clearly indicated in offer. After tender price bid opening, any voluntary / unsolicited information's / confirmations / clarifications / interpretations by the tenderers will not be entertained as a policy and tender will be finalized only with available data / information's given in offer. g. If required, BHEL will have stage inspection (at any stage) and quality audit of the mill with prior intimation. h. In case of order on import supplier marine insurance will be arranged by BHEL. Once the shipment is made, scanned copies of NND documents (Bill of Lading , commercial invoice, packing list, country of origin, Report for length of rounds, MTC, Applicable IBR Forms, Photomicrographs & details of discharge Port agent/freight forwarder shall be submitted by Seller to Purchaser either by e-mail or by fax. i. PURCHASER reserves the option to alter the specific delivery schedules from time to time within the terminal due date of contract for specific quantity. j. The prices OFFERED/TO BE CONTRACTED finally have to be kept firm till successful completion of the contract k. For indigenous suppliers 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. l. Supply credentials not older than 5 years shall only be considered. m. Foreign suppliers has to submit the Non-Negotiable Document before the shipment reaches the port or else the demurrage and detention charges will be deducted from suppliers invoice n. Applicable Inco term for this tender is INCOTERMS 2010 o. Supplier has to submit the NND before the shipment reaches the port or else the demurrage and detention charges will be deducted from suppliers invoice. p. 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.	
----	--	--

	q. 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.	
40	r. 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 e-mail/EPs message or by fax/ telex/cable. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original offer.	
	s. 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.	
	t. 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.	
	u. Deviations if any against any of tender conditions should be provided in a "Deviation Statement", against each point.	
	v. 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 the websites ➤ https://bheleps.buyjunction.in ➤ http://tenders.gov.in ➤ http://eprocure.gov.in ➤ http://www.bhel.com	
	w. 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).	
	x. 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.	
	y. 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.	
	z. Indigenous suppliers should submit the prices in Indian Rupees only. Import suppliers may submit their bid in foreign currency. The currency for quoting shall be selected from the drop-down menu provided in the EPs portal.	
	aa. In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes. Incomplete documents / offer will be rejected.	
41	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.	
42	Caution: ➤ 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.	

43	Suspension of Business Dealings with Suppliers/ Contractors BHEL's guidelines for suspension of business dealings with Suppliers/Contractors shall apply to this Notice Inviting Tender/Enquiry. The said guidelines are available at http://bhel.com/vender_registration/pdf/Suspension_guidelines_adbridged.pdf the bidders shall peruse the same prior to submission of the bid. Any action taken or proposed to be taken by BHEL under the said policy shall be without prejudice and in addition to other rights and remedies as may be available to BHEL under contract or law.
44	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://bheleps.buyjunction.in within 14:00 Hrs (GMT +05:30) of the due date of this tender. The bidder would be required to register on the e-procurement market place https://bheleps.buyjunction.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.
On behalf of BHEL  K. JOSEPH REGIS Deputy General Manager MM / RM / Steel (Purchase) BHEL, TIRUCHY - 620 014.	To be filled & Signed by Original Manufacturer/Mill Name of the mill / Principal: Signature: (Affix Seal) (All conditions were read & clearly understood and agreed in totality with the mentioned deviations only)



Product: Carbon, Alloy & Stainless Steel Rolled Bars (for Boilers & Valves)

Revision Record:

Rev: 01: Source of supply for AS included.

Rev: 02: Text re-written, Class Nos introduced for Alloy steel. High temperature test removed. TDC: 03: 306/00 merged into this.

Rev: 03: Cl. 4, 6, 9 modified.

Rev: 04: Cl 5 revised to include Impact test for bars used for valves purchase orders, clarity brought in Cl 4.

Rev: 05: Heading modified. Cl 1 size restriction for CS and AS SA182 rolled bars added as per ASME. SA182 Gr 91&Gr 92 added and subsequent clauses modified for chemistry, Heat treatment, mechanical properties, photomicrograph and NDE.

Cl 2 – Steel makers names removed and requirement for creep testing added as per IBR Reg 4. Cl 2, 6 & 10 modified for SS.

Cl 4 – SA 182 F91, F92 & F23 Tempering temperature and soaking time modified. Cl 5 – Bend test Clarified, Cl 6 – MPI added. Cl 11 added. Cl 10 – IBR Forms indicated. CS: SA675 Gr 70 added and its requirements added in Cl 1, 2, 4 in line with collaborator practise.

Rev 06: Dt: 25/11/2014 Cl 2, 4, 5, 6, 10 modified

Rev 07: Dt: 06/10/2015: Cl 2.5, 4.3, 5.6, 10.9 added; Cl 1.0, Cl.2.3, 4.2, 5.2, 6.1, 9.0, 10, 12.0 modified.

Rev 08: Dt: 24/12/2015: Cl 1, 2, 3, 5, 6, 7, 10, 11 & 12 modified.

Rev: 09 Dt: 25/07/2016 – Cl 1 modified to add SA 182 F304L, Cl 5 modified to add impact requirement for SA 479 TP 410 Condition 2

1. MATERIAL SPECIFICATION: ASME(Latest as on the date of Enquiry/Purchase Order, whichever is earlier):

Carbon Steels (CS)	:	SA 105, SA 675 Gr 70
Low Alloy Steels (AS)	:	SA 182 F11 Class 2, F12 Class 2 & F22 Class 3, SA182 F91 & SA182 F92 (Code case 2179); SA 193 B7 & B16
Stainless Steels (SS)	:	<i>Austenitic:</i> SA 182 F304, F304L, F316, SA 479 TP 304; <i>Martensitic:</i> SA 479 TP 410 Condition 2
Additional Requirements	:	As listed below (Supplementary to above material specifications)
Size and Quantity	:	As per Purchase order & Drawing.

SA 105 and SA 182 rolled bars shall be restricted to dia $\leq$ 114.3mm.

For API 6D 24th Edition 2014 materials for sour service: Materials for pressure-containing and pressure-controlling parts shall meet the requirements of NACE MR0175 Ed 2009.

2. CHEMICAL COMPOSITION & PROCESS

- Melting:** CS & AS: Fully killed. CS : SA 675 – Silicon and Aluminium killed. Product analysis per heat: CS: C $\leq$ 0.25%. SA182 F92: Si: 0.10-0.50%, Ni: 0.30 max & Cu:0.25% max.
- CS, AS:** Rolled bars shall be processed by hot forging/rolling and subsequently finished by cold rolling (if required) to final size. **SS:** hot finished.
- Raw material Steel to be inspected at Mill & test certificate countersigned by IBR approved inspecting authority, if the mill is not approved under IBR as well known steel maker.
- SS: All raw materials used in steel making including incoming scrap shall be checked by supplier to ensure freedom from radioactivity.
- Additional requirements for API-6D materials** (in Product analysis):
CS: Carbon: 0.23% max.
Sulfur: 0.020% max, Phosphorus: 0.025% max
Carbon Equivalent (CE): 0.43% max.
Carbon Equivalent formula: $\%C + (\%Mn/6) + (\%Cr + \%Mo + \%V)/5 + (\%Ni + \%Cu)/15$.

SS: The carbon content of austenitic stainless steel welding ends shall not exceed 0.03 % by mass, except for stabilized material in which case a carbon content of up to 0.08 % by mass is permissible.

- Tolerance for chemistry shall be as per the above applicable material specifications/standards.

3. DIMENSIONS AND TOLERANCES

Dimensional Tolerances : CS & AS: as per SA 29-2015. SS: as per SA 484-2015.



4. HEAT TREATMENT(HT)

- 1) CS: SA 105 Normalised at 880-920 deg C, SA 675 Normalised at 880-920 deg C and Tempered at 600-650 deg C
AS(SA 182): Normalised and tempered,
For SA 182 F91, F92 Normalising temperature : 1040-1080 deg C & Tempering temperature :750-780 deg C.
SA 193: Quenched and tempered.
- 2) Photomicrograph test for F91 & F92 bars - one per heat treatment lot per size and reported in test certificate.
Acceptance – The material shall be free from any micro fissures. Microstructure shall show lathe tempered martensite and also to be examined for grain growth. Photomicrograph with 400x (Min) magnification along with Photomicrograph report to be provided. The actual magnification and result of actual microstructure shall be certified/indicated.
- 3) **HT Equipment qualification for API-6D materials:** As per Annex F of API-6D 24th Edition. Materials shall be heat treated in calibrated furnaces (HT Equipment) and furnaces shall be recalibrated at a frequency not longer than 12 months from the last calibration.

5. MECHANICAL TESTS

- 1) Extent of test: for each size/heat/HT batch.
- 2) Tensile test: The test specimens shall be removed from a test coupon (TC) after the final heat-treatment cycle.
Perform tensile tests at room temperature in accordance with the procedures specified in ASTM A370-2015. Perform a minimum of one tensile test. All yield strengths shall be determined using 0.2 % offset method. The results of the tensile test(s) shall satisfy the applicable material specification requirements.

If the results of the tensile test(s) do not satisfy the applicable requirements, two additional tests on two additional test specimens (removed from the same TC with no additional heat treatment) may be performed in an effort to qualify the material. The results of each of these tests shall satisfy the applicable requirements.

- 3) Additional requirements for SA182 F91 & F92:
F91: Yield: (0.2% offset): Min 450 MPa; Tensile: Min 630 MPa, Max 850 MPa; Hardness(HBW): Min 195, Max 248
F92: Tensile: Min 630 MPa, Max 850 MPa; Hardness(HBW): Min 191, Max 250.
- 4) Additional tests: Bend test:
CS: 1 Sample 19mm thick(t)x25.4mm width to be bent 180 deg around mandrel of radius 6.35mm
AS (SA 182 only), SS: 1 Sample 19mm thick(t) x 25.4mm width to be bent 180 deg around mandrel of radius =1.5 x t.
- 5) Bars meant for Valves purchase orders of SA105 and SA182 F22 Cl3 materials shall be impact tested.
1/HT batch: ASTM A370-2015, 2mm. Charpy-U Notch at room temperature. **Acceptance:** Avg of 3 specimens: 36J, single Min: 24J.
- 6) PED 97/23/EC (CE-marking) items: Charpy- V impact test at 20 deg. C as per ASTM A 370-2015,
Acceptance: Avg : 40 joules, Min. single value: 27 joules.
- 7) **Impact testing for API 6D items:** Carbon, alloy and stainless steel (only for SA 479 TP 410 Condition 2) for pressure-containing parts in valves with a specified design temperature below -29°C shall be impact-tested, as indicated in the drawing/purchase order.

A minimum of one impact test, comprised of a set of three specimens, shall be performed on a representative test bar of each heat of the material in the final heat-treated condition. If a test fails, then a retest of three additional specimens removed from the same TC, with no additional heat treatment, may be made, each of which shall exhibit an impact value equal to or exceeding the required average value.

Carbon Steels, Alloy Steels & Stainless Steels (only for SA 479 TP 410 Condition 2) : Charpy- V impact test as per ASTM A370-2015, Test Temperature: As per material specification; **Acceptance:** As per below table:

Minimum V-notch Impact Requirements (Full-size Specimen)

Minimum Tensile Strength (MPa)	Average of Three Specimens (Joules)	Single Specimen (Joules)
≤ 586	20	16
> 586 to 689	27	21
> 689	34	26

	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	Doc No: TDC:0:309 Rev No: 09 Effective Date: 25/07/2016 Page: 3 of 4
Product: Carbon, Alloy & Stainless Steel Rolled Bars (for Boilers & Valves)		

6. NON DESTRUCTIVE TEST

- 1) **Extent of test:** for each product. Stage of test: After heat treatment.
 - a) **UT:** 100% for dia $\geq 50\text{mm}$ and for all bars of SA 182 F91 & F92 as per ASTM A388-2015.
Acceptance: ASME Sec.VIII Div. 2 Cl.3.3.4.
 - b) **MPI for CS & AS:** As per ASTM A275-2015. Dry MPI:100%; For SA182 F91, F92: 100% Wet MPI.
Acceptance: ASME B16.34-2013 Mandatory Appendix II. Linear Indications like cracks, folds & other injurious defects are unacceptable.
 - c) **LPI for SS:** 100%: ASTM E165-2012, No linear indications acceptable.
- 2) **SS:** Finished bars shall be checked for radioactive contamination and reported. Survey meter shall be used to measure at 5cm near the surface. Acceptance limits: Shall be less than 0.1 milli Rontgen (MR) per hr or 1 micro Sievert per hr.

7. WORKMANSHIP AND FINISH

Items to be proof machined as per drawing or shot blasted for CS/AS, Pickled & passivated as per ASTM A380-2013 for SS, & be free from scales & defects like laps, seams, folds, cracks, etc. Machined items (except SS) to be coated with a layer of transparent rust preventive before despatch.

8. REPAIR

Repairs by fusion welding are prohibited. Surface defects can be removed by mechanical means and defective areas smoothly dressed up with the adjacent surface. Minimum thickness after repair to meet drawing / Specification.

9. MARKING AND PACKING

Details of stamping on each item: dia $\geq 25\text{ mm}$: with low stress stamps and bordered by paint: Heat number, Specification & grade, Size, Code case number (for Gr 92), Maker's emblem/code & Inspection Authority's seal. Dia $< 25\text{ mm}$: All above details to be painted. Bars to be supplied in bundles $< 1\text{ ton}$, secured suitably for rough handling. Metal tags with details of specification, melt number and maker's emblem to be secured to the bundles.

10. INSPECTION AND CERTIFICATION

- a) Products shall be inspected at works and the applicable IBR Form must be countersigned by the Inspecting Authority as indicated below in case the shop is not recognised as a "Well known Forger/Steel maker" under IBR:
 - ☐ **Imported Items:** Inspecting Authority approved by IBR for the Country of origin.
 - ☐ **Indigenously Supplied items:** Director of Boilers/Chief Inspector of Boilers/Inspecting Authority approved by IBR, for the respective state.

Certification in IBR Form IV for IBR items from "IBR-Well Known Forger/Steel Maker" or "Inspecting Authority", as applicable, to be submitted. IBR Form IV & Test certificate in English language with following details, shall accompany the product (including proof machined):

1. Purchase Order No.(BHEL), TDC No & its revision no, Test certificate no & date.
2. Specification, Grade with applicable year of code, Code case number (for Gr 92), Heat Number, Drawing No, Quantity & Size.
3. Supplier of the steel used in making the finished product (well known and others in IBR Form IV).
4. Melting & rolling process, Chemistry including incidental elements - Heat wise, Product analysis, Carbon Equivalent(CE).
5. Heat treatment details of the material and test bars. For F91, F92 supplies – Photomicrograph at 400x resolution.
6. Mechanical test results- Tensile (UTS, YTS, % elongation, % reduction in area), Impact & Hardness and NDE test results with reference & acceptance standard.
7. Repair details if any, Certified copy of TC for starting material.
8. **For SS:** Measured Radioactivity levels shall be reported in the Mill Test Certificate. (Not to be recorded in IBR Form)
9. For API items, works certificate with details like QSL, size shall be issued. Records of furnace calibration and surveys shall be maintained for a period not less than five years.



Product: Carbon, Alloy & Stainless Steel Rolled Bars (for Boilers & Valves)

- b) For PED 97/23/EC (CE-marking) items, the test certificates with details specified above shall be submitted as per BS EN 10204-2004.
1. For pressure parts test certificates of type 3.1 or 3.2 is acceptable.
Type 3.1 – Suppliers shall have ISO 9001-2008 certification certified by Notified Body recognized by European community and test certificate certified by suppliers authorized inspection representative.
Type 3.2 – Components inspected and test certificates certified by Notified Body recognized by European community.
 2. For non-pressure parts test certificates of type 2.2 is acceptable.
Type 2.2 – suppliers test certificates signed by suppliers authorized inspection representative with test results as required by TDC.

11. AUDIT CHECKS AT BHEL

BHEL reserves the right to carry out audit checks for chemistry, HT condition, mechanical test and NDT on representative test bars or job. Supplies found defective during check or subsequent processing at BHEL will be rejected.

12. END USE

SA 105, SA 182 & SA 479 are for Pressure part components in Boilers & Valves of high temperature service meeting IBR, ASME Section I-2015, PED 97/23/EC and API-6D 24th Edition. SA 193 is for high temperature bolting and for drive shafts.

 25/07/2016		 25/7/16		 25/7/16	 25/7/16
Venkanna Rupani	G. Panneer Selvam	S. Selvarajan	K. Rajasekaran	S. Siyamala	U. Revisankaran
Sr.Engineer/QA	DGM/QA	SDGM/QA	SM/Valves/Engg	DGM/Valves/ Purchase	AGM/QA&BE
Prepared By	Reviewed By				Approved By

	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	DOC No: TDC:0:404 Rev: 15 Effective Date: 23/12/2015 Page: 1 of 3
Product: Carbon, Alloy & Stainless Steel Forgings (Boilers And Valves)		

Revision Record:

Rev 09: New materials F23, F91 & F92 requirements added in Cl.1.0, Cl.2.0, and Cl.4.0 to Cl.6.0. CE marking certification clarity included in Cl.10.

Rev 10: Cl 1:F6a Class 2 added, Code case corrected. Cl 2: Steel makers names removed and requirement for creep testing added as per IBR Reg 4, Cl 4: Tempering temperature and soaking time modified for SA 182 F91, F92 & F23. Cl 4 & 10: Photomicrograph requirement added for F91 & F92 forgings, Cl 2, 6 & 10: modified for SS, Cl 5: Bend test Clarified, Cl 6: Wet MPI added.

Rev 11: Cl 2 Pt 3, 4, 5 modified. Cl 6 – Wet MPI for CS, AS added, Cl 10.1 – IBR Forms indicated

Rev 12: Cl 1, 2, 4, 6 and 7 – requirements for grades SA 182 F1, SA 336 F1, F12, F22 Cl 3 and F91 added (for Neyveli Project). Creep test criteria in-line with BHEL R&D included. Cl 2 Pt 8 modified. Cl 6 Pt 1 – SA388 changed to ASTM A 388 based on ASME Sec II Ed 2013.

Rev 13: Dt: 17/11/2014: Cl 2 Cl 4 Cl 10 Cl 12 modified.

Rev 14: Dt: 06/10/2015: Cl.4.3, 5.2, 5.8, 10.1.b.9 added; Cl 1.0, 2.1, 2.2, 2.3, 4.1, 4.2, 5.3, 6.2, 9.0, 10 modified.

Rev 15: Dt: 23/12/2015: Cl 1, 2, 3, 5, 6, 7, 10, 11 & 12 modified.

1. MATERIAL

Specification: ASME (Latest as on the date of Enquiry/Purchase Order, *whichever is earlier*): (ASTM also applicable for non-pressure parts/Valves)

Carbon Steel (CS)	:	SA 105, SA 350 LF 2
Alloy Steel (AS)	:	SA 182 F12 Class 2, F22 Class 3, SA 182 F23 (Code case: 2199), SA 182 F91 & SA182 F92 (Code Case: 2179), SA 182 F1, SA 336 F1, SA 336 F12, SA 336 F22 Cl 3, SA 336 F91
Stainless Steel (SS)	:	SA 182 F6a Class 2, F6a Class 3, SA 182 Gr. F 304, 304L, 316, 316L, 316H, 321, 321H, 347 & 347H; AISI 410 for TOA Gland and bushings.
Additional Requirement	:	As listed below (supplementary to Specification)
Size and Qty	:	As per Purchase order & Drawing.

For API-6D 24th Edition 2014 materials for sour service: Materials for pressure-containing and pressure-controlling parts shall meet the requirements of NACE MR0175 Ed 2009.

2. CHEMICAL COMPOSITION & PROCESS

1) Melting: fully killed.

Product analysis per heat: CS: C ≤ 0.25% , AS: SA182 F23: Si: 0.25-0.50% & Cu: 0.25max

SA182 F92: Si: 0.10-0.50%, Ni: 0.30 max & Cu: 0.25% max

Additional requirements for API-6D materials (in Product analysis):

CS: Carbon: 0.23% max.

Sulfur: 0.020% max, Phosphorus: 0.025% max

Carbon Equivalent (CE): 0.43% max.

Carbon Equivalent formula: $\%C + (\%Mn/6) + (\%Cr + \%Mo + \%V)/5 + (\%Ni + \%Cu)/15$.

SS: The carbon content of austenitic stainless steel welding ends shall not exceed 0.03 % by mass, except for stabilized material in which case a carbon content of up to 0.08 % by mass is permissible.

- Raw material Steel for IBR forging items to be inspected at Mill & test certificate countersigned by IBR approved inspecting authority, if the mill is not approved under IBR as well known steel maker.
- Forging: Hot working to ensure uniformity of structure & strength with reduction ratio in area 4:1 min from ingot to final forging, close to final size & shape. Flow lines to be parallel to axis of openings. Forged Items ordered to this TDC shall be forged to the nearest shape before machining to final dimensions as per respective drawing.
- Blooms / Billets used for forgings (Side Length, Dia ≥ 50mm) shall be UT tested. For Acceptance Norm refer Cl.6.0. For finished bars this can be done at Final stage.
- SS: All raw materials used in steel making including incoming scrap shall be checked by supplier to ensure freedom from radioactivity.
- Tolerance for chemistry shall be as per the above applicable material specifications/ standards.

3. DIMENSIONS AND TOLERANCES

Tolerances as per Drawing. Untoleranced dimensions for valve components as per VL:STDC:023 Rev: 00.

4. HEAT TREATMENT(HT)

1) Heat treatment shall be as per applicable drawing. Unless otherwise specified, the following heat treatment shall be following:

CS: SA 105: Normalised, SA 350 LF 2: Normalised at 880-900 °C & Tempered at 620-640 °C

AS: Normalised and Tempered.

For SA 182 F91, F92 & F23, SA336 F91 Normalising temperature : 1050-1080°C & Tempering temperature : 750-780°C.

SS: As per material specification.

AISI 410: Supply in Quenched & Tempered condition as below.

	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	DOC No: TDC:0:404 Rev: 15 Effective Date: 23/12/2015 Page: 2 of 3
Product: Carbon, Alloy & Stainless Steel Forgings (Boilers And Valves)		

Quenching at 955-1010°C in air or water or oil or Polymer. Soaking 30 mts/inch maximum thk. Tempering at 663°C.min. Soaking :60 mts/inch maximum thickness and air cool.

- 2) Photomicrograph test for F91 & F92 forgings - one per heat treatment lot per size and shall be reported in test certificate.
Acceptance – The material shall be free from any micro fissures. Microstructure shall show lathe tempered martensite and also to be examined for grain growth. Photomicrograph with 400x (Min) magnification along with Photomicrograph report to be provided. The actual magnification and result of actual microstructure shall be certified/indicated.
- 3) **HT Equipment qualification for API-6D materials:** As per Annex F of API 6D 24th Edition. Materials shall be heat treated in calibrated furnaces (HT Equipment) and furnaces shall be recalibrated at a frequency not longer than 12 months from the last calibration.

5. MECHANICAL TESTS

- 1) Extent of test: for each size/heat/HT batch from sample product or identical test coupon.
- 2) Tensile test: The test specimens shall be removed from a test coupon (TC) after the final heat-treatment cycle.
Perform tensile tests at room temperature in accordance with the procedures specified in ASTM A370-2014. Perform a minimum of one tensile test. All yield strengths shall be determined using 0.2 % offset method. The results of the tensile test(s) shall satisfy the applicable material specification requirements.

If the results of the tensile test(s) do not satisfy the applicable requirements, two additional tests on two additional test specimens (removed from the same TC with no additional heat treatment) may be performed in an effort to qualify the material. The results of each of these tests shall satisfy the applicable requirements.

- 3) Additional requirements for SA182 F23, F91 & F92:
F91: Yield: (0.2% offset): Min 450 MPa; Tensile: Min 630 MPa, Max 850 MPa; Hardness(HBW): Min 195, Max 248
F92: Tensile: Min 630 MPa, Max 850 MPa; Hardness(HBW): Min 191, Max 250
F23: Tensile: Min 510 MPa, Max 730 MPa; Hardness(HBW): Min 150, Max 220
- 4) AISI 410: Hardness 197-235 HBW. No other mechanical test required.
Additional requirements of tests: (Other than AISI 410 Only)
- 5) **Bend test: Acceptance as per IBR**
CS: Sample 19mm.Thick(t) x 25.4mm width to be bent 180 deg. around mandrel of radius 6.35 mm.
AS, SS: Sample 19mm.Thick(t) x 25.4mm width to be bent 180 deg. Around mandrel of radius =1.5 x t
- 6) **Impact test for QCNR Valves & CRHNR Valves:** CS, AS and SS: 1 / HT batch. As per ASTM A 370-2014, 2mm Charpy-U notch, at Room temperature. Acceptance: Avg of 3specimens: 36J, Single Min: 24J
- 7) **CE-marking items** Charpy- V impact test at 20 deg.C as per ASTM A 370-2014,
Acceptance : Avg : 40 joules, Min. single value: 27 joules.
- 8) **Impact testing for API 6D items:** Carbon, alloy and stainless steel (except austenitic grades) for pressure-containing parts in valves with a specified design temperature below -29°C shall be impact-tested.
A minimum of one impact test, comprised of a set of three specimens, shall be performed on a representative test bar of each heat of the material in the final heat-treated condition. If a test fails, then a retest of three additional specimens removed from the same TC, with no additional heat treatment, may be made, each of which shall exhibit an impact value equal to or exceeding the required average value.

Carbon and Alloy steels: Charpy- V impact test as per ASTM A 370-2014, Test Temperature: As per specification;
Acceptance criteria: As per below table:

Minimum V-notch Impact Requirements (Full-size Specimen)

Minimum Tensile Strength (MPa)	Average of Three Specimens (Joules)	Single Specimen (Joules)
≤ 586	20	16
> 586 to 689	27	21
> 689	34	26

6. NON DESTRUCTIVE TEST

- 1) Extent of test: for each product. Stage of test : After heat treatment.
- 2) **UT:** As per ASTM A388-2014 - All finished forgings of dia/wall thickness ≥50mm;
All Body & yoke of special class valves & all forgings of SA 182 F91, F92 & F23, SA 336 F91.
Acceptance: ASME Sec.VIII Div. 2 Cl.3.3.4.
- 3) **MPI for CS & AS:** 100% : As per ASTM A275-2015.
Dry MPI/ Wet MPI : CS, AS (other than SA182 F91, F92, F23, SA 336 F91) : all sizes
Wet MPI : SA 182 F91, F92, F23; SA 336 F91: all sizes.
Acceptance: ASME B16.34-2013 Appendix II .Linear Indications like cracks, folds & other injurious defects are unacceptable.
- 4) **LPI for SS:** 100%: ASTM E165-2012, No linear indications acceptable.
- 5) SS: Finished forgings shall be checked for radioactive contamination and reported. Survey meter shall be used to measure at 5 cm near the surface. Acceptance limits: Shall be less than 0.1 milli Rontgen (MR) per hr or 1 micro Sievert per hr.



Product: Carbon, Alloy & Stainless Steel Forgings (Boilers And Valves)

7. WORKMANSHIP AND FINISH

Forged items to spec SA336 shall be machined in the inside surface as it is meant for steam application. Items to be proof machined as per drawing or shot blasted for CS/AS, Pickled & passivated as per ASTM A 380-2013 for SS, & be free from scales & defects like laps, seams, folds, cracks, etc. Machined items (except SS) to be coated with a layer of transparent rust preventive before despatch.

8. REPAIR

Repairs by fusion welding are prohibited. Surface defects can be removed by mechanical means and defective areas smoothly dressed up with the adjacent surface. Minimum thickness after repair to meet drawing / Specification.

9. MARKING AND PACKING

Details of stamping on each item with low stress stamps: Heat number, Specification & grade, Code case number (for Gr 92 & 23), Maker's emblem/code & Inspection Authority's seal. Forgings to be properly packed and despatched to avoid damage during transit.

10. INSPECTION AND CERTIFICATION

10.1 For IBR Items:

- a) Products shall be inspected at works and the applicable IBR Form must be countersigned by the Inspecting Authority as indicated below in case the shop is not recognised as a "Well known Forger/Steel maker" under IBR:

Imported Items: Inspecting Authority approved by IBR for the Country of origin.

Indigenously Supplied items: Director of Boilers/Chief Inspector of Boilers/Inspecting Authority approved by IBR, for the respective state.

- b) Certification in IBR Form III-G for IBR items from "IBR-Well Known Forger" or "Inspecting Authority", as applicable, to be submitted. IBR Form III-G and Test certificate in English language with following details, shall accompany the product (including proof machined):

1. Purchase Order No.(BHEL), TDC No & its revision no, Test certificate no & date.
2. Specification, Grade with applicable year of code, Code case number (for Gr 92 & 23), Heat Number, Drawing No.,Quantity & Size
3. Supplier of the steel used in making the finished product (well known and others in IBR Form IV).
4. Melting & forging process, Chemistry with incidental elements-Heat wise, Product analysis, Carbon Equivalent (CE).
5. Heat treatment details of the material and test bars. For F91, F92 supplies – Photomicrograph at 400x resolution.
6. Mechanical test results- Tensile (UTS, YTS, % elongation, % reduction in area), Impact & Hardness and NDE test results with reference & acceptance standard.
7. Repair details if any, Certified copy of TC for starting material.
8. **For SS:** Measured Radioactivity levels shall be reported in the Mill Test Certificate. (Not to be recorded in IBR Form).
9. For API items, works certificate with details like QSL, Pressure-Temperature rating, size shall be issued.Records of furnace calibration and surveys shall be maintained for a period not less than five years.

10.2 For CE-marking items the TCs with details specified above shall be submitted as per BS EN 10204-2004.

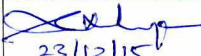
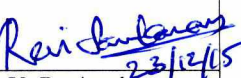
1. For pressure parts test certificates of type 3.1 or 3.2 is acceptable.
Type 3.1 – Suppliers shall have ISO 9001-2008 certification certified by Notified Body recognized by European community and test certificate certified by suppliers authorized inspection representative.
Type 3.2 – Components inspected and test certificates certified by Notified Body recognized by European community.
2. For non-pressure parts test certificates of type 2.2 is acceptable.
Type 2.2 – suppliers test certificates signed by suppliers authorized inspection representative with test results as required by TDC.

11. AUDIT CHECKS AT BHEL

BHEL reserves the right to carry out audit checks for chemistry, HT condition, mechanical test and NDT on representative test bars or job. Supplies found defective during check or subsequent processing at BHEL, *will be rejected.*

12. END USE

Valve bodies, bonnets, discs, socket ends, body guides etc., Pressure part fittings in boilers & low, high temperature service like discs, socket weld tees, ells, weld neck flanges & stubs (except drum nozzles) meeting IBR, ASME Section I-2015, ASME B 16.34-2013 and API-6D 24th Edition. **Non pressure part items in boilers and valves:** For these, requirements on starting material,bend test and inspection by IBR are not required.

 23/12/2015	 23/12/15	 23/12/15			 23/12/15
Venkanna Rupani	G. Panneer Selvam	S. Selvarajan	K. Rajasekaran	A. Ayyachamy	U. Revisankaran
Sr.Engineer/QA	DGM/QA	SDGM/QA	SM/Valves/Engg	SDGM/Valves/ Purchase	AGM/QA&BE
Prepared By	Reviewed By				Approved By

BHEL recently received guidelines from Govt. Of India and Central Vigilance Commission and we have been asked to comply with the guidelines with regard to dealings with Indian Agent/Foreign Agent of Foreign Suppliers.

1. Mandatory submission of an Agency Agreement

- 1.1 It shall be incumbent on the Indian agent and the foreign principal to adhere to the relevant guidelines of Government of India, issued from time to time.
- 1.2 The Agency Agreement should specify the precise relationship between the foreign OEM/foreign principal and their Indian agent and their mutual interest in the business. All services to be rendered by agent/associate, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier/Indian agent. Any payment, which the agent or associate receives in India or abroad from the OEM, whether as commission or as a general retainer fee should be brought on record in the Agreement and be made explicit in order to ensure compliance to laws of the country.
- 1.3 In the absence of any agency agreement, BHEL shall not deal with any Indian agent (authorized representatives / associate / consultant, or by whatever name called) and shall deal directly with the foreign principal only for all correspondence and business purposes.
- 1.4 Agents will file an authenticated Photostat copy duly attested by a Notary Public / Original certificate of the Principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission / remuneration / salary / retainer ship being paid by the principal to the agent.
- 1.5 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the Foreign Principal.

2. Disclosure of particulars of agents / representatives in India

2.1 Tenderers of Foreign nationality shall furnish the following details:

- 2.1.1 The Bidder(s) / Contractor(s) of foreign origin shall disclose the name and address of the agents / representatives in India if any and the extent of authorization and authority given to commit the Principals. In case the agent / representative be a foreign Company, it shall be confirmed whether it is existing Company and details of the same shall be furnished.
- 2.1.2 The amount of commission / remuneration included in the quoted price(s) for such agents / representatives in India.
- 2.1.3 Confirmation of the Tenderer that the commission / remuneration, if any, payable to his agents / representatives in India, paid in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details:

2.2.1 The Bidder(s) / Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any, indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents / representatives.

2.2.2 The amount of commission / remuneration included in the price(s) quoted by the Tenderer for himself.

2.2.3 Confirmation of the foreign principals of the Tenderer that the commission / remuneration, if any, reserved for the Tenderer in the quoted price(s), paid in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.

2.3 Failure to furnish correct and detailed information as called for in paragraph 2.1 & 2.2 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by BHEL Besides this there would be a penalty of banning business dealings with BHEL or damage or payment of a named sum.

Please furnish the above information immediately