



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MM / RM / PURCHASE / TUBES

TITLE : Supply of Seamless Alloy 617 Tubes	Phone: +91 431 2577421 /2575730 Fax : +91 431 252 0719 Email : vkaruna@bheltry.co.in
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Reference Number: Enquiry 1501500011	Enquiry Date: 01.04.2015/25.04.2015	Due date for submission of quotation: 01.06.2015
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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.

Please note that under any circumstance both **delayed offer** and **late offers** will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the date tender opening.

Sub: Supply of Seamless Alloy 617 Tubes

Supply of Seamless Alloy 617 tubes and TDC: 127 Rev 00 & TDC:125 Rev 01

BHEL commercial terms & conditions with Price Bid formats 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) Bharath Heavy Electricals Limited) under enquiry reference "1501500011"

Tenders should reach us before 14:00 hours on the due date
Technical bid will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.

Yours faithfully,
For Bharath Heavy Electricals Limited

DGM/ PURCHASE/TUBES

V. KARUNAKARAN
Deputy General Manager
MM / Tubes / Purchase
BHEL, TIRUCHY - 620 014.

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

PHONE :2577447
GRAMS : BHARATELEC
FAX NO: 2520719
E-mail: agk@bheltry.co.in
Web:

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429-002/A

	Enquiry No 1501500011	Enquiry Date 25.04.2015 01.04.2015	Due Date for Quotation 01.06.2015
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order. <u>Bid should be submitted in Two Parts. 1. Techno-commercial Bid (Part-I) and 2. Price Bid (Part-II) in a separate sealed cover and both the covers must be placed in a Third Cover and Sealed. Our Enquiry No., Eng. date & Eng. Due date must be written on all Three covers.</u>			

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	154970010001 TUBE-52X11.9X10000-SB-167 UNS6617	M	340.000	340.00	30.12.15
20	154970033500 TUBE-21.3X4.78X3500-SB-167 UNS6617	M	7.000	7.00	30.12.15
30	154970042000 TUBE-63.5X18X2000-SB-167 UNS6617	M	4.000	4.00	30.12.15
40	154970056000 PIPE OD-33.4X9.09X6000-SB-167 UNS6617	M	6.000	6.00	30.12.15
50	154970066000 PIPE OD-48.3X10.16X6000-SB-167 UNS6617	M	42.000	42.00	30.12.15

This Enquiry shall be monitored by Independent External Monitor

Shri D.R.S Chaudhary, IAS (Retd.)
Flat No. L-202 & L-203 (1st Floor)
Ansal Lake View Enclave
Shamla Hills
Bhopal- 462 013 (M.P.)
Ph: +91 755 -4050495
dilip.chaudhary@icloud.com

General Note:

- 1) All the tubes are to be supplied fully meeting the TDC 127 Rev 00 & TDC 125 Rev 01.
- 2) All the enquiry terms & conditions are given in Annexure I. Supplier to submit the duly filled "Annexure-I & IP" along with the offer.
- 3)Tenders can be deposited in our tender box designated as "MM-TUBES-FB-150-SEC 25" located at discussion room, 4th floor, 24 building, With official date seal issued by our dispatch section located at 4th floor, 24 Building.

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

V. KARUNAKARAN
Deputy General Manager
MM / Tubes / Purchase

MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
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1501500011 / 01.04.2015/25.04.2015

4) All other relevant documents enclosed.

Enclosures:

"LD clause has to be confirmed without fail."

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The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

V. KARUNAKARAN
Deputy General Manager
MM / Tubes / Purchase

MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,

BHEL, TIRUCHY - 620 014.

**BHARAT HEAVY ELECTRICALS LIMITED
MM/RM/PURCHASE/TUBES
BHEL / TRICHY-620 014.**

ANNEXURE- I

Enquiry Terms & Conditions for Open tender 1501500011

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

SI No	BHEL Requirements	Supplier Comments (Acceptance or otherwise for each point to be given)
01	<p>Material specification: Material specification, OD, wall thickness & Length should be strictly as per enquiry.</p>	
02	<p>Specification, Size & Quantity:</p> <ol style="list-style-type: none"> 1) All materials are to be supplied fully meeting the material specification & Technical Delivery condition TDC: 127 Rev00 (for seamless tubes) & TDC 0:125 Rev01 (for seamless pipes) with respect to manufacturing route as mentioned. Point-by-Point confirmations is required for TDC. If there is any deviation, the same should be mentioned clearly in the offer itself. 2) The additional requirements for the above product over those given in the TDCs as mentioned below. <ol style="list-style-type: none"> A) For pipes manufactured to TDC 0:125 the tolerance shall be – OD:±1%, WT: ±12.5%. B) For tubes manufactured to TDC 0:127 the tolerance shall be as per TDC. C) Length Tolerance for both TDCs is: No negative tolerance (-0 mm), only positive Tolerance is allowed (+....).Payment will be made to the ordered length only. 3) Packing & preservation shall be strictly as per the TDC. 4) All tubes are to be supplied to the specific length detailed in the description. Any deviation in length has to be indicated in the offer itself. 	
03	<p>Offer Submission:</p> <ul style="list-style-type: none"> ➤ Please submit your offer in TWO part bid (technical cum commercial bid in one cover and price bid in another cover) in single cover. The Covers should be duly super scribed with the ENQUIRY NO and DUE DATE in BOLD letter without fail. ➤ The OFFER, sealed and Super scribed as "Parts 1 & II inside" indicating Enquiry No., Due Date, Address & Reference of the Bidder should reach this office on or before the due date by 14:00 hrs (IST). OFFERS RECEIVED AFTER 14:0hrs is (IST) WILL NOT BE CONSIDERED FOR EVALUATION. ➤ Bidders shall submit the OFFER in English language (a single envelope containing two inner envelopes)as indicated below: Envelope 1: This sealed envelope should contain <ol style="list-style-type: none"> (a) technical bid (b) un-priced commercial bid (copy of the Priced Bid without the price details) ➤ This envelope should be clearly marked "Part 1 - Technical and Un-priced commercial bid, indicating Enquiry No., Due Date, Address & Reference of the Bidder. ➤ Envelope II: This sealed envelope should contain price details. This envelope should be clearly marked "Part II - Price bid", indicating enquiry No., Due Date, Address & Reference of the Bidder. <p>Note: Bidders are requested to submit their offers only through sealed bids. As the part II (priced bid) will not be opened before the technical evaluation is completed, bidders are requested not to submit their bids through email/fax etc.</p> <ul style="list-style-type: none"> ➤ OFFER is to be addressed to: DGM /MM/PURCHASE/TUBES 4th Floor - Building 24 BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014 TAMIL NADU, INDIA. 	
04	<p>Terms of Delivery :</p> <p>A. Indigenous:</p> <ol style="list-style-type: none"> a) For Indigenous vendors, offers with "FOR" incoterm only will be considered. However, freight breakup is to be given in the offer. b) Any other extra charges like ED, CST/VAT etc. are to be indicated clearly. The offer will be evaluated on total landed cost to BHEL Trichy. c) MODVAT CREDIT: if any excise Duty is payable, the chapter head / sub-head reference and the rate of the duty should be quoted. If the tenderer is availing MODVAT credit for this input material, the effect of preformed credit should be passed on to the purchaser. Tenderer under MODVAT shall be preferred. <p>B. Imports:</p> <ol style="list-style-type: none"> a) Suppliers to quote their rates on FOB/Load Port basis/Containerised Cargo only. Stuffing of materials has to be done by Supplier in empty container provided by BHELs freight forwarder. We also request you to submit your quotations for the destination port of Karaikkal & Tuticorin in your offer without fail. The quote should be all inclusive of all charges, including testing packing, inspection etc. b) CFR rates will not be considered for evaluation. 	

	<p>c) The available load ports for FCL (Full Container Load) Cargo in Freight Contract are Antwerp, Hamburg, Genoa, Rotterdam, Bilbao, Gothenberg, Felixstowe, St.Petersberg, Busan, Dalian, Shanghai, Kobe, Osaka, Yokohama.</p> <p>d) The available load ports for LCL (Less than Container Load) Cargo in Freight Contract are Antwerp, Hamburg, Genoa, Rotterdam, Bilbao, Gothenberg, Felixstowe, Thamesport, Tilbury, Le Harve, St.Petersberg, Busan, Masan, Dalian, Shanghai, Tianjin, Kobe, Osaka, Yokohama, Singapore, Durban.</p> <p>e) The available load ports for BB (Break Bulk) Cargo in Freight Contract are Antwerp, Hamburg, Genoa.</p> <p>f) In case if the suppliers are unable to execute through the above ports with the available types of cargo loading (Reasons for the same to be mentioned), FOB rate along with ocean freight (LIFO basis) applicable upto Chennai to be quoted.</p>	
05	<p>Payment terms:</p> <p>A. Indigenous:</p> <p>i) BHEL Payment term is 100% direct EFT payment after 45 days from the date of receipt and acceptance of materials.</p> <p>ii) The duplicate copy of the invoice meant for the transporters should accompany the material as stipulated under C.E. rules 52a and 173c (or) 57gg. A Photostat copy of the above invoice for each Delivery Challan should be submitted along with the original bills routed through bank or submitted directly to BHEL finance department.</p> <p>iii) 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.</p> <p>iv) Payment through bank is not preferred. In case of payment through bank is opted by supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of goods to site/stores with consignee copy attached. In this case loading will be 3% on the offered value.</p> <p>v) Offers of indigenous Suppliers with payment terms as LC / Advance Payment are liable for rejection.</p> <p>B. Imports:</p> <p>i) 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.</p> <p>ii) 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.</p> <p>iii) 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.</p> <ul style="list-style-type: none"> ➤ In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value. ➤ For LC at sight the loading will be considered @ 3.5% on the offered Value. ➤ Normally CAD at sight and Confirmed LCs are liable for rejection. 	
06	<p>Delivery: The offer shall clearly indicate delivery period in fixed number of weeks/Months from the date of Purchase Order.</p>	
07	<p>Liquidated Damage (Indigenous & Imports):</p> <ol style="list-style-type: none"> 1. Liquidated damages shall be 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value. 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). 3. a) IMPORT: For CFR / CIF terms, LD will be calculated from the B/L date. For FOB terms, LD will be calculated from final inspection agency's signed date in the TC. b) INDIGENOUS: For "FOR Delivery terms", Lorry way bill date and for "Ex-work delivery terms" final inspection certificate date / intimation of readiness whichever is later will be taken for LD calculation. 	
08	<p>Risk Purchase clause : BHEL at its option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch 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.</p>	
09	<p>Performance Bank Guarantee : The Bidder, in the event of an order, should furnish a bank Guarantee from BHEL's consortium banks (List attached) or counter – guaranty by vendor's bank to BHEL's consortium banks, at no extra cost to BHEL, in a proforma prescribed by BHEL, provided along with the order, for an amount equivalent to 10% of the contract value. The BG shall be valid for period of 18 months from the date of last shipment or 12 months from the date of receipt / acceptance at BHEL, Trichy whichever is later, with a claim period of two months.</p>	
10	<p>Validity: Offer/Price validity of 60 days is required after the price bid opening in case you are technically and commercially qualified.</p>	
11	<p>Agency Commission :</p> <ul style="list-style-type: none"> ➤ In respect of offers from overseas suppliers, agency commission, if any, payable to their agents in India, shall invariably be shown separately in the Performa invoice and this will be paid by us in India, in Indian rupees, on 	

	<p>satisfactory completion of the contract.</p> <ul style="list-style-type: none"> ➤ It overseas principal has any tie-up with any third party in respect of agency commission it should be declared while submitting offers. ➤ Copies of current agency agreement / authorization letter in respect of agency commission shall be furnished along with offer, if not made available earlier. ➤ For calculation of rupee equivalent agency commission, exchange rate as prevailing on the date of order will be taken. 	
12	<p>General condition:</p> <ol style="list-style-type: none"> 1. In addition to TCs in relevant IBR forms corresponding mill TCs should also be provided along with dispatch of tubes. Three sets of original and one copy of all such TCs are to be provided to BHEL, trichy. 2. Acceptance of TC by BHEL before dispatch is must. 3. Material is to be inspected by third party inspection agency as approved by respective Inspection agency in case the Mill is not approved by IBR. 4. While despatching tubes, in addition to bundling with metal straps, we require for easy handling at loading and unloading points. 5. Transparent Rust preventive coating and packing should be such that the coating withstands atleast one year of storage at open yard on receipt of material. 6. We require the shipment of the tubes to be as per the dates mentioned against the individual items in the enquiry. 7. BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed. 8. Lowest price received against BHEL tenders need not be the technically acceptable one and in that case, BHEL reserves the right not to consider the same. 9. BHEL reserves the right to negotiate L1 rate or re-float the tender opened if L1 price is not the lowest acceptable price to them inter-alia other reasons. 10. Vendor should physically weigh the materials before stuffing them into Container and incorporate the same in BL and packing Slip. 11. Date of price bid opening will be informed later after acceptance of offer on technical ground. 12. No revision of prices will be entertained after the tenders are opened. 13. Supplier shall indicate the place of manufacture and mill name in the offer. 14. The Import supplier which is going to supply first time to BHEL (not supplied any materials earlier), the Payment will be made after 45 days of receipt & acceptance of materials at BHEL store. 15. Offer will be evaluated based on Landed cost to BHEL Trichy. 16. Tenders should be free from CORRECTION AND ERASURES, Corrections if any, must be attested. <ul style="list-style-type: none"> A) If, in the price structure quoted for the required goods, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly. B) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected. C) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (A) and (B) above. <p>Note: Bidders are requested to submit their offers only through sealed bids. As the part ii (priced bid) will not be opened before the technical evaluation is completed, bidders are requested not to submit their bids through email/fax etc.</p> 17. Fixed Price : All items should be quoted on "Per unit basis". Prices quoted by the bidder shall be fixed and not subject to any escalation whatsoever during the period of bid validity and execution of the Purchase Order. A bid submitted with an adjustable price will be liable or rejection. Prices shall be written in words and figures. In the event of any discrepancy with regard to total price and unit price Whichever is less shall be considered correct. All rates should include the third party inspection charges. RATES QUOTED SHALL BE INCLUSIVE OF ALL CHARGES INCLUDING PACKING, INSPECTION ETC. NO EXTRA PAYMENT WILL BE MADE IN ANY CASE. 18. Bid currency: Indian bidders should submit the prices only in Indian Rupees. Foreign bidders may submit their bid in their preferred currency. For the evaluation purposes the exchange rate (TT - Selling Rate of SBI) on technical bid opening date will be considered. 19. The offer is to be signed and sealed in original by the bidder without fail. 	

	<p>20. BHEL prefers the manufacturers to quote directly. In case this is not possible and the offer is being submitted by an Indian agent, the following details are to be furnished along with the offer:</p> <ol style="list-style-type: none"> The letter from their Principal authorizing the Indian agent to submit the offer on their Principal's behalf. In case the Indian agent submits offer on their own letter head then a covering letter (in original) from the Principal should be enclosed, clearly mentioning that they are bound by the offer submitted by the Indian agent on their behalf. Precise relationship between foreign suppliers and their Indian agents and their mutual interest in business, should be clearly spelt out Any payment, which the agent receives in India or abroad, from the foreign supplier, whether as a commission or as a general retainer fee is to be mentioned in the offer. All services to be rendered by the agent, whether of general nature or in relation to the particular contract, must be clearly stated by the foreign supplier and the Indian agent. The amount of agency commission agreed to between the foreign principal and the Indian agent should be specifically disclosed and the agency commission will be paid in Indian Rupees only on satisfactory completion of the contract. For calculation of rupee equivalent of agency commission, exchange rate as prevailing on the date of order will be taken. Copy of current agency agreement is to be enclosed. Offers with non-compliance to any of the above will be liable for rejection. <p>21. OFFER FROM TRADERS, RE-ROLLERS (only cold drawing of pipes/tubes), FABRICATORS, BORING/MACHINE SHOPS (only have lathe and machining facility), expanding process AND STOCKISTS ARE NOT ACCEPTABLE AND WILL NOT BE CONSIDERED FOR EVALUATION.</p> <p>22. BIDDERS WHO ARE NOT REGISTERED VENDOR OF BHEL TRICHY HAVE TO SUBMIT THE FILLED IN SUPPLIER REGISTRATION FORMS (SRF) AVAILABLE IN THE BHEL WEBSITE - www.bhel.com AND THE OTHER REQUIRED DOCUMENTS CALLED FOR IN THE SRF (INCLUDING D&B REPORTS FOR IMPORT VENDORS. ALONG WITH THE TECHNICAL BID WITHOUT FAIL. The same shall be scrutinized as per BHEL evaluation procedures. OFFERS SUBMITTED WITHOUT THIS WILL BE REJECTED</p> <p>23. ALL VENDORS (BHEL REGISTERED VENDORS OR NEW VENDORS) SHOULD SUBMIT AN EXPERIENCE CERTIFICATE DETAILING THE QUANTITY SUPPLIED SPEC WISE YEAR WISE ALONG WITH THE UNPRICED PO COPIES AND PROOF OF SUPPLY (SUCH AS INVOICE & BILL OF LADING COPIES) ALONG WITH THE OFFER FOR INCONEL MATERIAL/TENDERED SPECIFICATIONS AND TEST CERTIFICATES FOR THE SAME; FOR OFFER ACCEPTANCE. THE MANUFACTURER SHALL HAVE MANUFACTURED ATLEAST A MIN QTY OF 10 MT OF INCONEL MATERIAL/ TENDERED SPEC AND THE SAME SHALL HAVE BEEN SUPPLIED/IN USE/OPERATION.</p> <p>ALL VENDORS (BHEL REGISTERED VENDORS OR NEW VENDORS) SHALL SUBMIT - THE FACILITIES AVAILABLE AT THE MILL - STARTING MATERIAL TO FINISHED PRODUCT, MANUFACURING QUALITY PLAN, INSPECTION & TEST PLAN TO MEET THE TDC REQUIREMENTS) ALONG WITH THE TECHNICAL BID SHOULD BE SUBMITTED WITHOUT FAIL SPECIFIC TO INCONEL. The same shall be scrutinized as per BHEL evaluation procedures. OFFERS SUBMITTED WITHOUT THIS WILL BE REJECTED.</p> <p>24. If supplier is not a steel maker then source of raw material for the manufacturing of tubes shall be submitted.</p> <p>25. The manufacturer shall submit filled in tubes supplier facility report respectively. Offers submitted without this will be rejected. Suppliers without basic manufacturing facilities in-house, shall not be considered for evaluation.</p> <p>26. In house test facilities for mechanical, chemical & non - destructive testing are mandatory requirements for consideration of this offer.</p> <p>27. BHEL/End customer reserve the right to inspect the item ordered at any stage at vendor's works and if found not to meet the stipulated conditions, material is liable for rejection.</p> <p>28. Bidders are to confirm all the above points in their "Technical and unpriced commercial bid". Incomplete offers will not be considered. The technical documents submitted for consideration of offer is to be signed and sealed in original by mill without fail.</p> <p>29. 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.</p> <p>30. The offers of the bidders who are on the banned list as also the offer of bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on the BHEL website -www.bhel.com.</p>	
13	<p>Integrity Pact (IP): Signed Integrity pact should be furnished along with the offer. Offers without signed IP will not be considered for evaluation. IP should be signed by authorized official of the bidder / Vendor / Contractor. This tender will be monitored by IEM. Shri XXXX</p>	
(On behalf of BHEL)		<p align="center">SIGNED BY MANUFACTURER / MILL</p> <p>Name of Mill: Designation / Department: Seal & Signature</p>

BHEL Trichy-14	Quality Assurance	Technical Delivery Conditions
Product: Seamless Tubes of UNS N06617 (SB167) for Advanced Ultra Super Critical (AUSC) Boilers		
Document No. TDC: 0:127	Rev.No.00	Effective Date: 02/03/15
		Page 1 of 2

Record of Revision:

Rev 00 dt 02/03/15 – Fresh Issue

1. **SCOPE:** This TDC covers tubes of UNS N06617 (SB167) with wall thickness ≥ 3.6 mm, for use in AUSC boilers.

2. **MATERIAL:**

Specification : ASME SB167 (Latest on the date of Purchase Order)
Material : UNS N06617
Additional Requirement : As listed below (Supplementary to Specification)
Size and Qty. : As per Purchase order

3. **CHEMICAL COMPOSITION AND PROCESS:**

Material shall be produced by using vacuum induction melting (VIM) and vacuum arc re-melting (VAR) or electroslag refining (ESR).

Product Analysis: As per spec. Raw materials used in making of tubes including incoming scrap shall be checked by supplier to ensure freedom from radioactivity. Tubes shall be made by seamless process/ extruded process and shall be hot worked annealed or cold work annealed.

Heat Analysis in weight %: Test method as per ASTM E1473

Element	Cr	Fe	Mn	Mo	Co	Al	C	Cu	B	Si	S	N	Ti	Ni
Wt %	21-23	1.5 max	0.3 max	8-10	11-13	0.8-1.3	0.05-0.08	0.05 max	0.002-0.005	0.3 max	0.008 max	0.05 max	0.3-0.5	Bal

4. **DIMENSIONAL TOLERANCES & STRAIGHTNESS:**

Permissible outside diameter variation is ± 0.25 mm. Permissible wall thickness variations: – 0% to + 10% of the specified **minimum** wall thickness.

5. **HEAT TREATMENT:**

UNS N06617 – solution annealed condition at 1150 °C to 1180 °C (suggested temperature).

6. **MECHANICAL TESTS:**

Extent of test: for each size/heat/HT batch; on final heat treated condition samples:

Quantum of Tests: (as per IBR): Minimum two tubes for first 100 tubes and one per 100 or part thereof for tubes over 100 numbers

UNS N06617: Tensile Strength: Min 665 Mpa, Yield Strength (0.2% off set): Min 240 Mpa, Elongation (L=5.65√A), min 35%

Micro: Grain size ASTM 3 to 5

7. **NON-DESTRUCTIVE TESTING & HYDRO TESTING: (Preferably on-line automated)**

Each tube shall be examined for its integrity of full section over its entire length.

Ultrasonic Testing: For thickness equal to and greater than 3.6 mm UT shall be conducted as per ASTM E213. Calibration: 2 axial notches (one ID & one OD) and two transverse notches (one OD and one ID) shall be used to standardise the system settings (to draw DAC). Notch shall be of length 50mm and depth 5% (maximum) of nominal thickness of job (Minimum depth shall be 0.3 mm and maximum 1.5mm). For OD less than 30mm axial, transverse notches in outer surface (OD) is sufficient for calibration. The direction of scanning shall be clockwise & anti clockwise. Scanning shall be done with scanning sensitivity of reference level plus 6 dB. Evaluation shall be carried out with reference sensitivity.

Acceptance criteria: Any discontinuity crossing the DAC shall not be acceptable irrespective of length. Any discontinuity with indication less than DAC shall be sized and if the length of discontinuity is greater than 10 mm it shall not be acceptable. All indications shall be sized and reported

Hydro testing: Extent of test: On all tubes as per ASME SB 829 Cl 5.2 with S = 163MPa.

8. **MARKING :**

Details to be identified on each tube continuously along the entire length (in English only):

1) PO Number 2) Maker's emblem/code 3) Specification & grade 4) Heat number 5) Size, 6) No. of tubes, 7) Inspector's seal 8) Condition: Hot finished or Cold Finished

i) Below OD 31.8mm.(Excl.)- Sl.No:1 to 8 to be stamped on metal/plastic tag attached to bundle.

ii) OD 31.8-76.1mm.(Incl.) - Sl.No: 1 to 5 and 8 to be paint stenciled on each tube, Sl.No:1 to 8 to be stamped on Metal/Plastic tag attached to bundle.

iii) OD>76.1 mm. - Sl.No: 2,3,4,5 & 7 to be hard stamped with round edge stamp at 100mm from both ends and Sl.No:1 to 5 and 8 to be paint stenciled on each tube.

9. WORKMANSHIP AND FINISH:

The Inside & outside surfaces of the tubes shall be free from any imperfections. The material shall be plain, uniform in quality and condition, smooth, straight or flat and free of wrinkles, overlaps, tears, cracks & defects like laps, seams, folds, cracks, pitting etc. No repairs/weld repairs permitted. Tubes (inside & outside) to be cleaned to remove scales after HT.

10. PACKING:

Thickness ≤ 2.5mm. in boxes and others in bundles. Tubes of thickness ≥ 6.5mm and OD ≥ 88.9 can be shipped loose. Bundles to be ≤ 4 tons of equal no. of tubes, fastened with galvanized strap (1x25mm.min.) or annealed wire for CS & AS and by Nylon strap for SS at both ends & at 1m interval in between. Wooden pallets to cover tubes are not permitted. Tube ends shall be closed with plastic end caps / plugs secured for storage.

11. INSPECTION & CERTIFICATION:

- a) Products shall be inspected at works and the applicable IBR Form must be Countersigned by the Inspecting Authority as indicated below:
- b) Imported Items: Inspecting Authority approved by IBR for the Country of origin (To be concurred by BHEL before placing PO). Indigenously Supplied items: Boiler Inspectorate/Directorate of respective State.
- c) Certification in IBR Form-IIIE for IBR items from "IBR-Well Known tube Maker" and for Others IBR Form-IIIB as per enclosed format to be submitted.
- d) Manufacturer's Test certificate (MTC) (ORIGINAL in ENGLISH with following details):
 - i) Purchase Order No. (BHEL), TDC No. & Test certificate No., Size and Quantity-Melt wise.
 - ii) Specification and Grade with year of code, Code case number, Heat Number, Tube making process, chemistry including incidental elements-Ladle and product Analysis.
 - iii) Supplier TC of the alloy used in making the finished product – Well known steel maker IBR Form IV & others Form IVA.
 - iv) Details of ingot, Melting & forming process, Chemistry including incidental elements - Heat wise.
 - v) Heat treatment details of the material and test bars, Mechanical test results, creep test report with reference & acceptance standard.
 - vi) NDE examination test results with reference & acceptance standard.
 - vii) Results of dimensional data sheet

All the tests specified here shall be carried out at works and the test results shall be furnished in the test certificates (4 copies). The jobs shall be inspected and certified by the inspecting agency authorised by BHEL, as specified in the purchase order.

12. QUALITY PLAN

Before start of production the manufacturer shall submit a Manufacturing and Inspection plan (MIP) to BHEL product QA for approval. The MIP shall constitute of:

- | | | |
|---|--|---|
| i) Melting & refining, | vi) Internal tests and inspection before final heat treatment, | xi) Marking preservation and dispatch, |
| ii) Ingot weight and type, | vii) Final heat treatment along with parameters, | xii) Test instructions for NDE examinations along with sketches |
| iii) Hot rolling/extrusion process percentages, | ix) Test and inspections after heat treatment | xiii) Type of machining and examinations. |
| iv) Top bottom end discard percentages, | | |
| v) Position of the part in ingot, | x) Test certificate requirements, | |
| vi) Preliminary heat treatment, | | |

13. AUDIT CHECKS AT BHEL

BHEL reserves the right to carry out audit checks for chemistry, HT condition, mechanical test and NDT on representative test samples or job. Supplies found defective during check or subsequent processing at BHEL are liable for rejection.

	 AM 2/3/15	 2/3/15	 02/03/15	
Haritha.C/QA	Kalyanaraman.V/ QA	Selvarajan.S/QA	Ravibharath.R/WRI	Revisankaran.U/QA
Prepared by	Reviewed by		Approved by	

Record of Revision:

Rev 00: 06/10/14: Fresh Issue

Rev 01: 10/12/14: Cl 2, 4, 5 and 9 corrected

1. Material:

Specification	:	ASME SB167 (Latest on the date of Purchase Order)
Material	:	UNS N06617
Additional Requirement	:	As listed below (Supplementary to Specification)
Size and Qty.	:	As per Purchase order

2. Chemical Composition and Process:

Material shall be produced by using vacuum induction melting (VIM) followed by vacuum arc re-melting (VAR) or electro slag refining (ESR). Any other suitable melting and re-melting process shall be used only after approval from the purchaser.

Product Analysis: As per spec. Raw materials used in making of pipes including incoming scrap shall be checked by supplier to ensure freedom from radioactivity. Pipes shall be made by seamless process/ extruded process and shall be hot worked annealed or cold work annealed.

Heat Analysis in weight %: Test method as per ASTM E1473

Element	Cr	Fe	Mn	Mo	Co	Al	C	Cu	B	Si	S	N	Ti	Ni
Wt %	21- 23	1.5 max	0.3 max	8-10	11-13	0.8- 1.3	0.05- 0.08	0.05 max	0.002- 0.005	0.3 max	0.008 max	0.05 max	0.3- 0.5	Bal

3. Dimensional Tolerances & Straightness:

- OD/ID and Wall thickness tolerances as per BHEL PO and relevant Drawing.
- The Pipes shall not deviate from straightness by more than 1mm in any one shall not be more than 6mm over the entire length. A sharp bend at the end or kink and twist are not acceptable. These limitations are applicable for any given plane.

4. Heat Treatment:

UNS N06617 – solution annealed in the range 1150°C to 1175°C.

5. Mechanical Tests:

Extent of test: one sample/for each size/heat/HT batch; on final heat treated condition samples:

UNS N06617: Tensile Strength: Min 665 MPa, Yield Strength (0.2% off set): Min 240 MPa, Elongation ($L=5.65\sqrt{A}$), min 35%

Microstructure: Grain size ASTM No 2 to 5.

6. Non-destructive testing & Hydro testing: (Preferably on-line automated)

Each tube shall be examined for its integrity of full section over its entire length.

Eddy current testing: Eddy current testing shall be conducted as per ASTM E 571. 100 % area shall be inspected to ensure absence of surface and sub-surface defects.

Ultrasonic Testing: For thickness equal to and greater than 3.6 mm UT shall be conducted as per ASTM E213. Calibration: 2 axial notch (one ID & one OD) and 2 transverse notch (one ID & one OD) shall be used to standardise the system settings (to draw DAC) for circumferential scan and axial scan respectively. Notch shall be of length 50mm and depth 3% (maximum) of nominal thickness of job (Minimum depth shall be 0.3 mm). For OD less than 30mm one notch in outer surface (OD) is sufficient for calibration. The direction of scanning shall be clockwise & anti clockwise for circumferential scan to find longitudinal discontinuity and two axial direction for axial scanning to find transverse discontinuity. Scanning shall be done with scanning sensitivity of reference level plus 6 dB. Evaluation shall be carried out with reference sensitivity.

Acceptance criteria: Any discontinuity crossing the DAC shall not be acceptable irrespective of length. Any discontinuity with indication less than DAC shall be sized and if the length of discontinuity is greater than 10 mm it shall not be acceptable. All indications shall be sized and reported.

Hydro testing: Extent of test: On all pipes as per ASME SB 829 Cl 5.2 with S = 163MPa.

7. Workmanship and Finish:

The Inside & outside surfaces of the pipes shall be free from any imperfections. The material shall be plain, uniform in quality and condition, smooth, straight or flat and free of wrinkles, overlaps, tears, cracks & defects like laps, seams, folds, cracks, pitting etc. Localised imperfections, if any, may be removed by skin machining only to a surface finish of ≤ 6.3 microns ensuring the wall thickness, inside and outside diameter. Local depressions or ground spots are not acceptable. No repairs/weld repairs permitted. Pipes (inside & outside) to be clean & shot blasted to remove scales after HT.

8. Marking & Packing:

Details to be identified: On Each Pipe 1) Heat number 2) Specification & grade 3) Size 4) Maker's emblem/code, 5) No. of pipes 6) Inspector's seal.

- i) Upto OD 31.8 (Excl.) – Sl.No: 1 to 7 to be stamped on metal or plastic tag attached to bundle.
- ii) OD 31.8 to OD 76.1 (Incl.) – Sl.No:1 to 5, 7 to be paint stencilled on each pipe, 1 to 7 to be stamped on metal or plastic tag attached to bundle.
- iii) OD > 76.1- Sl.No: 2,3,4,5 & 7 to be hard stamped with round edged stamp at 100mm from an end of each pipe and 1 to 5 to be paint stencilled on each pipe.

9. Inspection & Certification:

- a) Products shall be inspected at works and the applicable IBR Form must be Countersigned by the Inspecting Authority as indicated below:
- b) Imported Items: Inspecting Authority approved by IBR for the Country of origin (To be concurred by BHEL before placing PO). Indigenously Supplied items: Boiler Inspectorate/Directorate of respective State.
- c) Certification in IBR Form-IIID (Annexure – I) for IBR items from “IBR-Well Known Pipe Maker” and for Others IBR Form-IIIA (Annexure – II) as per enclosed format to be submitted.
- d) Manufacturer’s Test certificate (MTC) (ORIGINAL in ENGLISH with following details):
 - i) Purchase Order No. (BHEL), TDC No. & Test certificate No., Size and Quantity-Melt wise.
 - ii) Specification and Grade with year of code, Code case number, Heat Number, Steel & Pipe making process, chemistry including incidental elements-Ladle and product Analysis.
 - iii) Supplier TC of the steel used in making the finished product – Well known steel maker IBR Form IV & others Form IVA.
 - iv) Details of steel ingot, Melting & forming process, Chemistry including incidental elements - Heat wise.
 - v) Heat treatment details of the material and test bars, Mechanical test results with reference & acceptance standard.
 - vi) NDE examination test results with reference & acceptance standard.
 - vii) Results of dimensional data sheet
- e) Survey meter shall be used to measure radioactive contamination at 5cm near the surface. Acceptance limits: Shall be less than 0.1 milli Rontgen (MR) per hr or 1 micro Sievert per hr. The Measured Radioactivity levels shall be reported in the Mill Test Certificate. (Not to be recorded in IBR Form).

All the tests specified here shall be carried out at works and the test results shall be furnished in the test certificates (4 copies). The bars shall be inspected and certified by the inspecting agency authorised by BHEL, wherever specified in the purchase order.

f) Quality Plan:

Before start of production the manufacturer shall submit a Manufacturing and Inspection plan (MIP) to **BHEL product QA** for approval. The MIP shall constitute of:

- | | | |
|---|--|---|
| i) melting & refining, | vi) internal tests and inspection before final heat treatment, | xi) marking preservation and dispatch, |
| ii) ingot weight and type, | vii) quality heat treatment along with parameters, | xii) test instructions for NDE examinations along with sketches |
| iii) hot rolling/extrusion process | ix) test and inspections after heat treatment | xiii) type of machining and examinations. |
| iv) top bottom end discard percentages, | x), test certificate requirements, | |
| v) position of the part in ingot, | | |
| vi) preliminary heat treatment, | | |

g) 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 are liable for rejection.

h) End Use

To be used in pipes of boilers and headers for Advanced Ultra-Super Critical (AUSC) boiler applications.

		 10/12/14		
Haritha.C/QA	Ravibharath.R/WRI	Kalyanaraman.V/ QA	Selvarajan.S/QA	Revisankaran.U/QA
Prepared by	Reviewed by		Approved by	

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 60 DAYS FROM THE DATE OF COMPLETION OF WARRANTY PERIOD)

PERFORMANCE BANK GUARANTEE

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at "BHEL House", SIRI Fort, New Delhi 110 049) through its High Pressure Boiler Plant Division located at Tiruverumbur, Tiruchirapalli- 620 014 (hereinafter called 'the Company') having entered into a contract withhereinafter called ' the said contractor ' which term includes 'suppliers' for the purpose of this Bond and under the terms and conditions of the contract No..... Dt Between BHEL, Trichy and as per the contract, the contractor / supplier is to furnish a performance Bank guarantee for Rs. for the due performance of the equipment to be supplied under the above referred contract and for the fulfillment of all the terms and conditions of the contract, We(indicate the name of the bank) (herein after referred to as the bank) at the request of (Contractor(s)) do here by undertake to pay the company an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by the company by reason of any breach by the said contractor (s) of any of the terms and conditions contained in the said agreement.

2. We(indicate the name of the bank with full address), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the contractor(s) 'failure to perform' the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____.

3. We undertake to pay unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(indicate the name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till_____Office / Department/ Division of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (I) Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.

(ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack.Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.

6. We(indicate the name of Bank), further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealised.

9. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirapalli.

10. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authorities granted to him/them by the guarantor.

11. We(indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we....., (indicate the name of Bank) have hereunto set out
Bank Seal the _____ day _____ month 200
BANK E-MAIL ID:
BANK PHONE NO.
BANK FAX NO:

List of Consortium Bank		
	Nationalised Bank	Nationalised Bank
1	Allahabad bank	19 Vijaya Bank
2	Andhra bank	Public Sector Banks
3	Bank of Baroda	20 IDBI
4	Canara Bank	Foreign bank
5	Corporation bank	21 CITI Bank N.A
6	Central bank	22 Deutsche Bank AG
7	Indian Bank	23 The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24 Standard Chartered Bank
9	Oriental bank of Commerce	25 The Royal Bank of Scotland N.V.
10	Punjab National Bank	26 J P Morgan
11	Punjab & Sindh Bank	Private bank
12	State Bank of India	27 Axis Bank
13	State Bank of Hyderabad	28 The Federal Bank Limited
14	Syndicate Bank	29 HDFC
15	State Bank of Travancore	30 Kotak Mahindra Bank
16	UCO Bank	31 ICICI
17	Union Bank of India	32 Indusind Bank
18	United Bank of India	33 Yes Bank

List of Consortium Bank	
Nationalised Bank	Nationalised Bank
1 Allahabad bank	19 Vijaya Bank
2 Andhra bank	Public Sector Banks
3 Bank of Baroda	20 IDBI
4 Canara Bank	Foreign bank
5 Corporation bank	21 CITI Bank N.A
6 Central bank	22 Deutsche Bank AG
7 Indian Bank	23 The Hongkong and Shanghai Banking Corporation Limited
8 Indian Oversea Bank	24 Standard Chartered Bank
9 Oriental bank of Commerce	25 The Royal Bank of Scotland N.V.
10 Punjab National Bank	26 J P Morgan
11 Punjab & Sindh Bank	Private bank
12 State Bank of India	27 Axis Bank
13 State Bank of Hyderabad	28 The Federal Bank Limited
14 Syndicate Bank	29 HDFC
15 State Bank of Travancore	30 Kotak Mahindra Bank
16 UCO Bank	31 ICICI
17 Union Bank of India	32 Indusind Bank
18 United Bank of India	33 Yes Bank

INTEGRITY PACT

Between

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

and

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

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

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

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

Section 1 – Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
- 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved

in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

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

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

Section 4 – Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

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

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

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

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

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the

Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

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

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal)

Place-----

Date-----

Witness: _____

Witness: _____

(Name & Address) _____

(Name & Address) _____

Sl.No	Sequence		
1.0		Name of the Company	
		Address of the Registered Office (Telephone, E-Mail, Fax)	
1.1		Factory Location and Address (Telephone, E-Mail, Fax)	
1.2		Installed Capacity (Tonnes / Year)	
		4.1) Carbon Steel	
		SA 192	
		SA 210 Gr. A1, C	
		SA 106 Gr. B, C	
		Riffled Tube / SA 210 Gr. C	
		4.2) Alloy Steel	
		SA 335 P11, P12, P22	
		SA 213 T11, T22	
		SA 335 P91, SA 213 T91	
		SA 335 P23, P92	
		SA 213 T23, T92	
		Riffled Tube /	
		SA 213 T12, T22, T23	
		3) Stainless Steel	
		ASME & ASTM A 213 TP 304, 304L, 316, 316L, 316LN, 317, 317L, 321, 310S	
		SA 213 TP 347H, 347HFG, Super 304H	
		Inconel – (mill to mention standard & grade)	
1.0	Steel		
1.1		Whether the firm has Integral Steel making facility?	
		If yes,	
		IBR APPROVAL FOR Steel	
1.1.1		Type of Furnace	
		Refining Facility: AOD/VOD	
1.1.2		Capacity of furnaces (Metric Tonnes / Melt)	
		Other refining,	
1.1.3		Facility for manufacture of Blooms	
		Testing Facilities	
		Mechanical,	
		Chemical	
		NDE if any	
		Identification Co Relation with TC.	
		If No,	

1.1.4		Source of Raw Material (Blooms)	
1.1.5		(If there is a requirement for steel of non-China source, is there some way of segregating and ensuring)?	
1.1.6		For C.S the Sources of Procurement - are they IBR approved?	
1.2.1		Type of Steel bought Concast or Rolled Bloom or both etc	
1.2.2		For Alloy Steels the Sources of Procurement - are they IBR approved?	
1.2.3		Sources of procurement for Inconel -	
1.2.4		What are the controls on steel suppliers? What is the type of NDE done on the Raw material?	
1.2.5		What is the surface condition of Raw Materials?	
1.2.6		What is the Incoming Inspection methodology	
1.2.7		How are the Raw Materials identified?	
1.2.8		What is the certification for the Raw Materials? Review a typical Test Certificate.	
1.2.9		What is the identification and traceability scheme followed?	
1.3		Any other Aspect of Storage? Space, chances of mixing up etc	
1..4		How are the blooms cut? Shear or gas cut? Surface freedom from cracks?	
		Source of Raw Material (HOLLOWS)	
		For S.S the Sources of Procurement - are they IBR approved?	
		What is the surface condition of Raw Materials?	
		What is the certification for the Raw Materials? Review a typical Test Certificate.	
		What is the Incoming Inspection methodology	
		What is the identification and traceability scheme followed?	
		Any other Aspect of Storage? Space, chances of mixing up etc	
2.0	Manufacturing facility		
2.1.1		Diameter (Minimum and Maximum),	
2.1.2		Thickness (Minimum and Maximum) and Length (Maximum)	
2.1.3		Through Hot Finishing	
2.1.4		Through Cold Finishing	
2.1.5		Type & Make of rolling mill along with the details of the Individual Equipments	
2.1.6		Type & Make of Cold Mill along with the details of the Individual Equipments	
2.2		Type and capacity of furnace for Heating and reheating of material	
2.3		Dimension Control especially w.r.t eccentricity in	

		each WC	
2.4		Method of maintenance of traceability, including in the case of drop out billets in process? 1). The process materials should have clear bundle tags as in SSTP. 2). The chances of mixing of bundles any where in the plant to be noted. 3). The method of handling the bundle from raw material stage to Despatch stage to be assessed to identify any change for missing traceability. 4). The availability of Grade Test equipments and its working condition.	
2.5		Extent of cropping of thickened ends? Practice followed?	
2.6		Temperature gauge calibration and the temp correlation as it travels through the Furnace	
2.7		Atmosphere maintenance in furnace (oxygen levels)	
2.8		Type of descaling facility at rolling mill and finishing mill	
2.9		Straightening facility at the end of mill	
2.10		Finishing temperature measurement at the end of Reducing and sizing mill ... The length of the cooling bed?	
3.0	Heat Treatment		
3.1		Size and capacity of furnace	
3.2		Type of Heat Treatment Carried out (batch or continuous)	
3.3		Temp measuring equipment availability and their calibration	
3.4		Maintenance of Furnace atmosphere to avoid scaling	
3.5		Heat treatment records and their verification and maintenance	
3.6		Surface appearance of finished pipes/tubes	
3.7		Straightening facility after Heat Treatment	
3.8		Identification of pipes after Heat Treatment	
4.0	Testing Facility	Online UT Facilities (Kraut Kramer) Type of scanning, defect identification and defect segregation	
4.1		On line eddy current test facility.	
4.2		Calibration Pipes and Tubes	
4.3		Procedure and Calibration procedure, Rework and retesting procedure	
4.4		Qualification of NDE operator	
		Removal of residual magnetism	
4.5		Hydraulic Test Facility (Indicate the Maximum Pressure, Auto or manual,)	

4.6		Calibration of instruments for Hydraulic Testing,	
4.7.		Inspection: 1). Method of Inspection: Visual, Dimension, Operator Qualification, Inspn. Procedure . 2). Grade Checking method and its effectiveness. 3). Type of defects and frequently or mostly occurring defects. 4). % acceptance level. 5) Sorting, Identification of defect, Traceability of rejected material.	
4.7.1		1). List of measuring Instruments. 2). Calibrations Status of measuring Instruments. Gauss meter	
4.7		Chemical Testing Details of Equipment availability and their calibration	
4.8	Instruments	Mechanical Testing and the calibration	
4.8.1		Capacity of UTM	
4.8.2		Capacity of Flaring machine and flattening machine	
4.8.3		Correlation with test specimen and product	
4.8.4		Knowledge on Codes and job	
4.8.5		Hardness Testing facility and calibration	
4.8.6		Micro-examination facility	
5.0		Descaling facility	
5.1.1	Final Cleaning & Identification	Type	
5.1.2		Finish	
5.2		System of Maintenance of Correlation	
5.3		The type of removal of shallow surface defects in the case of pipes (local grinding is not permitted. The surface should be skin turned)	
5.4		Facility for Hard stamping and Correlation with Certificates	
5.5		Facility for Longitudinal Colour Coding all the tubes (a mandatory requirement)	
5.6		Final Cleaning & Identification	Quality of end capping?
5.7		Dimensional checks and uniformity in length	
		Facility for rust preventive oil coating	
		Quality of RPF	
		Method of stenciling (Size of the letter)	
6.0	Certification	System of Certification & correlation of materials	
6.1		Readiness to supply TC in soft form In case a uniform format is prescribed by BHEL ... when BHEL goes in for a data capture system for auto-generating TC Extracts?	
6.2		Feasibility for third party inspection at the time of critical tests like NDE?	
7.0		Details of Accreditation for Quality Systems	