

BHEL :: BAP :: RANIPET
PURCHASE DEPARTMENT

ANNEXURE-A TO OPEN TENDER REF: 5340759E DT 29.09.2014

ANNEXURE-A

Sealed Tenders are invited from prospective suppliers for supply of ID & OD Controlled Seamless Steel Tubes as per Scope, Size, Specification, Standards and Quantities as listed below.

LAST DATE FOR SUBMISSION OF BID: 21.10.2014 BEFORE 14:00 HRS IST

BID OPENING DATE:21.10.2014 AT 14:30 HRS IST

SCOPE : SUPPLY OF ID & OD CONTROLLED SEAMLESS STEEL TUBES

SNO	MATERIAL CODE	SIZE	SUPPLY LENGTH	MATERIAL SPECIFICATION	UNIT	QTY	DELIVERY SCHEDULE	
							QTY	DLY. DATE
01	150984926500	SS TUBE ID & OD controlled, 745x615mm	6370mm	16 MO3/ 15 MO 3 & BHEL TDC:RTF:303/06	No	4	4	60 days from date of PO
02	150982094470	SS TUBE ID & OD controlled, 457x357mm	4470mm	13 CR MO 4-5 & BHEL TDC:RTF:303/06	No	1	1	60 days from date of PO
03	150982204801	SS TUBE ID & OD controlled, 298.7x266.7mm	4800mm	P235 TR 2/ST 37 & BHEL TDC:RTF:303/06	No	1	1	60 days from date of PO
04	150982204100	SS TUBE ID & OD controlled, 298.7x266.7mm	4100mm	P235 TR 2/ST 37 & BHEL TDC:RTF:303/06	No	1	1	60 days from date of PO
05	150984505200	SS TUBE ID & OD controlled, 560x480mm	5200mm	P235 TR 2/ST 37 & BHEL TDC:RTF:303/06	No	4	4	60 days from date of PO
					No	11	11	

Note:-

1. Quantity Tolerance: Not Applicable & Number of tubes to be ensured
2. All the tubes shall be supplied as per TDC:RTF: 303/06 and despatched with rust preventive oil coating.
3. The contract delivery date is the date of receipt at BHEL Stores for suppliers in India and the date of dispatch clearance given by BHEL for overseas suppliers.
4. BHEL prefers to deal directly with the Main producers only.
5. In case of supplies from any new foreign supplier, material inspection shall be carried out by Third Party Inspection Agency like Lloyds or SGS or BVQI prior to shipment at Supplier's work and total inspection charges shall be borne by the supplier only.
6. In case of offer with equivalent material grade, then copy of the entire specification of that equivalent material grade shall be sent along with the techno-commercial bid without fail.
7. In case of late offer, the same will be returned to the supplier without opening



ANNEXURE – B to OPEN TENDER: 5340759E/ 29.09.2014
FOR SUPPLY OF ID & OD CONTROLLED SEAMLESS STEEL TUBES
DUE ON 21.10.2014
STANDARD TERMS & CONDITIONS
(FOR GUIDANCE TO THE SUPPLIERS)

A] Submission of Offer

Sealed tenders super-scribed with Tender Number, Due Date, Item Name & Supplier's Name and Validity of the Offer shall be addressed to Manager / Purchase (Steel), Bharat Heavy Electricals Limited, Ranipet – 632 406, Tamilnadu, INDIA, so as to reach him on or before the date and time specified in the tender. It shall contain two sealed covers in one envelope.

Sealed envelope super-scribed, with Tender Number, Item Name, Tender Due Date & Supplier's Name, Validity of the offer/s containing:

Cover I: Techno-Commercial and Unpriced Bid

Sealed Cover super-scribed "Cover I – Techno-Commercial and Unpriced Bid" containing:

- a) **Complete technical Offer** with details, catalogues, as applicable.
- b) **Un-priced bid** (i.e. Bid without the Price),
- c) **Filled-in BHEL's Standard Terms & Conditions** as per Annexure C- enclosed with the Tender Document,
- d) **All relevant enclosures** of above documents / formats, if any.
- e) **Deviation summary** submitted in two parts – giving the summary of technical deviations separately and the commercial deviations separately, if any and
- f) **Supporting documents** to substantiate equivalent material specifications / sections, where quoted for.
- g) **Clientele list** with their full address including detail of contact person with phone no., fax no. & e-mail ID (if any) to whom the same / similar items are supplied in the past two years. The date of supply may also be indicated, against each client.
- h) **Bidders who are not already registered with BHEL Ranipet** are requested to submit the filled in Supplier Registration Forms (SRF) available in the BHEL website-ww.bhel.com and the other required documents called for in the SRF (D&B / Credit reform for import vendors, the facilities available at the mill – starting material to finished product, manufacturing quality plan, inspection & test plan to meet the TDC requirements) along with the technical bid. In addition, vendors may submit an experience certificate detailing the quantity supplied specification wise year wise along with the unpriced PO copies and proof of supply along with the offer for all the tendered specifications. Technical acceptance of offer by BHEL, shall be based on the evaluation of offer and the submitted documents.
- i) **Authorization Letter:** Such of those tenderers who wish to participate in the Tender Opening, should attach an authorization letter which shall be duly signed and stamped in original, identifying the representative to be deputed for tender opening.

Note

- (i) The materials offered, shall conform to the specification and scope attached in the tender.
- (ii) In case the offered materials are not conforming to the Enquiry material Specification, such offers would not be considered for evaluation and would be rejected. Where equivalent specifications and sections are offered considering such offers will be at the sole discretion of BHEL. Wherever alternative standards / specifications are offered by Bidder, the Bidder shall provide sufficient documentary evidence to ensure



equivalence to the designated standards / specifications, failing which the offer would be considered as not technically acceptable and hence shall stand rejected.

(iii) All taxes and duties payable as extra to the quoted price should be specifically stated in offers. Offer from within India shall be submitted along with CST & TIN No. / Tariff No. etc, failing which the purchaser will not be liable for payment of such taxes and duties. Our TIN No. 33243560005, CST No. 239383/11.06.91, BHEL ECC No. AAACB4146PXM008.

(iv) The un-priced bid is to be used to indicate relevant commercial implications without indicating price.

(v) Commercial terms are to be indicated clearly in the offer.

(vi) No changes shall be entertained once the bid is opened unless otherwise specifically agreed to in writing by BHEL.

(vii) Money values shall not be indicated anywhere in the un-priced bid.

(viii) Time required for inspection (at Supplier's works), should be clearly given in terms of numbers of working days

(ix) It is advised that all the pages and annexure to the Techno-Commercial bid should be serially numbered, including indicating the total number of pages.

Sealed envelope super-scribed Cover - II (Price bid), with Tender Number, Item Name, Tender Due Date & Name of the Supplier and Validity, containing:

Sealed Cover super scribed "Cover II –Price Bid" containing:

Price Bid in conformance with the commercial terms as per Cover- I.

a.) The Prices shall be indicated in both figures and words, clearly specifying the currency used. Differential foreign currencies may not be used in a given offer.

b.) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the 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.

c.) 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; and

d.) if there is 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 of (b) and (c) above.

e.) if there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser the bid is liable to be ignored.

Note

(i) 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).

(ii) No Price Variation Clause will be entertained and No advance payment will be made by BHEL.

(iii) 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 (Cover I) shall hold good and the commercial term quoted in the Price Bid (Cover II) shall not be considered.



- (iv) In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes.
- (v) The quotation should be valid at least for a period of 90 days from the tender opening date.
- (vi) Offers should be submitted in two sets, one original and one copy.
- (vii) The offers should invariably contain Signature (ink-signed) & Office Stamp of the Supplier. Any corrections / erasures in the offers should be initialled and stamped.
- (viii) Indian bidders should submit the prices in Indian Rupees only.
- (ix) Foreign bidders may submit their bid in foreign currency. The currency should be clearly indicated in the un-priced commercial bid as well as in the price bid.
- (x) Indian Suppliers shall quote on FOR Destination basis only. Destination is BHEL, Ranipet Stores. Foreign Suppliers shall quote on FOB Delivery. Delivery shall be on FOB Sea-Port basis and with the add-on freight charges to the FOB Price, to arrive at the C&F price/s. No other delivery terms shall be acceptable. The Port of delivery shall be a popular and commonly used international sea port. Freight charges for carriage from port of dispatch to Chennai Sea shall be separately indicated in the price bid. (C&F Charges). All home port charges like Quay Dues, Bill of Lading issue charges, ISPS, Loading permit charges, Handling Charges and all and any other charges shall be borne by the Seller only. In case the order/s are released on FOB basis, ocean transit would be arranged by the freight forwarder nominated by BHEL, details of whom would be included in the Purchase Contract. In the event that the order is released on C&F basis, shipment shall be arranged by the Seller. As per Government of India guidelines, BHEL Ranipet being a Government of India Undertaking the Bill of Lading shall be made with the Shipper as "Government of India". This shall be specifically confirmed by the Bidder.
- (xi) Where the cargo is containerized, Container stuffing charges would be to the account of the supplier, where the containers are to be stuffed at the works of the supplier. In case of of FOB contract/s, containers would be arranged by the freight forwarder of BHEL.
- (xii) Port to Port carriage would be arranged through shipping agent nominated by Government of India / BHEL in the case of Sea Shipments and
- (xiii) List of shipping agents would be a part of the Purchase Contract.

B] Opening of Offers

a) Tenders shall be received up to 1400 Hours on 21.10.2014 and be opened on the same day at 1430 Hours. Tenders received after 1400 Hours would not be opened. The times indicated are Indian Standard Time (IST). Tenders received after 14:00 Hrs would be designated as "Late Offer" and would be returned back to the Bidder unopened.

b) Supplier shall submit two covers (Cover-I techno-commercial bid & Cover-II price bid) in one envelope only. If one cover containing all the bids techno-commercial bid & price bid together, the **bid is liable for rejection**. The decision to accept such bids shall be the sole discretion of BHEL, which may be done by BHEL after segregating the bids so received.

c) Such of those Tenderers who wish so, may participate in the Tender Opening by deputing their representatives. The representatives would be allowed to participate in the Tender opening only on submission of a signed and stamped authorization letter issued by the Supplier. Representatives without the Authorization Letter would not be allowed to participate in the Tender Opening. Representatives who turn up after the Tender opening time / start of the Tender opening would not be allowed to participate. After tender opening the details would not be given to such suppliers who choose to be absent at the time of Tender opening.



d) Details such as the Technical Specification, Delivery Terms, and Delivery Period and the Price details in the event of the sealed price bid opening, alone would be read out by the Tender Opening Officer. No other data will be read out.

e) In exceptional cases, at the discretion of BHEL, in the event of the named representative (named in the Tender Document) is unable to come due to unavoidable circumstances, then an alternative representative would be allowed, where the alternative representative should carry a revised original authorization certificate. Suppliers are advised to avoid such situations to avoid embarrassments on both sides and

f) If so required, BHEL reserves the right to open the Price-Bids, 'in-camera'. Intimation to this effect would be given to the Supplier by BHEL, before the opening of the Price-Bids.

g) Price Bid opening will be done through conventional public sealed bid mode / Reverse Auction method (English method). All tenderers would have to specifically give their acceptance for this in their bid/s.

Note

(i) Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be provided in ENGLISH language only.

(ii) 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.

(iii) Specifications are the basic essence of the "Item". and all deviations shall be summarized and provided in a "Deviation Statement", listing the points and the deviation against each point, and

(iv) BHEL reserves the right to increase or decrease the tendered quantity and would order on more than one vendor at the lowest acceptable price to BHEL. In ordering on more than one source, the ratio of quantity split will be in the ratio of 70:30. BHEL reserves the right to split the quantity of the enquiry. In case of split 70% qty will be ordered on the original lowest bidder (L1) and balance 30% on the next higher bidder excluding H1, who accepts the L1 price. However, final decision to split the order rest with BHEL only. In case BHEL decides not to split the order Bidders would be asked to give the "Negative impact" price arising out of BHEL's decision to move away from splitting the order. In such cases, both the original price bid and the negative impact price bid would be opened to arrive at the final prices, in the event BHEL decides the mode of price bid opening as "Sealed Bid Opening". In the event that the other than L1 suppliers do not accept the L1 price, then the balance 30% will be reverted to the original L1 and the original L1 shall be bound to accept the balance 30% of the enquiry quantity kept reserved for order splitting. This decision would be given by BHEL within 60 days of the price bid opening.

(v) 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.

C] Evaluation of Offers

a) The price bids including the negative impact price of the technically acceptable offers alone, contained in Cover II shall be opened.

b) All bidders shall submit their offers by filling-in the format of the BHEL tender documents. Offers received in any other format are liable to be rejected. Offers are asked in BHEL's format for purpose of standardisation - to help in the offer evaluation.

c) Offer with any pre-conditions (like conditional discounts) for price are liable to be not considered / rejected. For evaluation the such conditions would be removed and only the base offer would be considered for evaluation and comparison.

d) 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. The revised offer 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 shall not be changed on account of the technical discussions.

e) BHEL reserves the right to reject without assigning any reasons / load any offer with factors other than already specified for such offers having deviations to BHEL Specifications, Standard Terms & Conditions at its discretion. The decision of BHEL in this regard shall be final.

f) BHEL reserves the right to reject an offer due to unsatisfactory past performance during tender finalisation / execution of a contract at any of BHEL projects / units or if unsatisfactory performance report is received from the party/s referenced by the supplier at any time during tender finalisation.

g) BHEL reserves the right to operate Purchase / Price preference to Government of India Undertakings, which shall be given as per the guide lines of Government of India given from time to time and / or relax the Terms and Conditions of the tender.

h) For the purpose of comparing prices, tender prices shall be converted to Indian rupees and the conversion shall be made by using the TT Selling rate of State Bank of India (SBI) prevailing on the date of opening of Techno-Commercial/Unpriced bids. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. This exchange rate will be followed till placement of order.

i) 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 and If so required by BHEL, Supplier may have to share their costing sheet with BHEL.

D] Execution of the Order

a) BHEL will have the option to pre-inspect the materials at Supplier's works by BHEL's own inspector or by third party agency appointed by BHEL or BHEL's end customer/s but this does not absolve the Supplier from giving the specifications as agreed upon.

b) In the case of overseas suppliers Inspection call for carrying out the inspection shall be given 30 days before the scheduled contract delivery date. BHEL requires clear 10 days notice to arrange for inspection. The Inspection date/s given by the Supplier shall be on firm basis. For local Suppliers the Notice period of Inspection shall be 10 working days.

c) Deviations, if any pointed out by the visiting Inspection team of BHEL shall be corrected and the items as per specification shall be dispatched on or before the contract delivery date.

d) The final inspection for acceptance will, however, be carried out at BHEL's works at Ranipet.

e) The contract delivery date is the date of receipt at BHEL Stores for suppliers in India and the date of dispatch clearance given by BHEL for overseas suppliers.

f) Travel & other local stay cost for the Inspectors sent by BHEL will be to BHEL account, but other Inspection Charges, if any shall be to the account of the Seller only.

g) 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 and as per BHEL TDC.

h) Foreign suppliers shall dispatch on FOB or C&F agreed Sea-Port basis, according to the contract conditions. Indian suppliers shall dispatch on free delivery (door-delivery) at BHEL stores basis only. Unloading the materials at BHEL Stores would be to the account of BHEL only.

i) 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.



j) Materials shall be dispatched only after getting the dispatch clearance of BHEL (Dispatch clearance would either be faxed / e-mailed as a scanned document / couriered.) and

k) Terms of payment:

i) Indigenous Suppliers: 100% payment will be made directly thru' EFT within 90 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet. If any supplier is asking for payment terms other than the above specified, then suitable loading on cost will be considered. **Loading of any deviation in the payment terms w.r.t tender terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders.**

ii) Foreign Suppliers "100% thru' irrevocable & unconfirmed LC at sight within 3 weeks from the PO date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid upto the PO delivery period and 15 days thereafter for negotiation. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. **BHEL reserves the right to load the price of foreign suppliers in order to bring them on common platform as per Indigenous Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 90 days.**

m) Any incidence of tax like Income tax, Service Tax and with holding any other similar tax / duties /levies imposed by the Government of India, or the State Government, where the BHEL Unit is located, deductible at Source, during the tenure of the Order shall be deducted by BHEL and necessary certification of the deduction (Tax deduction at Source) would be given.

n) The Guarantee period shall start from the "Date of receipt and acceptance of the materials at BHEL Stores."

E] Liquidated Damages Clause:

BHEL will levy penalty as Liquidated Damages (LD), for delay in delivery. The damages shall be at the rate of ½% per week or part thereof subject to a maximum of **10%**. The contract delivery date for purpose of L.D is the date of receipt at BHEL Stores for suppliers in India and the date of dispatch clearance given by BHEL for overseas suppliers. Supplier shall deduct the applicable LD from the first payment when raising the claim for the same. The applicable LD if any would be communicated by BHEL along with the dispatch clearance. The LD would apply on the undelivered portion only. In case of reasons attributable to BHEL for the delay in delivery (for e.g. delay in arranging the pre-inspection) then the delivery time would be reset to the extent of the time delay attributable to BHEL, with waiver of the LD. Delivery being the essence of BHEL's contract requirements, In the event that a **Supplier does not accept the LD condition above, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above.**

F) Miscellaneous

i) Role of Agents:

BHEL prefers to deal directly with the Main producers only.

BHEL strongly discourages the engagement of Agents in India by foreign principals, to deal with BHEL, in BHEL's tenders.

BHEL will not enter into any correspondence with an Indian Agent.

The Indian Agent will not be extended the privilege given to the principals, such as that of attending the tender openings, attending technical discussions, commercial discussions or price negotiations and such like.

In case, in spite of the above, a foreign principal insists on engaging an Indian Agent, It is made clear by BHEL that:

It is the sole responsibility of the foreign principal to ensure the Agent does not represent any other foreign principal in a given tender.



An undertaking to this effect shall be given by the foreign principal that his / her Agent does not represent any other foreign principal in the tender. This document shall form a part of the techno-commercial offer.

If at any stage of the tender, BHEL finds that an Indian Agent has represented more than one foreign principal, all such offers of and all the foreign principals would be disqualified summarily in the tender inquiry. BHEL will only give an intimation of notice of the disqualification. No correspondence would be entertained by BHEL, on their decision. Such decision of BHEL shall be irrevocable, firm and final and shall be binding on the tenderer.

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 status of their proposed agent vis-à-vis BHEL.

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.

In the event of the foreign principal engaging an Indian Agent:

a) The Supplier shall furnish an authenticated copy of the Agency Agreement with his agent detailing the precise relationship between them and their mutual interest in the business along with techno-commercial bid.

b) The Supplier shall furnish original authorization letter for the Indian Agent. The letter shall contain name, contact person, complete postal address including phone, fax and e-mail ID. It shall also spell out the type of services to be rendered by Indian Agent.

c) Indian Agent & Agency commission: An Indian Agent can represent only one Foreign Manufacturer against a particular Tender. The FOB price quoted by the foreign bidder shall include the agency commission. However, the agency commission component payable to their Indian Agents shall be shown separately in the Offer, either as a lump-sum or as a percentage of the quoted price. This will be paid by BHEL in Indian Rupees, on satisfactory receipt & acceptance of the materials. For calculation of Rupee equivalent of Agency Commission, exchange rate as prevailing on the date of Purchase Order will be taken and

d) For all discussions, technical clarification and negotiations etc. only the principal would be authorized for interaction with BHEL. The Agent shall not be a party to the discussions / negotiations and would not be normally allowed to participate.

ii) Terms & Conditions of Letter of Credit (L/C) for overseas suppliers (indicated for acceptance).

a) Unconfirmed irrevocable Letter of Credit at Sight only will be opened by BHEL. Confirmation of L/C is not preferred by BHEL. Also L.C will be opened in Lots in line with the staggered delivery.

b) All Bank charges out side India are to the Supplier's account and within India to BHEL's account.

c) In case of L/C extension caused by delays attributable to the Supplier, the L/C extension / commitment charges are to be borne by the Supplier.

iii) Other terms & conditions for letter of credit: - Documents for negotiation

a) Signed Commercial invoice in quadruplicate, for a value not exceeding the draft amount, quoting the import Licence No and certifying goods evidencing shipment of the merchandise are as per Applicant's Purchase Order. The amount of invoice after deducting Indian Agent's commission, if any, should not exceed the Credit amount. (The Indian agent's commission, if any, is payable in India in Indian rupees only.)

b) Certificate of Country of Origin, from the country of manufacture, issued by the Chamber of Commerce.

c) One set of Original and two sets of Non-negotiable copies of 'signed', 'unmarked', 'clean on board' Ocean Bill of Lading, showing Shipper as "Government of India" Account M/s. Bharat Heavy Electrical Ltd, Unit: BHEL, Ranipet as consignee (The opening bank should not be notified as consignee), marked freight payable / prepaid at destination.



- d) Packing list in 4 copies in English, indicating Size wise Number of bundles / pieces shipped and weight.
- e) Certified copy of the fax / e-mail sent by the beneficiary to the applicant giving the following particulars of shipment, as the insurance is to be arranged by the Applicant in India: (a) Purchase Order Number & date; (b) Bill of Lading Number & date (c) Name of vessel; (d) Port of Loading; (e) Number of bundles / pieces and weight; (f) Invoice Number, date and value (g) Purchase Order item number's despatched. The cable / fax is to be sent within 2 working days of shipment.
- f) Beneficiary's certificate showing the relevant airmail / courier reference no. and date that the following clauses have been complied with:
- 1] Beneficiary to forward by Registered Airmail / Courier one complete set of original documents and one set of non-negotiable documents within 3 working days of obtaining shipping documents to Regional Manager (ROD), Bharat Heavy Electricals Ltd, No. 165, Thambu Chetty Street, Chennai – 600 001. India. (Phone: +91-44-25341249, 25341240 / Fax - +91-44-25340787; e-mail: raja@rodchn.bhel.co.in)
 - 2] Beneficiary to courier at his cost 3 copies of complete set of non-negotiable documents to the Officer who released the Purchase Order.
 - 3] Declaration by the Supplier certifying that the contents in each case are not less than those entered in the invoices / packing list and that the invoicing for the supplies effected is strictly in accordance with agreed rates as stipulated in the Purchase Order.
 - 4] Declaration to the effect that all other documents as per purchase order has been couriered to the Purchase order releasing authority
 - 5] The carrying steamer should be seaworthy, less than 25 years of age and approved by Lloyds / Classification Societies / General Insurance Corporation of India from time to time and
 - 6] Copy of Dispatch Clearance / Instruction issued by BHEL.

iv) Documents to be sent directly to the Purchaser prior to shipment

- a) Manufacturer's Original Internal Inspection / Test certificate in triplicate.
- b) Manufacturer's Original Guarantee certificate as per Purchase Order. The material shall be guaranteed for a period of 12 months from the date of acceptance of the materials at BHEL stores or 18 months from the date of dispatch whichever is earlier. The acceptance would be evidenced by the Stores Receipt Voucher (SRV) which will be raised by BHEL.
- c) Inspection / Test Certificate issued by BHEL / Inspection agency specified in the Purchase Order. In the event that Inspection prior to dispatch is not carried out by the Engineers of BHEL, the Inspection certificate of the third party so authorized by BHEL and
- d) Any other documentation as specified in the Purchase Order.

v) Conditions for transportation:

- a) All shipping documents shall show the Purchase Order Number & Date, Import Licence Number & Date, and Letter of Credit Number & Date.
- b) Transshipment is to be avoided.
- c) Loading on deck is not permitted. The transport document must not contain a provision that goods may be carried on deck.
- d) A transport document which is produced or appearing to have been produced by reprographic, automated or computerized systems or as carbon copy will be accepted as an original document provided that it is marked as original and is ink-signed.
- e) The transport document must contain all the conditions of carriage on the original document.



- f) The transport document must not indicate the place of destination as being different from the port of discharge.
- g) The transport document must not contain the indication 'intended' or similar qualification in relation to the vessel or other means of transport or port of loading or port of discharge.
- h) The transport document must be issued by the carrier or his agent and not by any freight forwarder.
- i) Transport documents bearing reference by stamp or otherwise, to costs additional to the freight charges are not acceptable.
- j) The Bills of Exchange must be dated and presentation of documents for negotiation must not be later than 15 days after the date of shipment and in any case not later than the expiry date of the Credit.
- k) Material shall be dispatched through the agency nominated by BHEL.
- l) Indian suppliers shall dispatch the materials on freight prepaid and on door-delivery basis (FOR Destination – Destination: BHEL Stores) and
- m) 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.

G) Reverse auction (RA) / on-line bidding on internet:

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 2.a. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.
2. b. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit "online sealed bid" in the Reverse Auction. Non-submission of "online sealed bid" by the bidder for any of the eligible items for which techno commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.



7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for noncompliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.]
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“ , which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL goes for reverse auction & depending on the number of bidders, the H1 bidders (whose quotes are highest in online sealed bid) may not be allowed to participate in further RA process. Further, in case of sufficient vendors, exclusion of H1 bidders may get extended up to 20%.

H] Force Majeure

If at any time during the currency of this contract, the performance in whole or in part, by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events), then provided notice of happening of any such events is given by either party to other within ten days from the date of occurrence thereof, neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

I] Cancellation of Order:

In the event of non-performance of the contract by the Supplier, BHEL reserves the right to cancel the order with issue of a written notice. BHEL would provide a curing period of 30 days, for the Supplier to rectify the situation. If the Supplier fails to rectify the reason/s that led to the issue of cancellation notice by BHEL, then the cancellation order would be issued automatically by BHEL, without further recourse to the Seller. BHEL will not pay any cancellation charges or any other charges / damages to the Supplier, arising out such cancellation. In the event of the non-performance of the supply contract, by the Supplier, the rights of BHEL include, in addition to cancelling the order, to take alternate purchase action at the cost and risk of the



supplier. The additional expenditure to be incurred by BHEL in such alternate purchase would be to the account of the supplier. (Risk Purchase). This remedy would be in addition to the invoking of the CEBG on grounds of failure of the Supplier in executing the Contract and any other legal remedies."

J] Contract Execution Bank Guarantee:

To demonstrate the fidelity of the successful bidder, in executing the Contract, on receipt of the Letter of Intent / Purchase Order, the Supplier shall arrange to provide a contract execution bank guarantee (CEBG). The format of the CEBG is a part of this enquiry. The format may be downloaded and necessary stamping may be obtained from the Banker towards submission of the CEBG. The indigenous suppliers have to provide the CEBG from any one of the Nationalized Banks, listed in the annexure to these terms. Overseas suppliers can submit the CEBG from any of the reputed International / National Bankers. However the CEBG is to be confirmed by any of the Bankers listed by us. In the event of failure by the Supplier to execute the contract either fully or partially, BHEL would encash the entire CEBG. The CEBG shall be valid for the period covering the agreed delivery date of the order with a further claim period of 3 months on the last specified delivery date. In the event of the failure of delivery BHEL would proceed with encashing the CEBG without reference to the Supplier. In the event of BHEL granting extension of the delivery dates, then the CEBG validity shall also be got extended by the Supplier to the extent of the extended delivery times together with the claim period as specified elsewhere. **The CEBG shall be for a value of 2% of the Purchase order.** **Suppliers who are all already registered with BHEL and having a vendor performance rating of A or A+ grade would be exempted from submission of CEBG.**

K] Others

- a) In case of any contradiction in the terms and conditions given here and elsewhere in the other documents of the tender, it shall be the responsibility of the tenderer to get it clarified from BHEL. The officer authorized to provide such clarifications is Manager / Steel Purchase e-mail: pandian@bhelrpt.co.in
- b) Alterations to the conditions of the Tender can be done only by the authorized officer, at any time before the date and time of tender opening. Such changes, if any, would be communicated in writing and / or hosted in the web-page.
- c) **Applicability of Integrity Pact:-** Integrity Pact are applicable for all the BHEL enquiries whose estimated value is equal to or more than Rupees 10 Crores. Submission of duly-filled & signed BHEL standard format of Integrity Pact (without any deviation) by Suppliers along with the un-priced (Techno-Commercial) bid is pre-requisite condition for evaluation of the offer. Copy of Integrity Pact with applicable nominated IEM is attached along with the tender documents for ready reference of Suppliers. 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.
- d) The laws governing this transaction shall be the laws in India.
- e) Wherever not specified, Inco terms 2010 shall be used to interpret the Commercial terms and conditions and
- f) In the event of an order, Supplier shall agree to settlement of disputes or differences, if any, by way of arbitration, in accordance with the "Rule of Arbitration" of the Indian Council of Arbitration.

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.



**ANNEXURE - C TO OPEN TENDER No: 5340759E / 29.09.2014 FOR ID & OD CONTROLLED SEAMLESS STEEL TUBES
CHECK LIST STANDARD COMMERCIAL TERMS & CONDITIONS**

S No.	BHEL Standard Terms	Supplier Confirmation	Deviation (if any)
01	Terms of Delivery:		
(a)	Indigenous Supplies : FOR - Destination means FOR - BHEL Stores, Ranipet [Packing & Forwarding, Freight & Insurance are in Supplier's scope i.e. included in the quoted prices. Unloading at BHEL Stores would be to the account of BHEL only].		
(b)	Foreign Supplies : FOB basis inclusive of SEA Worthy packing and inclusive of all charges till FOB Freight charges up to Chennai Port also to be quoted separately.		
02	Delivery Period: To mention clearly the exact delivery period as it attracts contractual penalty on delays.To be indicated in weeks from date of receipt of Purchase Order (P.O)		
03	Liquidated Damages (LD) : The applicable LD shall be at the rate of 0.5% per week to maximum of 10% for the undelivered portion and for the deliveries made beyond the agreed Delivery Period. Delivery being the essence of BHEL's contract requirements, in the event that a Supplier does not accept the above LD condition, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above.		
4 (a)	Terms of payment for Indigenous Suppliers: 100% payment will be made directly thru' EFT within 90 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet. If any supplier is asking for payment terms other than the above specified, then suitable loading on cost will be considered. Loading of any deviation in the payment terms w.r.t tender terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders.		
4 (b)	Terms of Payment for Foreign Suppliers: "100% thru' irrevocable & unconfirmed LC at sight within 3 weeks from the PO date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid upto the PO delivery period and 15 days thereafter for negotiation. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. BHEL reserves the right to load the price of foreign suppliers in order to bring them on common platform as per Indigenous Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 90 days.		
05	Whenever there is an Indian Agent to represent a Supplier, it is mandatory to give the details of services to be rendered by Indian Agent and / or the details of agreement between Supplier and Agent. Supplier to indicate the Agency Commission payable. Indian Agency Commission will be paid only in Indian Rupees, calculated at the rate of exchange prevailing on the date of price bid opening. This is payable on satisfactory completion of the contract. Agency agreement copy shall be submitted along with Annexure-C without fail. 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 one Suppliers all such offers will be rejected.		



**ANNEXURE - C TO OPEN TENDER No: 5340759E / 29.09.2014 FOR ID & OD CONTROLLED SEAMLESS STEEL TUBES
CHECK LIST STANDARD COMMERCIAL TERMS & CONDITIONS**

S No.	BHEL Standard Terms	Supplier Confirmation	Deviation (if any)
06	Guarantee Certificate: To be submitted. Guarantee regarding manufacturing defect should be for a period of 12 months from date of acceptance of the materials at BHEL Stores, or 18 months from the date of shipment whichever event occurs earlier.		
07	Contract Execution Bank Guarantee (CEBG): The Supplier shall submit a BG for 2% of the contract value valid for the agreed delivery period + 3 Months. Attached CEBG Format is to be signed and submitted along with Annexure-C as a token of acceptance. Please note no deviation is allowed.		
08	Validity: Supplier to mention clearly the validity date of the offer. Minimum 90 days from first tender opening date and 60 days from the date of the Reverse Auction/Price bid opening date;		
09	Clientele List: Supplier to submit detailed clientele list with their full address including detail of contact person with phone no., fax no. & e-mail ID as per clause A(j) of Annexure - B (STANDARD TERMS & CONDITIONS).		
10	Reverse Auction (R/A) / Bidding through Internet: Supplier confirmation required.		
11	Taxes & Duties:		
(i)	Excise duty in % (for Indigenous supplier): To be indicated by supplier. ED invoice is required for availing Cenvat. benefit		
(ii)	Sales tax in % (for Indigenous supplier): VAT / CST to be indicated by the supplier. In case of TNVAT, VAT input credit will be restricted to 2% only.		
12	Test Certificate: To be submitted. With Chemical and Mechanical properties and dimensions as per Standards and our Technical Delivery Conditions		
13	Risk Purchase Clause (as per clause-I of Annexure-B) (Supplier Confirmation Required)		
14	For Foreign Offers:		
(i)	Manufacturers' Name and address:		
(ii)	Country of Origin:		
(iii)	Nearest loading Seaport;		
(iv)	Ocean freight rate per MT		
(v)	Approximate weight and cubage of the consignment.		
15	Firm price till completion of order		
16	Inspection before despatch at supplier's works by BHEL/TPI agency		
Signature & Office Seal of Vendor			

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 2 MONTHS FROM THE DATE OF COMPLETION OF SUPPLIES)

CONTRACT EXECUTION 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 Boiler Auxiliaries Plant located at Ranipet – 632 406, (hereinafter called 'the Company') having entered into a contract with M/s.....
..... hereinafter 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, Ranipet and as per the Contract, the Contractor / Supplier is to furnish a Contract Execution Bank Guarantee for Rs.....in words.....
.....for the due performance of the contract and for the fulfillment of all the terms and conditions of the contract.

Sign and seal of issuing bank
Please affix Non Judicial Stamp
here, as per Stamp Act

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

1. We.....
.....
.....(Bank's name, Branch, Place – address to be mentioned [herein after referred to as the Bank) at the request of.....
.....(Contractor(s)] do hereby undertake to pay the company an amount not exceeding Rs.....in words
.....
.....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.....
.....
.....(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.....in words.....

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

3. We undertake to pay conditionally 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.....(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 Purchase Department 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(date) (After 2 months from the date of completion of supplies) 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.

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

6. We.....(name of the 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. The guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency of or change in the constitution of the Contractor, but shall in all respects and for all purpose be binding and operative until all payments of all moneys due or that may hereafter become due to the said company or settled irrespective of any liability or obligation of the Contractor under the said Contract.

9. 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 from the Contractor shall, at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.


10. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Ranipet, Tamilnadu Jurisdiction.

11. The Bank declares that it has powers to issue this Guarantee under the Bank's Memorandum and Articles of Association and the undersigned has full powers to do so on its behalf under the power granted to him by the proper authorities of the Bank.

12. We(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.....
(name of Bank) have hereunto setout Bank Seal the.....
day of.....month 2014.

Sign and seal of issuing bank.

	Technical Delivery Condition (TDC) FOR SEAMLESS STEEL PIPES	Doc Ref:	TDC:RTF:303
		Rev No.	06
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1.0 SCOPE

1.1. This TDC specifies the requirements for supply of seamless steel pipes for use as fan shafts.

1.2. Steel grades covered are:

- a) P235TR2 of EN 10216-1
- b) SA 106 Gr B/C
- c) 13 Cr Mo4-5 of EN 10216-2
- d) 16 M03 of EN 10216-2
- e) SA 335 P12 and P22


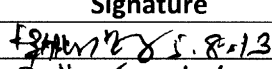
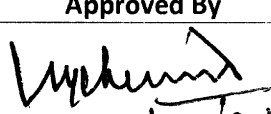
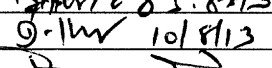
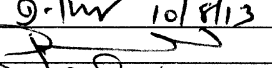


2.0 Chemistry and mechanical properties


2.1. Chemistry shall be as per specification.

2.2. Mechanical properties and heat treatment required shall be as per following table and acceptance norm is as per respective specifications.

Material	Heat Treatment Condition	Mechanical Properties at room Temp.	Additional mechanical properties	Remarks
*P235TR2 of EN 10216-1	Normalized or normalizing formed	Tensile, yield, % elongation	--	Old designation St 37
SA 106 Gr B/C	Normalizing	Tensile, yield, % elongation	--	--
*16M03 of EN 10216-2	Normalized or normalizing formed	Tensile, yield, % elongation and impact at + 20°C	Yield strength at 450°C	Old designation 15 M03
*13Cr M04-5 of EN 10216-2	Normalizing/ Hardening and tempering	-do-	-do-	Old designation 13 Cr Mo44
SA 335 P12 & SA 335 P22	Normalizing and tempering	Tensile, yield, % elongation	--	--

*Note: Mechanical properties for the tube thickness above 60 mm shall be same as that of 60 mm thick tube.

Prepared By	Reviewed By	Signature	Approved By
	Engineering (fans)		 12/08/2013
	QC (Proc)		
	Material Planning		
	Purchase		
	QA		
Issued By		QUALITY ASSURANCE	

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3.0 Dimensional Control

3.1. The pipes may be machined/treated both on the inner and outer diameter to meet the tolerances as mentioned below.

- a) Internal diameter shall be within $\pm 1\%$ of specified value subject to maximum of ± 4 mm.
- b) External diameter shall be within 0 to +3 mm of specified value.
- c) Concentricity of the bore shall be within 0.5 mm and out of straightness shall not be more than 1 mm on entire length.
- d) Surface roughness shall be Ra 6.3 microns or finer.
- e) Pipe ends shall be square to the pipe axis.

4.0 Ultrasonic examination

- a) Reference standard: ASTM E 213.
- b) Scanning direction: Both circumferential directions.
- c) Calibration notch:
 - i. V or U type
 - ii. Depth: 5% of specified tube thickness subject to minimum of 0.3mm and maximum of 1.5 mm.
 - iii. Width: Maximum 1.5 mm.

5.0 Marking, Preservation and Packing:

5.1. Pipe shall be stamped either on the face or at a distance of 300 mm from pipe end with the following details.


- a) Supplier name/emblem
- b) Specification and grade
- c) Melt No.
- d) Size

5.2. Each pipe shall be supplied loose with rust inhibitive **paint** on inner and outer surfaces to withstand marine corrosion.

6.0 Test Certificate

6.1. The supplier shall furnish test certificate in English as per 3.1 of EN 10204 for the following properties.

- a) Chemistry - melt wise
- b) Tensile strength, yield strength, % of elongation, impact energy, Elevated temperature yield strength --- (see Cl.2.2.)
- c) Ultrasonic examination results -- (see Cl.4.0)

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Record of revisions

Rev No.	Clause	Revision made	Date
00	--	Original issue	15 12 93
01	--	Title Modified	16 08 95
	1.3	Deleted	
	2.1	Mechanical requirements are Brought under this clause.	
	2.2	Pipe machining requirements Included	
	3.1	Normalizing for St.37 and SA 106 Gr.B/C included.	
	4.0	UT requirements are detailed	
02	8.0	Clause modified to include 3.1 Format of TC	23 05 97
	--	Clause Nos. are updated	
	1.3	Clause added	
	2.2	Editorial correction	
03	5.1	Tolerance on thickness removed & tolerance on OD is included	08 12 98
	5.2	Deleted	
	1.3	Clause Added	
	1.2 & 2.1	SA 106 Gr.C added	
04	2.2	Ra for surface roughness is included	02 05 02
	5.3	Straightness requirement added	
04	--	Totally modified	01 06 07
05	--	Material designation modified inline with revised standard. Grades SA 335 P22 and P12 are added and St 35.8 is deleted.	05 08 13
06	5.2	Revised as Rust inhibitive paint.	