

BHARAT HEAVY ELECTRICALS LIMITED

MM/RM/PURCHASE/C&F

BHEL / TRICHY-620 014.

ANNEXURE-A-Rev 01**ENQ NO-1402000034**

Date: 03-11-2020

Enquiry Terms & Conditions for Supply of Fittings as per DIN EN 10253-2 Gr.1.5415 (16Mo3)

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

Any deviation to the below mentioned terms shall be stated specifically in the comments column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation. (If otherwise mentioned).

Sl No	BHEL Requirements	Supplier Comments
01	<u>Material specification:</u> Supply of Fittings as per DIN EN 10253-2 Gr.1.5415 (16Mo3) shall be made strictly as per NPCIL Specification TDC-AT:2 Rev 02 and Special Condition Annexure as mentioned in the enquiry.	
02	<u>Specification, Size & Quantity:</u> a) All the Fittings as per DIN EN 10253-2 Gr.1.5415 (16Mo3) are to be supplied fully meeting the applicable NPCIL Specification TDC-AT:2 Rev 02 and Special Condition Annexure. If there is any deviation, the same should be mentioned clearly in the offer itself. b) Inspection agency for Indigenous suppliers – BHEL & NPCIL. c) Supplier has to provide acceptance for the NPCIL approved generic QAP furnished by BHEL. d) Point wise confirmation for Special Condition Annexure 1 shall be provided by the supplier (Annexure enclosed).	
03	<u>Offer Submission:</u> ➤ Offer is to be submitted in TWO part bids system (Technical bid + Price bid) in the E-Procurement portal. Scan copy of the filled Annexure-A, Tender documents etc., shall be uploaded in the EPS portal. ➤ The offer is to be submitted within 2.00 P.M on or before the due date. ➤ After the scrutiny of technical bids, price bids of only techno-commercially qualified offers shall be opened with prior intimation.	
04	<u>Authorization for participation in EPS portal through DSC:</u> i) <u>E-Tender Participation requirements</u> Either Principal or authorized agent shall register their Digital Signature Certificate (DSC) (Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION). Suppliers are advised to go through the FAQ available in the web portal (www.bhel.abcpurchase.com). DSC shall be registered for the authorized person and all transaction done using that DSC against our tenders shall be taken as valid communication and shall be binding on principal/agent and is valid legally.	
05	<u>Validity:</u> The offers shall be kept open for acceptance for 180 days from the date of Tender opening. Once the tenders are submitted, rates cannot be changed on any grounds.	
06	<u>Delivery:</u> The offer shall clearly indicate delivery period in fixed number of Weeks/Months from the date of Purchase Order.	

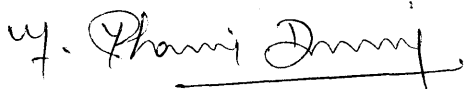
07	<u>Goods and Service Tax (GST)</u> <u>Indigenous suppliers:</u> 1. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration No (GSTIN) which should be clearly mentioned in the offer. If the dealer is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Dealers under composition scheme should declare that he is a composition dealer supported by the screen shot taken from GST portal. The dealer has to submit necessary documents if there is any change in status under GST. 2. Supplier shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No. which is linked/uploaded in GSTN network shall be clearly indicated), Billed to party (with GSTIN) & Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc. 3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code). 4. Invoices will be processed only upon completion of statutory requirement and further subject to following: - Vendor declaring such invoice in Form GST ANX-1 - Receipt of Goods or Services and Tax invoice by BHEL 5. As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on despatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2). 6. In case of discrepancy in the data uploaded by the supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL. 7. In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor 8. In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor. 9. Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor. 10. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contracts. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number. 11. GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.	
08	<u>Terms of Delivery:</u> A. <u>INDIGENOUS:</u> - Bidders should submit their offer for FOR Destination -BHEL Stores, Trichy. The quote should be inclusive of all charges, including testing, packing & forwarding, inspection, Insurance etc. (Ex-Works offers will not be considered). - The soft copies of the Invoice, LR copy & Test certificates shall be forwarded to BHEL immediately after dispatch.	



09	<u>Payment terms:</u> Indigenous: BHEL Payment term is 100% direct EFT payment after 60 days from the date of receipt and acceptance of materials.	
10	<u>Liquidated Damage (Indigenous & Imports):</u> Penalty will be levied @ 0.5 % of the undelivered portion per week of delay or part thereof subject to a maximum of 10% of the total order value. - 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). Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number. a) INDIGENOUS: For "FOR Delivery terms", Lorry way bill date will be taken for LD calculation.	
11	<u>Risk Purchase clause:</u> BHEL at its option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or 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.	
12	<u>Warranty / Guarantee:</u> Supplier to accept guarantee/warranty of "18 months from dispatch or 12 months from commissioning, whichever is earlier". Any deviation to this may lead to rejection of the offer.	
13	<u>Non-Disclosure Agreement(NDA):</u> The bidders shall enter into the Non-disclosure agreement totally voluntarily, with full knowledge of its meaning and without duress. (Format attached).	
14	<u>Patent Right</u> The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.	
15	<u>Evaluation Criteria:</u> The offers of both import vendors and indigenous vendors will be evaluated on total landed cost to BHEL, Trichy. The evaluation details with respect to the import & indigenous vendors is detailed below: I) <u>Indigenous Vendors:</u> Total Landed cost = FOR Rate in INR (A) + Applicable Taxes (B) + Loading for payment term & LD (C) – Applicable input tax credit (D) - Indigenous vendors submit offers on Free on Road (FOR), Trichy in INR. (SGST, CGST, UGST & IGST) on (BASE PRICE+GST) and any other charges quoted by indigenous vendors will be added to the base price. - Loading for payment terms & non-acceptance of Liquidated Damages (LD) will be added to the FOR value for arriving the landed rate. - However, input credit is availed for GST taxes, hence the same is excluded for arriving at the landed cost. Note: "In the course of evaluation, if more than one bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 bidders. In case more than one bidder happens to occupy the L1 status even after soliciting discounts, the L1 bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding".	

Handwritten signature: Y. Praveen Kumar

16	<u>General condition:</u> a) Three sets of documents containing Test certificates, Copies of the approved quality documents and test procedures, DCR and Drawings, etc must be provided along with the supply of Raw materials. Dispatch clearance for material shall be given after acceptance of TC's by BHEL & NPCIL. b) Supplier has to submit Quality documents and related test procedures for approval. c) For Indigenous supply, chemical composition and mechanical test are to be carried out in NABL accredited laboratory only d) We required the shipment of fittings to be as per the dates mentioned in the enquiry. e) All the items in the enquiry will be evaluated and ordered on package basis. f) No revision of prices will be entertained after the tenders are opened. g) For the evaluation purposes, exchange rate (TT selling rate of SBI) as on schedule date of tender opening (Part I, i.e technical bid, in case of two part bid) shall be considered. h) BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed. i) 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. j) 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. k) In the event of our customer order covering this tender being cancelled / placed on hold / otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender / your purchase order at any stage of execution. l) Offer will be evaluated based on Landed cost to BHEL- Trichy on package basis. m) No payment will be made for the excess quantity. n) Offer should be submitted only as per the Unit of Measurement (UOM) specified in the enquiry. o) 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) All documents submitted with the offer shall be signed and stamped in each page by authorized representative of the bidder. q) Documents not signed and stamped by the authorized signatory of the bidder shall not be accepted and considered for registration / evaluation of the bid etc. r) Any additional documents submitted by supplier / bidder, during processing of registration application / tender or after placement of order, shall not be accepted unless it is submitted with forwarding letter and duly signed and stamped as mentioned above.	
17	<u>Fraud Prevention Policy</u> "The bidder along with its associate/collaborators/sub-contractors /consultants/service providers shall strictly adhere to BHEL Fraud prevention policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about fraud or suspected fraud as soon as it comes to their notice."	
18	<u>Cartel Formation:</u> All the firms should desist from forming cartel as the practice is prohibited under Section 3(3) (a) & (d) of the competition Act 2002. If any such instance is observed during this tender will attract disciplinary action as per BHEL policies.	
19	<u>Resolution of Disputes:</u> a. If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations. b. If the parties fail to resolve their dispute or difference by such mutual consultation within 30 days of its occurrence, then, unless otherwise provided in the contract, either the Purchaser/Consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India. In the case of a dispute or difference arising between the Purchaser/Consignee and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of an officer in BHEL Trichy, appointed to be the arbitrator	



	by the General Manager/MM BHEL Trichy. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One lakhs (Rs. 1,00,000/-) c. Venue of Arbitration: The venue of arbitration shall be the place from where the contract has been issued, i.e., BHEL Trichy. d. Jurisdiction of the court will be from the place where the tender enquiry document has been issued, i.e., Trichy, India.	
20	<u>In the event of Force Majeure:</u> a. Notwithstanding the provisions contained in other clauses, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure. For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees, lockouts excluding by its management, freight embargoes and Acts of GOD. b. If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty-one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. c. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side. d. In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.	
21	<u>Execution of the order:</u> a. BHEL will have the option to pre-inspect the materials at Supplier's works by BHEL's own inspector or by third party agency appointed by BHEL or BHEL's end customer/s. The mere act of the pre-dispatch inspection (PDI) does not absolve the Supplier from giving the specifications as agreed upon in the Purchase Order. b. In the case of overseas suppliers Inspection call for carrying out the inspection shall be given 30 days before the scheduled contract delivery date. 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 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.	
22	<u>Financial Documents:</u> a. Indigenous Suppliers shall submit audited copies of annual reports (Balance Sheets), Profit & Loss statement for last four years (or from date of incorporation whichever is less).	
23	<u>Special Provisions for Micro and Small Enterprises (MSE) bidders registered as per MSME act:</u> (Subject to participating MSE vendors should meet the tender requirements of BHEL) ➤ As per Gazette Notification no. S.O. 2119(E) dated 26.06.2020 issued by Ministry of MSME applicable/existing Micro and small suppliers are requested to get registered with Udyam Registration portal and share us the Udyam registration no along with Udyam registration certificate. ➤ 25% of the tendered quantity is earmarked for MSE suppliers in this tender, subject to participating MSE Vendors should meet the tender requirements of BHEL. In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE vendor within the "L1+15% price band", the supply shall be shared proportionately. ➤ In the event of Non MSE supplier becoming L1 and MSE supplier quotes within the price band of L1+15% and it is not possible to split the tendered quantity on account of reasons like customer contract requirement/technical	

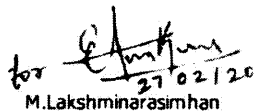
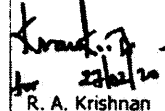
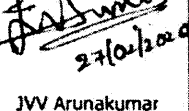
	requirements, then 100% of the quantity will be offered to MSE suppliers subject to acceptance of L1 price by MSE supplier. ➤ Counter offering of L1 rate will not be made with any MSE vendor whose quoted rate is more than the price band of L1+15%. ➤ Payment to MSE vendor will be as per the applicable provisions of the MSMED Act 2006. ➤ If L1 offer is from a Micro / Small enterprise, the 25% earmarking provision is not applicable. ➤ Out of the 25% tendered quantity reserved for MSE suppliers, 6.25% shall be earmarked for procurement from MSE owned by SC/ST entrepreneurs. Apart from this 3% shall be earmarked for procurement from MSE owned by Women entrepreneurs. ➤ In case of any change in the MSE status of the bidder, it shall be the responsibility of the bidder to notify the change as a part of the bid document. If at a later date it comes to the knowledge of BHEL, that the change in the status has not been intimated by the bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the bidder as per the procurement policy of BHEL. ➤ MSE suppliers can avail the intended benefits only if they submit along with the offer, Valid EM-II certificate or valid NSIC certificate or UAM certificate along with attested copy of a CA certificate (Format enclosed as below) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. Documents should be notarized or attested by a Gazetted officer. However, credentials of all MSE suppliers will be verified before considering the intended benefits for MSE suppliers at the time of tender evaluation. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.	
24	<u>Preference to Make in India:</u> ➤ For this procurement, the local content to categorize a supplier as a class I local supplier/class II local supplier /Non-local supplier and purchase preference to class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent Orders issued by the respective Nodal Ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of part II bids against this NIT.	
25	<u>Enclosures:</u> a) Enquiry b) NPCIL Technical Specification TDC-AT:2 Rev.02 c) QAP Documents d) Special Condition Annexure 1 e) Non-Disclosure agreement.	
<i>M. Thambidurai</i> M. THAMBIDURAI Dy. Engineer (BHEL) Purchase / MM / RM / C&F BHEL TRICHY - 620 014. <u>SIGNED BY MANUFACTURER / MILL</u> Name of Mill: Designation / Department: Seal & Signature		

	BHEL, Tiruchirappalli – 14. Quality Assurance Technical Delivery Conditions	
	Doc No: TDCAT:2 Rev 02	Page 1 of 3

Specification for "DIN EN 10253-2 Grade 1.5415"- 16Mo3 Elbows/Bends

(W.O: D157 - D160 – 700MWe SG)

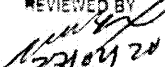
NPCIL Project: GHAVP-1&2

Rev No	Date	Prepared	Reviewed			Approved
		BHEL/QA	BHEL/Engg		BHEL/MP	BHEL/QA
00	17.05.2019	Nithin. O.R	M.Lakshminarasimhan		A.Venkatesan	Amit Roy
01	16.12.2019	Nithin. O.R	S.Lakshmi (QA)	M.Lakshminarasimhan (Engg)	R. A. Krishnan	JVV Arunakumar
02	27.02.2020	 Nithin. O.R	 M.Lakshminarasimhan		 R. A. Krishnan	 JVJ Arunakumar

Rev 00: First Issue

Rev 01 : General Revision as per DIN EN 10253-2

Rev 02: Clause 9.0 (Manufacture of Elbow/Bend from pipe) added based on comments in Rev-01.
Subsequent clause Numbers modified. Impact Test is not added since it is not required for 16Mo3 Elbows/Bends.

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड NUCLEAR POWER CORPORATION OF INDIA LTD.		
☒ अनुमोदित / APPROVED ☐ डिवायस के अनुसार अनुमोदित / APPROVED AS NOTED ☐ संशोधन की आवश्यकता है / रोकें । PROCEED WITH / HOLD FABRICATION ☐ अंतिम ट्रांसपेरेंसी एवं प्रिंट्स भेजें । SEND FINAL TRANSPARENCIES & PRINTS ☐ संशोधन करें एवं अनुमोदन के लिए पुनः प्रस्तुत करें । REVISE AND RESUBMIT FOR APPROVAL		
जाँचकर्ता CHECKED BY  27/02/2020	समीक्षकर्ता REVIEWED BY  27/02/2020	अनुमोदितकर्ता APPROVED BY  27/02/2020
दिए जाने वाले कार्य का अनुमोदन आपूर्तिकर्ता को जिम्मेदारता के अनुसार आपूर्ति के उद्देश्य के लिए नहीं करता । The Approval of the work to be done does not relieve the supplier of responsibility of supply according to specifications.		

	BHEL, Tiruchirappalli – 14. Quality Assurance Technical Delivery Conditions
	Doc No: TDCAT:2 Rev 02 Page 2 of 3

1.0 Scope

- 1.1 This specification covers the requirements for material, manufacture, inspection, examination, testing and supply of "DIN EN 10253-2 Grade 1.5415"- 16Mo3 Elbows /Bends

2.0 Applicable Documents

- 2.1 DIN EN 10253-2, ASME Sec III-NB, ASME Sec V
2.1 Drawing- For 90° Elbow:3-93-170-05308/Latest & For 180° Bend:3-93-170-05309/Latest

3.0 Material:

- Material Specification: DIN EN 10253-2 Grade 1.5415 (16Mo3)
Quantity: As per Purchase Order
Dimension: As per drawings- For 90° Elbow:3-93-170-05308/Latest & For 180° Bend:3-93-170-05309/Latest

4.0 Supply Condition

- Elbow/Bend shall be supplied in Normalized condition as per material specification.

5.0 Billet/Bloom Requirements:

- 5.1 Steel making process shall be mentioned in the quotation and subsequently in quality Plan & Manufacturing Process Plan. The steel shall be of fully killed.
5.2 Ladle analysis: Chemistry shall be controlled as per material specification.

6.0 Chemical Composition and Process of Manufacture of Elbow/Bend:

- 6.1 Elbow/Bend shall be manufactured by a seamless process. Elbow/Bend may be either hot or cold deformed. Elbow/Bend manufacturing route shall be mentioned in bid and subsequently in Quality Plan and Manufacturing Process Plan.
6.2 Product analysis: Chemistry shall be controlled as per material specification. Permissible variation of Product analysis shall be within the limits mentioned in the material specification

7.0 Mechanical Test Requirements & Extent of Test

The test coupon may be taken from the fitting(Bend/Elbow) itself or from an over length of the fitting(Bend/Elbow)) or from an accompanying test piece which is produced from the same semi-finished product and has undergone the same heat treatment as the fitting(Bend/Elbow). Following Mechanical tests shall be performed.

- 7.1 Tensile Test at Room Temperature: As per material Specification (UTS, 0.2% proof strength & % Elongation). Quantum of check is one per Heat per Heat treatment batch.
7.2 Tensile Test at 350°C: As per material Specification (0.2% proof strength). Quantum of check is one per Heat per Heat treatment batch.
7.3 Hardness test shall be performed for information purpose. Quantum of check is 10 readings on one test coupon/Heat/Heat Treatment batch.

8.0 Non Destructive Examination on Fittings(Elbow/Bend)

Non Destructive tests shall be performed on the Elbow/Bend.

- 8.1 Elbow/Bend shall be examined by Magnetic particle method in accordance with ASME Sec III NB-2555 or the Liquid Penetrant Examination in accordance with ASME sec III NB-2556.
8.2 Additionally, for Elbow/Bend over NPS6(DN 150) nominal size, the entire volume shall be examined by the Ultrasonic method in accordance with ASME Sec III NB-2552. Matching contour probe shoe/wedge shall be selected as per the T432.2 of Article-4 of ASME Sec V.

9.0 Manufacture of Elbow/Bend from Pipe:

The Elbow/Bend manufacturing process stage including details of Hot/Cold forming, stress relieving Heat Treatment (in applicable cases) etc. shall be mentioned in the Technical Bid and subsequently in Quality Plan & Manufacturing Process Plan.

Handwritten signature
27/10/12

Handwritten signature

	BHEL, Tiruchirappalli – 14. Quality Assurance Technical Delivery Conditions	
	Doc No: TDCAT:2 Rev 02	Page 3 of 3

10.0 Finish and Repair

Inside and outside surfaces shall be free from scales and defects like laps, seams, folds, cracks, pitting etc. Repairs by welding are prohibited. Surface defects can be removed mechanically, ensuring smooth curved surface and maintaining specified minimum thickness without affecting the workmanlike finish. Inner surface Finish of Elbow/Bend shall be 6.3 Microns or better.

11.0 Dimensional Tolerances and Check:

Each Elbow/Bend shall be visually examined and checked for dimensional requirements. Dimensions & Tolerances shall be as per drawings.

12.0 Documentation

12.1 Following documents shall be submitted to the purchaser for review and approval.

- Quality Plan, Manufacturing Process Plan, Heat Treatment Plans, NDE Procedure & Technique sheets.

12.2 Reports

Three set of following test report/certificates shall be submitted to the purchaser for review and approval.

- Chemical analysis-both cast & product.
- Mechanical test Report-Tensile(RT,350°),
- Non-destructive examination reports as per ASME Sec V.
- Heat treatment details
- Material Mix-up Report
- Visual and Dimensional Control Report.

13.0 Marking, Packing & Shipment

13.1 All the Elbows/Bends shall be marked with the following information.

- Material designation.
- Heat no.
- Serial Number
- Manufacturer's identification.
- Inspection agency stamps
- P.O Number

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

^^^^^^

N.A.D.
27/10/20

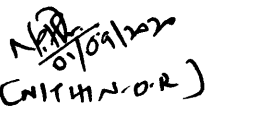
Wahid

SPECIAL CONDITION ANNEXURE – A

PR No.: 127668583

1. The indented items are required for NPCIL / Gorakhpur Haryana Anu Vidyut Pariyojina (GHA VP) – 1 & 2, 700MWe Steam Generator Project.
2. Two-part bid, open tender to be floated.
3. **End Use and End User Certificates will not be provided by BHEL.**
4. Supply of Seamless pipe fittings (Elbows / Bends) as per DIN EN 10253-2 Grade 1.5415(16Mo3), technical specification **TDCAT:2 Rev 02 Dt 27/02/2020** and quality plan **16Mo3 Elbow & Bend-01 Rev.01**. Supplier to confirm.
5. Supplier to give clause by clause confirmation for all clauses mentioned in TDC. Deviations shall be mentioned in the offer itself.
6. **For offer acceptance**, Suppliers should have the capability and experience to produce the seamless alloy steel fittings as per quality standards. Also, Supplier should have supplied the seamless alloy steel fittings for the nuclear application / Nuclear Power Corporation of India Limited / any Thermal Power station.
7. **As a documentary proof of supplier's experience** in manufacturing the intended items, Signed Test Certificates (Signed by Customer/TPI), Shipping release document/ supply invoice copy with specifications and details of Customer shall be submitted along with offer.
8. Offers received will be evaluated by BHEL and NPCIL. Final acceptance of the offers will be based on NPCIL recommendation.
9. Supplier has to comply with the generic approved Quality Plans enclosed with the indent.
10. Supplier has to submit Quality Documents (QAP – Quality Assurance Plan, Manufacturing Process Plan and associated procedures, Material Sampling and Testing Plan (MSTP) and related test procures as per QAP for approval from BHEL & NPCIL after awarding the contract.
11. The actual production of material is permitted only after approval of all documents required for manufacturing / inspection / testing activities by BHEL and NPCIL.
12. Inspection agency for imports are BHEL & NPCIL or NPCIL appointed third party inspection (TPI) agency. Inspection agency for indigenous supply are BHEL and NPCIL.


01/09/20
M. ARUN KUMAR
Deputy Manager
Engg. & Prod. ATP
BHEL, Trichy - 620 014
Engineering


01/09/20
(with M. Arun K.)
S. Lakshmi
02/9/2020
Quality Assurance

S. LAKSHMI
Deputy General Manager
Quality Assurance
BHEL, Trichy - 620 014.


01/09/20

01/09/20
M. PALANIVELU
Sr. Manager
Matl. Pmg & Sub-Config / ATP
BHEL, TRICHY - 620 014.
Materials Planning

M. PALANIVELU
Sr. Manager
Matl. Pmg & Sub-Config / ATP
BHEL, TRICHY - 620 014.

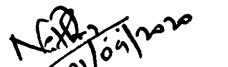
SPECIAL CONDITION ANNEXURE – A

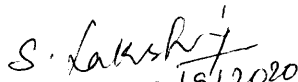
PR No.: 127668583

13. Chemical composition and mechanical tests shall be carried out in labs certified as per ISO/IEC 17025 or NABL / Government approved labs.
14. Supplier shall submit Test Certificates of finished materials for our review. Dispatch clearance will be given after acceptance of Test Certificates by BHEL & NPCIL.
15. Documentation: Three sets of documents containing (i.) Test Certificates and respective test reports (ii.) copies of the approved quality documents and test procedure, (iii.) design change requisitions (if any) and (iv.) Drawing etc. to be provided along with the supply of items.
16. All the items shall be procured from single source on full package basis.
17. Supplier to submit his technical and commercial bid conforming to the above points as given in this annexure.


ARUN 01/09/20

Engineering


01/09/2020
(NITHIN OR)


21/9/2020
Quality Assurance

S. LAKSHMI
Deputy General Manager
Quality Assurance
BHEL, Trichy - 620 014.


01/09/2020

Materials Planning


01/09/20
M. PALANIVELU
Sr. Manager
Matl. Png & Sub-Contg / ATP
BHEL, TRICHY - 620 014.

Supplier's Name and Address		Quality Plan for 16Mo3 Elbow/Bend						QP No: 16Mo3 Elbow/Bend-01 R01 Project: GHAVP 1 & 2 W.O : D157 to D160-001-1-93-171				
		Item : 16Mo3 Elbow/Bend Material: DIN EN 10253-2/1.5415 Sub-system: Steam Generator		QP No.: To be filled by Supplier Rev.No.: To be filled by Supplier Date: To be filled by Supplier Page No.: 1 of 3		Format of Record		Agency		Remarks		
Sl. No	Component & Operations	Characteristics	Type of Check	Quantum Of check	Reference Document	Acceptance Norms	8.	9.	M	B	N	
1.	2.	3.	4.	5.	6.	7.	8.	9.	**	10.		
1.0 Raw Material :												
1.1	Steel Melting : Method to be filled by Supplier	Steel melting	Record Verification	100%	DIN EN 10253-2/1.5415 MPP: To be submitted		TC	✓	P	---	---	Steel shall be fully killed
1.2	Ladle Analysis	Chemistry	Chemical analysis	1/Melt	DIN EN 10253-2/1.5415 MPP: To be submitted		TC	✓	P	R	R	----
1.3	Ingot/Billet Casting	Free from defects	Visual/Record verification	100%	MPP: To be submitted		---	---	P	---	---	----
2.0 In process Controls :												
2.1	Operations from Ingot/Billet to Elbow/Bend : To be elaborated by Supplier	Process parameters	Record Verification	100%	DIN EN 10253-2/1.5415 MPP: To be submitted Drg : To be filled (applicable)		RD	---	P	R	R	Starting material product from shall be as per Table-1 of EN10253-2.
2.2	Visual & Identification of Elbow/Bend	Visual & Identification	Verification and Visual	100%	DIN EN 10253-2/1.5415		---	---	P	---	---	--
2.3	Heat Treatment (Normalization)	R.O.H , Soaking Temp & Time, R.O.C	Review of HT Chart	100%	DIN EN 10253-2/1.5415 HT Plan: To be submitted		TC	✓	P	R	R	Note-5

Supplier's Name: To be filled		Reviewed & Approved		Reviewed & Approved	
		BHEL		NPCIL	
Prepared	Reviewed & Approved	Reviewed & Approved		Reviewed & Approved	

LEGEND: * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.
 ** M: SUPPLIER B: BHEL, N: NPCIL/TP1
 P: PERFORM R: REVIEW W: WITNESS AND H: HOLD
 TC: TEST CERTIFICATE RD: RECORD

N. R. S. / 08/08/2020
 [NITHIN.O.R.]

Supplier's LOGO	Supplier's Name and Address	Quality Plan for 16Mo3 Elbow/Bend		QP No:16Mo3Elbow&Bend-01 R01 Project: GHAVP 1& 2 W.O : D157 to D160-001-1-93-171
		Item : 16Mo3 Elbow/Bend Material: DIN EN 10253-2/1.5415 Sub-system: Steam Generator	QP No.: To be filled by Supplier Rev.No.: To be filled by Supplier Date: To be filled by Supplier Page No:4 of 3	

4. Drawing No - 90°Elbow: 3-93-170-05308/ Latest & Drawing No - 180° Bend: 3-93-170-05309/ Latest.
5. Chart shall be signed & submitted along with TC. Also calibration record of furnace, thermocouple & recorders shall be submitted for review.
6. Drawing shall be submitted to BHEL& NPCIL for approval. Drawing shall contain thickness at Intrados, Extrados and at free ends. Also mention about all the applicable dimensional tolerance in the drawing itself.

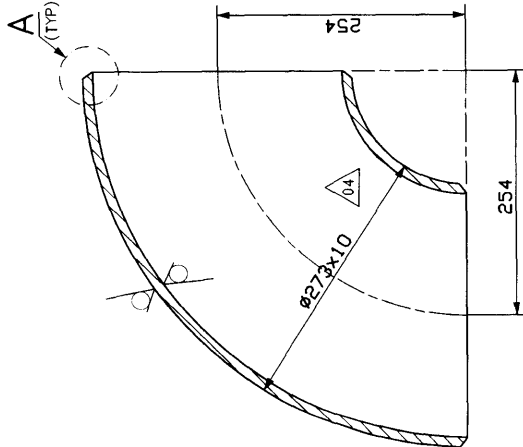
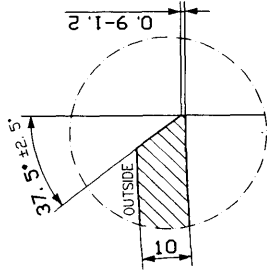
Handwritten signature and date: 08/09/2020

				LEGEND: * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: SUPPLIER B: BHEL, N: NPCIL/TPI P: PERFORM R: REVIEW W: WITNESS AND H: HOLD TC: TEST CERTIFICATE RD: RECORD
Prepared	Reviewed & Approved	Reviewed & Approved	Reviewed & Approved	
SUPPLIER'S NAME: To be filled		BHEL	NPCIL	

80890-041-86-8
DRAWING NO.

ALL DIMENSIONS ARE IN MILLIMETERS

6.3/10



DETAIL-A
(1:1)

NOTES: -

1. THE BEND SHALL BE DELIVERED IN NORMALISED CONDITION.
2. MATERIAL SPECIFICATION : DIN EN10253-2 : 16M63 (STEEL NUMBER 1.5415).
3. TOLERANCE ON DIMENSION AS PER DIN EN10253-2
4. APPROXIMATE WEIGHT : 26 KG.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		700MWe/GHVP-1&2	
DEPT NC	GRADE OF UTROL DIA C/M/F	SCALE 1:5 ; 1:1	WEIGHT (kg)
NC	150	1:5 ; 1:1	1:5 ; 1:1
Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014		SIGNATURE N.K. AK/SM A.S	
DATE 090814		DATE 090814	
NO. OF ITEMS		NO. OF ITEMS	
DRAWING NO : 3-93-170-05308		REV 04	

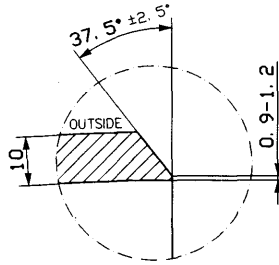
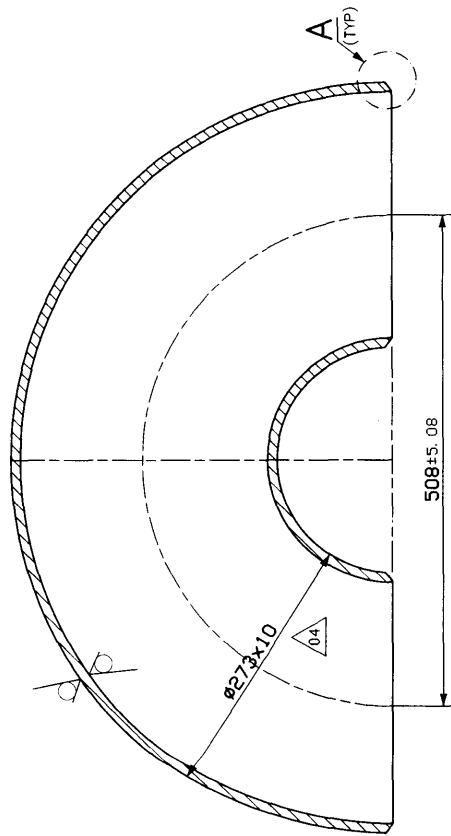
REV	DATE	ALTERED	BY	DATE	ALTERED	BY
04	191119	CHD&APPD : N.K.		03	29.07.19	CHD&APPD : N.K.
NOTE-1 MODIFIED AND THE APPLICABLE STANDARD FOR THE MATERIAL SPECIFICATION IS CHANGED BASED ON NPCIL COMMENTS IN TDC OF ELBONS/ BENDS						
02	210318	CHD&APPD : N.K.		01	151217	CHD&APPD : N.K.
NOTE-4 ADDED.						
IN MATERIAL SPECIFICATION STANDARD NUMBER ADDED.						

Size A3

60390-071-86-E
DRAWING NO.

ALL DIMENSIONS ARE IN MILLIMETERS

6.3/1/01



DETAIL - A
(1:1)

NOTES: -

- 03 1. THE BEND SHALL BE DELIVERED IN NORMALISED CONDITION.
- 01 2. MATERIAL SPECIFICATION : DIN EN10253-2 : 16Mo3 (STEEL NUMBER 1.5415).
- 04 3. TOLERANCE ON DIMENSION AS PER DIN EN10253-2
- 04 4. APPROXIMATE WEIGHT : 52 Kg.

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

700MWe/GHVP-1&2



Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620014

NAME	SIGNATURE	DATE	NO. OF VAR
N.K.		080814	
CHKD	APPD	ITEM NO	NO. OF ITEMS
AK/SM		080814	
A.S		080814	

DEPT NC
CODE 150
SCALE 1:5 : 1:1
WEIGHT (Kg)
REF TO ASST / OLD DWG

TITLE
180° RETURN BEND

DRAWING NO :
3-93-170-05309 04

Size A3

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED
04	191119	CHD&APPD : <i>[Signature]</i>	03	29.07.19	CHD&APPD : <i>[Signature]</i>
NOTE-3 MODIFIED IN DET-A, WALL THK CORRECTED.					
NOTE-1 MODIFIED AND THE APPLICABLE STANDARD FOR THE MATERIAL SPECIFICATION IS CHANGED BASED ON NPCIL COMMENTS IN TDC OF ELBOWS/ BENDS					
REV	DATE	ALTERED	REV	DATE	ALTERED
02	210318	CHD&APPD : <i>[Signature]</i>	01	151217	CHD&APPD : <i>[Signature]</i>
NOTE-4 ADDED.					
IN MATERIAL SPECIFICATION STANDARD NUMBER ADDED.					