



**PURCHASE-BOI DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED,
HEAVY ELECTRICAL EQUIPMENT PLANT,
RANIPUR, HARIDWAR – 249 403 (UTTARAKHAND), INDIA**

BHEL Ref. No.: **B/4066/2024/2835/V1**

Tender Enquiry for the requirement of Pneumatic Globe Valves with Spares for Lara & Singrauli Projects

Bids are invited from bidders for the requirement of item **Pneumatic Globe Valves with Spares i.e., Solenoid Valve for Pneumatic Globe Valve** for **Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2 projects** as per detailed specifications. All tender documents uploaded along with this tender enquiry are as mentioned below.

LIST OF TENDER DOCUMENTS

| S.No. | Document Name & No. | Total Pages |
|-------|--|-------------|
| 1. | PQR (PRE-QUALIFICATION REQUIREMENT) DOCUMENT NO. TL/PGV/PQR/2020003 Rev.00 Dated 25.10.2021 | 02 |
| 2. | TECHNICAL SPECIFICATION & DOCUMENTS comprising of following: a) ST47025 Rev. 03 and Its Addendum (Technical Specification for Pneumatic Globe Valve) b) Document No. 41313795003 Rev. 02 comprising of below: <ul style="list-style-type: none">Technical Specifications: 413137U8103 Rev. 01Technical Requirements: 41812870012 Rev. 06 c) Painting Scheme no. 10880-ENGG-N001A . | 11 |
| 3. | ADDITIONAL TERMS & CONDITIONS FOR TENDER (ANNEXURE-A) (in addition to General terms and conditions on GeM 4.0 or latest version as applicable) | 14 |
| 4. | BHEL QUALITY PLAN No. QA_BI_QP_903_REV01 | 02 |

For and on behalf of BHEL

Engineer (PPX-BOI)
BHEL, HEEL, Haridwar



PPX-BOI DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462 TEL: +91 1334 28 1707

PACKAGE- Pneumatic Globe Valve with Spares (i.e., Solenoid Valve)
PROJECT: Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2

BUYER ADDED BID SPECIFIC ADDITIONAL TERMS AND CONDITIONS (SCOPE OF ENQUIRY):

- E-bids on GeM are invited from bidders for the supply of Pneumatic Globe Valve with Spares (i.e., Solenoid Valve) for Lara and Singrauli projects as per requirement mentioned below:

| Sl. No. | Material Code & Item Description | Project Name | Details for Supply Completion | | |
|---------|---|---------------------|-------------------------------|-------------------|------------------------|
| | | | Lot No. | Lot Qty (in nos.) | BHEL Delivery Schedule |
| 1 | MAT. CODE: W90313726302; PNEUMATIC GLOBE VALVE AS PER DOC. NO. 41313795003 REV.02 | Lara Stage-II | 1 | 1 | 29-01-2026 |
| | | | 2 | 1 | 02-07-2026 |
| | | Singrauli Stage-III | 3 | 1 | 27-10-2026 |
| | | | 4 | 1 | 01-01-2027 |
| 3 | MAT. CODE: W99318128088; SOLENOID VALVE FOR PNEUMATIC GLOBE VALVE AS PER DRG 41812870012 REV.02 | Lara Stage-II | 1 | 1 | 29-06-2026 |
| | | Singrauli Stage-III | 2 | 1 | 02-06-2027 |

2. Consignee Details and Delivery Schedule:

| Sl. No. | Project Name | Site/ Project Address | Requirement Schedule | |
|---------|---------------------|---|----------------------|----------|
| 1 | Lara Stage-II | BHEL Site office | Lot-1 | 31-07-26 |
| 2 | | 2X800 MW NTPC LARA stage II project. | Lot-2 | 31-01-27 |
| 3 | | Pusaur, Dist Raigarh, Chhattisgarh 496440 | Lot-3 | 30-04-27 |
| 5 | Singrauli Stage-III | SINGRAULI SUPER THERMAL POWER PROJECT, SHAKTI NAGAR, SHAKTI NAGAR, Sonbhadra, Uttar Pradesh, 231222 | Lot-1 | 30-01-27 |
| 6 | | | Lot-2 | 30-07-27 |
| 7 | | | Lot-3 | 30-10-27 |

3. Buyers Specific Additional Terms & Conditions in addition to GTC

Annexure A

Note: Please fill your acceptance/ comments in confirmation column. Blank column will be understood as accepted by bidder.

| S. No. | Terms | Description | | | | | Bidder's confirmation | |
|--------------------------------------|--------------------------|---|---|------------|---------------------------------------|-------------------|-----------------------|--|
| 1. | Compliance of GTC on GeM | In addition to the terms & conditions mentioned in below table, General Terms and Conditions on GeM 4.0 (Version 1.24) Dt. 5th May 2025 or it's latest revision (if revised prior to issuance of enquiry) shall be applicable against this enquiry. Kindly confirm same is acceptable to you. | | | | | | |
| 2. | Scope of Enquiry | Kindly note the Project-wise requirement of item(s) covered in this tender enquiry as detailed below: | | | | | | |
| | | Sl. No. | Material Code and Item Description | Total Qty. | Project & Qty. | Delivery Schedule | | |
| | | 1 | Material Code: W90313726302 PNEUMATIC GLOBE VALVE AS PER DOCUMENT NO. 41313795003 REV. 02 | 4 Nos. | Lara Stage-II (Qty.: 2 Nos.) | U-1: 29-01-2026 | | |
| | | | | | | U-2: 02-07-2026 | | |
| | | | | | Singrauli Stage-III (Qty.: 2 Nos.) | U-1: 27-10-2026 | | |
| | | | | | | U-2: 01-01-2027 | | |
| | | 2 | Material Code: W99318128088 SOLENOID VALVE FOR PNEUMATIC GLOBE VALVE LP EXH WATER INJECTION AS PER DRAWING 41812870012 | 2 Nos. | Lara Stage-II (Qty.: 1 No.) | U-1: 29-06-2026 | | |
| Singrauli Stage-III (Qty.: 1 No.) | U-1: 02-06-2027 | | | | | | | |

(Signature of the Vendor with Seal)



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| | | | |
|-----|--|--|---------|
| 3. | Submission of Offer | The offer/bid shall be signed and stamped on each page by authorized representative of the bidder. | |
| 4. | Documents Checklist: | Please submit signed and stamped copy of your offer on each page along with following documents: <ul style="list-style-type: none"> • Buyers' added bid specific additional terms and conditions. • Technical PQR & its supportive document. • Technical documents, purchase specification & painting scheme • Certificate/self-certification for minimum local content as per PPP-MII order. • Replica of price bid schedule without prices with Part-I offer. | |
| 5. | Special Term | Techno-commercial terms as confirmed above in Annexure-A shall supersede the similar terms & conditions found contradictory written elsewhere in the offer. Kindly confirm the same. | |
| 6. | Compliance of Rule 144 (xi) of GFR 2017 | Compliance of Restrictions under Rule 144 (xi) of GFR 2017 shall be as per GeM. | |
| 7. | Evaluation criteria | Evaluation will be done on the basis of total landed cost to BHEL for complete enquiry, with cost involved for delivery up to respective BHEL project sites considering material cost, taxes & duties, Freight etc. for the complete requirement covered in the Bid. | |
| 8. | Bid validity/ Validity of offer | Please note that validity of the offer shall be 180 days from the date opening of Techno-Commercial bid (Part-I bid) on GeM portal. Offer of bidder's having validity less than 180 days shall be liable to get rejected. Please confirm. | |
| | | The required validity is considering that offer is complete & clear w.r.t. PQR and all techno-commercial conditions. Vendors need to extend their offer validity for the time taken by them in responding BHEL's comments/clarification sought during techno-commercial scrutiny of the offer. In case regret by any bidder for such validity extension, their offer shall liable to be reject. Please confirm. | |
| 9. | Pre-Qualification Requirements | <i>The Pre-Qualification Requirements have been enclosed / uploaded with tender documents. All the bidders should ensure submission of complete details and documents as called for in these requirements. The Offers submitted by the bidders would be scrutinized with respect to Pre-Qualification Requirements first. Techno-Commercial offer of only those bidders shall be evaluated who meet the Pre-Qualification Requirements.</i> | |
| 10. | Prices / Basis of quotation: | The offered prices of the items shall remain firm and fixed till the execution of the contract. Kindly confirm. | |
| | | Prices should be quoted on door delivery basis up to respective BHEL project site basis i.e. including all taxes, duties, local levies/ transportation/freight charges, packing & forwarding charges etc. The evaluation currency for this tender shall be INR. Please confirm. | |
| | | Transit Insurance would be arranged by BHEL. Please quote your prices accordingly. | |
| | | The prices are to be quoted on Ex-Works with freight Pre-paid up to project destination basis. The goods must be dispatched through any Bank approved transporters having their branch at Haridwar. The names and addresses of transporters approved by IBA as well as BHEL are posted at our website www.bhelhwr.co.in. Please note that, if you dispatch the material by any BHEL un-approved transporter then you will necessarily be required to furnish the MRC (Material Receipt Certificate)/ Receipted GR from respective Project Sites for processing of Vendor's dispatch invoices. No demurrage charges would be borne by BHEL. | |
| | | Please inform the rate of GST included in your quoted prices (considering ITC). | _____ % |

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| | | | | |
|-----|--|--|--|--|
| 11. | Regarding ITC based evaluation bid | Kindly note that this bid/tender has been availed with 100% ITC (Input tax credit) based evaluation. Bidders shall have to enter their Prices inclusive of all taxes including GST during participation in bid on GeM portal and also bidders to add/input the applicable GST amount in percentage separately as per provision made by GeM in the system. Kindly confirm your compliance to the above and submit your offer on GeM portal accordingly. | | |
| 12. | SPECIAL INSTRUCTION | Please note that as per BHEL’s Policy, we cannot allow Price impact for the requirement / scope of supply, which is a part of specifications of our tender enquiry. Hence please read all specification / documents thoroughly and submit your offer as per specifications of tender enquiry. In case of any confusion / un-clarity on any of the clause / requirement of specification, please clarify the same from BHEL before submission of offer. No deviation & request regarding un-clarity / contradictory conditions / ambiguity of specifications would be entertained after opening of techno-commercial offers. Further no price impact would be allowed for the requirement which is already part of the specifications of the tender enquiry, after opening of techno-commercial offers. Please note and confirm. | | |
| 13. | Special Instruction of Technical requirement | 1. | Bidders to refer BHEL specification & documents i.e. Technical Specification no. ST47025 (Rev. 03) and its addendum, Document no. 41313795003 (Rev. 02), 413137U8103 (Rev.01), 41812870012 (Rev.06) and Painting Scheme no. 10880-ENGG-N001A enclosed with this tender enquiry and submit their valuable offer in GeM portal. | |
| | | 2. | For Painting Requirements, Doc. No. 10870-ENGG-N001A shall be considered as reference & supersede requirements made elsewhere in the Specifications. | |
| | | 3. | Bidder to keep Two copies of O&M Manual inside the dispatch boxes and also to mention same in vendor’s shipping list at the time of dispatches. Also submit soft copy of O&M Manual to BHEL. | |
| | | 4. | Material is to be despatched on Door Delivery Basis to respective BHEL project sites. For all lots - Invoice, GR/LR, Packing list, Test Certificates are required in Original after dispatch. | |
| | | 5. | For material related to Unit-1 (Lot-1), Unit-2 (Lot-2), Commissioning Spares and Mandatory Spares needs to be packed in separately with proper labelling like item description, PO No. etc in separate Green colour painted wooden boxes and same is required to be marked on the box. | |
| | | 6. | For Indigenous Items: Before shipment of material, vendor has to obtain QR code from BHEL and these QR codes (properly laminated) shall be affixed on packages/boxes/crates/bundles of material to be supplied. QR code will be issued box wise/bundle wise, vendor to ensure that correct QR Code are affixed on the boxes/bundles. For Imported items: QR code will be affixed at site. | |
| | | 7. | Loose items (if any) needs to be packed in boxes/crates or bundled together. For loose items one marker board needs to be send for each bundle for fixing RFID Tag at site. | |
| 14. | Bid to RA | Opening of Price bid & RA shall be conducted for only those bidders who qualifies PQR and whose techno-commercial bid is acceptable to BHEL. To get maximum competition during RA, H-1 elimination criteria has been opted for RA. Please accept and quote accordingly. | | |
| 15. | Engineering Document approval | Drawings/ Data Sheet/ Documents (if applicable) as called for in BHEL specifications shall be submitted for approval to BHEL for BHEL/customer approval within 30 days of Purchase Order. BHEL will arrange the approval of the drawings/data sheets/ documents within 30 days of their receipt provided those are complete in all respect. The delay due to late submission shall be to supplier’s account whereas delay in approval of documents shall be BHEL’s account. In case of delay on account of BHEL, delivery shall be re-scheduled accordingly. | | |

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| 16. | Payment Terms | <p>The payment shall be done after receipt of Material at BHEL respective project site, within no. of days as defined in the below table from the date of receipt of Material at site i.e. MRC date).</p> <table><tr><th>Type of Bidder</th><th>Payment Terms (Number of Days from Material receipt at site)</th></tr><tr><td>Micro & Small Enterprises (MSEs)</td><td>45 days</td></tr><tr><td>Medium Enterprises</td><td>60 days</td></tr><tr><td>Non MSME</td><td>90 days</td></tr></table> <p>The Payment terms are subject to receipt of non-discrepant document from supplier. Please confirm.</p> | Type of Bidder | Payment Terms (Number of Days from Material receipt at site) | Micro & Small Enterprises (MSEs) | 45 days | Medium Enterprises | 60 days | Non MSME | 90 days | |
|----------------------------------|--|--|----------------|--|----------------------------------|---------|--------------------|---------|----------|---------|--|
| Type of Bidder | Payment Terms (Number of Days from Material receipt at site) | | | | | | | | | | |
| Micro & Small Enterprises (MSEs) | 45 days | | | | | | | | | | |
| Medium Enterprises | 60 days | | | | | | | | | | |
| Non MSME | 90 days | | | | | | | | | | |
| 17. | GeM charges | GeM charges if any shall be either side only i.e. buyer's GeM charges shall be in buyer's account and seller's GeM charges shall be on seller's account. Please confirm. | | | | | | | | | |
| 18. | Contract execution | Bidder's are advised to read GeM related query & clarification carefully on GeM portal. Order shall be executed through GeM. | | | | | | | | | |
| 19. | Quality Requirements | Inspection by BHEL/BHEL TPIA (M/s QUEST) As Per BHEL SQP No. QA_BI_QP_903 Rev01. Please confirm. | | | | | | | | | |
| | | Vendor to endorse the above referred SQP. | | | | | | | | | |
| | | Painting requirements shall be as per document no. 10880-ENGG-N001A . | | | | | | | | | |
| | | For Spares (i.e., Solenoid Valve): <ul style="list-style-type: none">Vendor to confirm that Inspection/ Testing/ Certification shall be done as per BHEL SQP QA_BI_QP_903 Rev.01.Vendor to confirm that If item does not appear in approved Quality Plan then Certificate of compliance (COC) will be provided by vendor.Vendor to confirm that Interchangeability certificate will be provided for Spares. | | | | | | | | | |
| 20. | MDCC clause | <p>Material shall be dispatched only after issue of material dispatch clearance certificate (MDCC) by BHEL. All test certificates/ Inspection Reports/COC and relevant documents are to be sent to BHEL before dispatch of material for issue of MDCC, which will be issued after review of test certificates/report/COC etc. MDCC will be issued within 07 days of receipt of these documents once found complete in all respects. In case of any delay on account of BHEL in issuing MDCC, delivery shall be extended by no. of days in excess of 7 days taken by BHEL in issuing MDCC and delays shall be dealt on merit basis.</p> <p>Material is to dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.</p> | | | | | | | | | |
| 21. | Packing | Each item must be tagged with description & quantity same as in Vendor's Packing List. Kindly confirm. | | | | | | | | | |
| | | Please ensure proper and sturdy packing suitable for handling at site or during transportation up to site in healthy condition. | | | | | | | | | |
| 22. | Quantity Variation | <p>BHEL reserves the right to cancel tender or reject any or all the quotations without assigning any reasons thereof.</p> <p>BHEL also reserves the right to Increase or decrease the tendered quantities or quantity of individual material code may be dropped as a whole also.</p> <p>Vendors should be prepared to accept order for reduced Quantity without any extra charges. Vendor should also be prepared for giving discount in case of Increase in Quantity.</p> <p>Vendor has to take manufacturing clearance from BHEL before starting manufacturing of material. In case ordered quantity is reduced at the time of manufacturing clearance, then payment shall be made accordingly as per decreased quantity. Please confirm.</p> | | | | | | | | | |
| 23. | Delivery Schedule/ Period | <p>Please note that materials are required as per delivery schedule mentioned in above clause 2 of Scope of Enquiry.</p> <p>Early delivery with respect to above lot wise delivery will be accepted only after written confirmation</p> | | | | | | | | | |

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| | | | |
|-----|--|--|--|
| | | <p>from BHEL. BHEL reserve rights to reject early delivery request of bidders / suppliers. Delivery period indicated in GeM bid is only indicative and final delivery of tender shall be taken as mentioned above.</p> <p>Accordingly, bidders to confirm the above deliveries or quote their best possible delivery in no of months / weeks from the date of placement of Purchase order, including all activities like document approval, inspection by TPI etc.</p> <p>Please note that BHEL reserve right to reject the offer of any bidders not meeting our project delivery requirement.</p> | |
| 24. | Liquidated Damages (LD) for late delivery | <p>If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract, the Buyer will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed Lot per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.</p> <p>The date of dispatch mentioned on LR/GR would be treated as the date of delivery for penalty purposes.</p> | |
| 25. | GST Penalty | <p>Vendor to provide dispatch documents to BHEL Haridwar in the same month of dispatch of material. In case of delay in submission of the same, Any GST penalty levied due to change of month of billing to End customer with respect to LR date will be borne by vendor. Please confirm.</p> | |
| 26. | Guarantee | <p>Kindly confirm that Guarantee would be provided for a period of "18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier".</p> <p>Supplier shall be responsible for free replacement of defective equipment / material at our site.</p> <p>Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.</p> | |
| 27. | Make in India & MSE Purchase Preference guidelines: | <p>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 Ref. No. P-45021/2/2017-PP (BE-II) dtd. 04/06/2020 issued by DPIIT. In case of subsequent orders issued, by the nodal ministry, changing the definition of local content for the items of this NIT, but before opening of Part-II bids against this NI, same shall be applicable for this NIT also.</p> <p>As per Make in India Order, only Class-1 and Class-2 local supplies are eligible to bid in this tender enquiry.</p> <p>For this eligibility criteria, bidders are required to submit certificate of Minimum local content as specified in Make In India Declaration format enclosed with Tender documents.</p> | |
| 28. | Settlement of Dispute, Conciliation & Arbitration: | <p>Settlement of Dispute</p> <p>If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Officer / IEM for amicable resolution by the parties. Designated Officer / IEM who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not. If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per 'CONCILIATION' Clause.</p> <p>CONCILIATION:</p> <p>Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of</p> | |

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Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in - "Procedure for conduct of conciliation proceedings" (as available in www.bhel.com).

Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.

ARBITRATION:

Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Arbitral Institution and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.

A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Region, Power Sector/ Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.

After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institutions (shall be identified by the contract issuing agency) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.

The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be at the court(s) of Haridwar.

Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Haridwar , shall have exclusive jurisdiction.

Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.

It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.

In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this

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| | | | |
|-----|--|---|--|
| | | <p>clause.</p> <p>In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause mentioned above. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.</p> | |
| 29. | Breach of Contract, Remedies and Termination: | <p>The following shall amount to breach of contract:</p> <p>I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.</p> <p>II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.</p> <p>III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.</p> <p>IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.</p> <p>V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.</p> <p>VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.</p> <p>VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.</p> <p>VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.</p> <p>IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.</p> <p>X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.</p> <p>Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.</p> <p>In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.</p> <p>Remedies in case of Breach of Contract.</p> <p>i) Wherein the period as stipulated in the notice issued under above clause has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.</p> <p>ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance</p> | |

(Signature of the Vendor with Seal)



PPX-BOI DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462 TEL: +91 1334 28 1707

PACKAGE- Pneumatic Globe Valve with Spares (i.e., Solenoid Valve)
PROJECT: Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2

| | | | |
|-----|--|--|--|
| | | <p>amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.</p> <p>iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:</p> <p>iv) In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.</p> <p>v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:</p> <p>a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.</p> <p>b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.</p> <p>vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.</p> <p>vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.</p> <p>viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.</p> <p>Note:</p> <p>1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:</p> <p>(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.</p> <p>(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.</p> | |
| 30. | Suspension of Business Dealings with Suppliers / Contractors: | <p>The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.</p> <p>If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860(Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: http://www.bhel.com/vender_registration/vender.php.</p> | |

(Signature of the Vendor with Seal)



| | | | | | | | | | | | | | | | |
|----------------|---|--|---|-------------|-------------|---|-------|--|--|--|-------|--|--|--|--|
| 31. | Conflict of Interest Among Bidders/ Agents | <p>A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <p>a) they have controlling partner (s) in common; or</p> <p>b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or</p> <p>c) they have the same legal representative/agent for purposes of this bid; or</p> <p>d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or</p> <p>e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; or</p> <p>f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:</p> <p>1. The principal manufacturer directly or through one Indian agent on his behalf; and</p> <p>2. Indian/foreign agent on behalf of only one principal, or</p> <p>g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or</p> <p>h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "</p> | | | | | | | | | | | | | |
| 32. | Micro and Small Enterprises (MSE): | <p>Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.</p> <table><tr><td>Type under MSE</td><td>SC/ST owned</td><td>Women owned</td><td>Others (excluding SC/ ST & Women Owned)</td></tr><tr><td>Micro</td><td></td><td></td><td></td></tr><tr><td>Small</td><td></td><td></td><td></td></tr></table> <p>Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.</p> <p>a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.</p> | Type under MSE | SC/ST owned | Women owned | Others (excluding SC/ ST & Women Owned) | Micro | | | | Small | | | | |
| Type under MSE | SC/ST owned | Women owned | Others (excluding SC/ ST & Women Owned) | | | | | | | | | | | | |
| Micro | | | | | | | | | | | | | | | |
| Small | | | | | | | | | | | | | | | |



PPX-BOI DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462 TEL: +91 1334 28 1707

PACKAGE- Pneumatic Globe Valve with Spares (i.e., Solenoid Valve)
PROJECT: Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2

| | | | |
|-----|---------------|---|--|
| 33. | Jurisdiction: | This contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause(s) mentioned above of this contract, the Civil Court having original Civil Jurisdiction at Haridwar shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract. | |
| 34. | Force Majeure | <p>"Force Majeure" shall mean circumstance which is: a) beyond control of either of the parties to contract, b) either of the parties could not reasonably have provided against the event before entering into the contract, c) having arisen, either of the parties could not reasonably have avoided or overcome, and d) is not substantially attributable to either of the parties And Prevents the performance of the contract, Such circumstances include but shall not be limited to: i) War, hostilities , invasion, act of foreign enemies. ii) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii) Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv) Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors. v) Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi) Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc. vii) Epidemic, pandemic etc.</p> <p>The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.</p> <p>If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.</p> <p>The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.</p> <p>Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not</p> <p>i) Constitute a default or breach of the Contract. ii) Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.</p> <p>BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.</p> | |



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HEEP: HARDWAR-249 403 (Uttarakhand)
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PACKAGE- Pneumatic Globe Valve with Spares (i.e., Solenoid Valve)
PROJECT: Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2

| | | | |
|-----|---------------------------|---|--|
| 35. | Cartel Formation | The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/guidelines. | |
| 36. | Fraud Prevention Policy: | Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice. | |
| 37. | Despatch documents | <p>Following documents to be enclosed with dispatch documents of this item:</p> <p>a) Test certificates, guarantee certificates and O&M Manuals.</p> <p>Submission to BHEL-HEEP Haridwar of invoices for payment for material shall be done along with:</p> <p>a) Tax Invoice b) Original copy of GR c) Packing list d) Test Certificates/Inspection Reports (TC/IR) e) Guarantee Certificate f) Original GST compliance certificate. g) E-way bill.</p> <p>Vendor to submit original GR/GRs to BHEL HEEP Haridwar for end customer billing. Please confirm.</p> | |
| 38. | Contact detail of Bidder: | <p>For necessary communication, bidders are requested to provide the follow details-</p> <p>1.Name of Contact Persons & Mobile numbers:</p> <p>_____</p> <p>_____</p> <p>2. Official email ids (at least two or three email id) : _____</p> <p>_____</p> <p>3. Works address / Location:</p> <p>_____</p> <p>_____</p> | |

(Signature of the Vendor with Seal)



PPX-BOI DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (Uttarakhand)
FAX: +91 1334 226462 TEL: +91 1334 28 1707

PACKAGE- Pneumatic Globe Valve with Spares (i.e., Solenoid Valve)
PROJECT: Lara Stage-II Unit-1&2 and Singrauli Stage-III Unit-1&2

39. **DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH**

REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND SUBSEQUENT ORDER(S) (To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) Bid Specification No:
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (*specify the name of the organization here*) has a local content of _____ % and this meets the local content requirement for ‘**Class-I local supplier**’ / ‘**Class II local supplier**’ ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Thanking you,
Yours faithfully,

**(Signature, Date &
Seal of Authorized
Signatory of the Bidder)**



40. **PRE-QUALIFICATION REQUIREMENTS:**

Description:

The Pneumatic Globe Valve is used for supplying water at LP turbine exhaust hood spray during turbine trip case in order to decrease the temperature of LP turbine. It is on/off & globe type valve. The Valve end connections are flanged type. It is pneumatically operated very quick opening and closing type valve. The valve shall be designed for high water flow in very less time to ensure safety of LP turbine.

Mandatory requirement for Pre-Qualification:

1. The vendor should have successfully designed, manufactured, tested & supplied of Pneumatic Globe valves for water application. Vendor should have supplied one (1) no. in at least one power or process plants in last seven (7) years from the date of issuance of enquiry with following technical details mentioned in table-1.

Table-1

| | |
|------------------|---------------------|
| Valve Type | 2/2 way Glove Valve |
| Valve Size Range | NB40 & above |
| Actuation | Pneumatic |
| Valve Rating | CL300 & above |

2. The vendor should furnish the following documents in line with criteria given in above sl.no.1.
 - a. Executed unpriced Purchase order (P.O.) should not be older than seven (7) years from the date of issuance of enquiry.
 - b. Dispatch document w.r.t above executed P. O. i.e. Approved valve GA drawing & data sheet, Delivery challan, Tax invoice, Inspection report & Lorry way bill for our review.
 - c. Those who have supplied above mentioned valve to BHEL-HARIDWAR to furnish only P.O. ref. for our review.



3. An Indian JV/Subsidiary company or a company having collaboration can also offer, provided that it has a valid technical collaboration or licensing agreement (for design/engineering, manufacturing, testing and supply of such equipment) in India with a Qualified Equipment Manufacturer (QEM) who meets the requirements stipulated at sl.no.1 above. Vendor to furnish supporting docs for valid technical collaboration or licensing agreement in India with a QEM.
4. The Indian JV/Subsidiary Company shall design, manufacture & test above referred valve as per QEM/Collaborator practice. Vendor to confirm.

Note: -

1. BHEL reserves the right to verify the information submitted by vendor. Submission of false/incorrect information shall lead to rejection of offer.
2. BHEL reserves the right to ask for more pertinent information /documents / clarifications. Vendor shall provide this information to BHEL in a timely manner so that project schedule doesn't hamper.
3. All the documents furnished to BHEL shall be in Hindi/English language only. If the documents are not in Hindi/English, then they must be accompanied with duly certified Hindi/English translations of the same.

-----End of PQR-----

SPECIAL NOTE FOR BIDDERS:

Following documents are an integral part of this tender enquiry and endorsed copies of these documents (duly signed and stamped on each page, as a token of acceptance) are to be uploaded along with offer on GEM portal.

1. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of "BUYER ADDED BID SPECIFIC ADDITIONAL TERMS AND CONDITIONS" and its clause wise supporting documents where required.
2. Please submit signed & stamped copy (each page) of PQR documents with proper filled information and related supporting documents as mentioned in PQR.
3. Any other documents required to be submitted as per your offer.
4. Please fill your acceptance/ comments in confirmation column of above Annexure-A of Buyer's Specific Terms & Conditions. Blank column will understood as accepted by bidder.
5. Copy/Replica of Price schedule (without prices) mentioning "Quoted' in place of price along with your techno-commercial (Part-1) offer.



BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR
TURBINE LAYOUT GROUP

PRE-QUALIFICATION REQUIREMENT
Pneumatic Globe Valve

DOCUMENT NO.
TL/PGV/PQR/2020003
Rev:00 Dt:25.10.2021

Description:

The Pneumatic Globe Valve is used for supplying water at LP turbine exhaust hood spray during turbine trip case in order to decrease the temperature of LP turbine. It is on/off & globe type valve. The Valve end connections are flanged type. It is pneumatically operated very quick opening and closing type valve. The valve shall be designed for high water flow in very less time to ensure safety of LP turbine.

Mandatory requirement for Pre-Qualification:

1. The vendor should have successfully designed, manufactured, tested & supplied of Pneumatic Globe valves for water application. Vendor should have supplied one (1) no. in at least one power or process plants in last seven (7) years from the date of issuance of enquiry with following technical details mentioned in table-1.

Table-1

| | |
|------------------|---------------------|
| Valve Type | 2/2 way Glove Valve |
| Valve Size Range | NB40 & above |
| Actuation | Pneumatic |
| Valve Rating | CL300 & above |

2. The vendor should furnish the following documents in line with criteria given in above sl.no.1.
 - a. Executed unpriced Purchase order (P.O.) should not be older than seven (7) years from the date of issuance of enquiry.
 - b. Dispatch document w.r.t above executed P. O. i.e. Approved valve GA drawing & data sheet, Delivery challan, Tax invoice, Inspection report & Lorry way bill for our review.
 - c. Those who have supplied above mentioned valve to BHEL-HARIDWAR to furnish only P.O. ref. for our review.



BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR
TURBINE LAYOUT GROUP

PRE-QUALIFICATION REQUIREMENT
Pneumatic Globe Valve

DOCUMENT NO.
TL/PGV/PQR/2020003
Rev:00 Dt:25.10.2021

3. An Indian JV/Subsidiary company or a company having collaboration can also offer, provided that it has a valid technical collaboration or licensing agreement (for design/engineering, manufacturing, testing and supply of such equipment) in India with a Qualified Equipment Manufacturer (QEM) who meets the requirements stipulated at sl.no.1 above. Vendor to furnish supporting docs for valid technical collaboration or licensing agreement in India with a QEM.
4. The Indian JV/Subsidiary Company shall design, manufacture & test above referred valve as per QEM/Collaborator practice. Vendor to confirm.

Note: -

1. BHEL reserves the right to verify the information submitted by vendor. Submission of false/incorrect information shall lead to rejection of offer.
2. BHEL reserves the right to ask for more pertinent information /documents / clarifications. Vendor shall provide this information to BHEL in a timely manner so that project schedule doesn't hamper.
3. All the documents furnished to BHEL shall be in Hindi/English language only. If the documents are not in Hindi/English, then they must be accompanied with duly certified Hindi/English translations of the same.

----End of PQR----

| <i>Sunil Kr. Sharma</i> 25/10/2021 | <i>Anil Kumar</i> 25/10/2021 | <i>Sandeep</i> 25/10/2021 | <i>Saswati</i> 25/10/21 |
|---------------------------------------|---------------------------------|------------------------------|-------------------------------|
| Prepared By | Checked By | Approved By | Approved By |
| SUNIL KR. SHARMA Dy.Engineer/TL | ANIL KUMAR Sr. Engineer/TL | S.K SONKAR Sr.Manager/TL | SASWATI SRIVASTAVA AGM/CIE |

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 19TH
JULY, 2024 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,
(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 4th June, 2020 and subsequent order(s).

Ref: 1) Tender Enquiry Specification No:
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... (*specify the name of the organization here*) has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:


- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Thanking you,
Yours faithfully,

(Signature, Date & Seal of
Authorized Signatory of the Bidder)

** - *Strike out whichever is not applicable.*

| | | | <p><u>PNEUMATIC GLOBE VALVE</u></p> <p>LIST OF DOCUMENTS AND DRAWINGS</p> <p>MAT. CODE – W90313726302</p> | | | | <p>4-13137-95003</p> <p>Rev.02 Dt: 03.03.2025</p> <p>Page 1 of 1</p> | | | | | | | | | | | | | | | | | | | | |
|---|---|---|--|-----------------------------|--------------------|-----------------------------|--|--|--|--------|------------------|--------------|------------|---------------|------------------|---|--|-------------|----|---|--|---|---|-------------|----|---|--|
| | | <p>A. <u>SCOPE OF THE DOCUMENT:</u></p> <p>This document lists down the drawings and documents to be followed for executing the order of one no. (1 no.) of Pneumatic Globe valve (DN40) having TAG No. MAC01AA051.</p> <p>B. <u>LIST OF DOCUMENTS AND DRAWINGS:</u></p> <table><tr><th>Sl.no.</th><th>Item description</th><th>Drg./Doc. no</th><th>Rev/ Index</th><th>No. of sheets</th><th>Quantity of item</th></tr><tr><td>1</td><td>Technical Purchase Specification: Valves</td><td>413137U8103</td><td>01</td><td>2</td><td></td></tr><tr><td>2</td><td>Technical Requirements (Pneumatic Globe Valve – Actuator & Accessories)</td><td>41812870012</td><td>06</td><td>1</td><td></td></tr></table> | | | | | | | | Sl.no. | Item description | Drg./Doc. no | Rev/ Index | No. of sheets | Quantity of item | 1 | Technical Purchase Specification: Valves | 413137U8103 | 01 | 2 | | 2 | Technical Requirements (Pneumatic Globe Valve – Actuator & Accessories) | 41812870012 | 06 | 1 | |
| Sl.no. | Item description | Drg./Doc. no | Rev/ Index | No. of sheets | Quantity of item | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Technical Purchase Specification: Valves | 413137U8103 | 01 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Technical Requirements (Pneumatic Globe Valve – Actuator & Accessories) | 41812870012 | 06 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>SIGN & DATE</p> | <p>NAVNEET 03.03.2025</p> | <p>AGREED DEPTT.</p> | <p>NAME</p> | <p>DATE & SIGNATURE</p> | | <p>NAME</p> | <p>SIGNATURE & DATE</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>CIE</p> | <p>ANJANI / MGR-CIE</p> | <p>-sd- 03.03.2025</p> | <p>WORKED BY</p> | <p>NAVNEET ; MGR/STE-TL</p> | <p>-sd- 03.03.2025</p> | | | | | | | | | | | | | | | | | | | | |
| <p>REV. NO.</p> | <p>02</p> | <p>CIE</p> | <p>ANJANI / MGR-CIE</p> | <p>-sd- 03.03.2025</p> | <p>CHECKED BY</p> | <p>NAVNEET ; MGR/STE-TL</p> | <p>-sd- 03.03.2025</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>CIE</p> | <p>S SRIVASTAVA / AGM-CIE</p> | <p>-sd- 03.03.2025</p> | <p>APPROVED BY</p> | <p>A JAIN; SDGM/STE-TL</p> | <p>-sd- 03.03.2025</p> | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|------------------------------|------------------|--------------------|------------|--|------------|------|-----------------|--------|--------------------|------|----------------|-------------------------------------|----------|-----------------------|-------------------------------|----------|-------------|------------|----------------|--------------|------|-----------|--------------|-------|
| | |  | PNEUMATIC GLOBE VALVE | | 413137U8103 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | REV-01 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Page 1 of 2 | | | | | | | | | | | | | | | | | | | | | | |
| <div>COPYRIGHT AND CONFIDENTIAL</div> <div>The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company</div> | | 1-Scope: This Technical Purchasing Specification covers supply of Pneumatic Glove valve with limit switch for 100% open indication. The requirements of this specification are valid as far as no other requirements are given in the enquiry. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2-Technical Data and Design: The criteria, e.g. fluid, pressure, temperature, material of the casing, etc., are as below. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><td>Valve Type</td><td>2/2-way Coaxial Valve , Externally Control</td></tr><tr><td>Valve Size</td><td>DN40</td></tr><tr><td>Design Pressure</td><td>64 bar</td></tr><tr><td>Design Temperature</td><td>65°C</td></tr><tr><td>End Connection</td><td>Flange RF 1.5" ANSI B16.5 CLASS 600</td></tr><tr><td>Function</td><td>Valve Normally Closed</td></tr><tr><td>Pressure range of control air</td><td>5-10 bar</td></tr><tr><td>Flow Medium</td><td>Condensate</td></tr><tr><td>Valve Material</td><td>Carbon Steel</td></tr><tr><td>Duty</td><td>Isolation</td></tr><tr><td>Valve Rating</td><td>CL600</td></tr></table> | | | | Valve Type | 2/2-way Coaxial Valve , Externally Control | Valve Size | DN40 | Design Pressure | 64 bar | Design Temperature | 65°C | End Connection | Flange RF 1.5" ANSI B16.5 CLASS 600 | Function | Valve Normally Closed | Pressure range of control air | 5-10 bar | Flow Medium | Condensate | Valve Material | Carbon Steel | Duty | Isolation | Valve Rating | CL600 |
| | Valve Type | 2/2-way Coaxial Valve , Externally Control | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Valve Size | DN40 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Design Pressure | 64 bar | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Design Temperature | 65°C | | | | | | | | | | | | | | | | | | | | | | | | | |
| | End Connection | Flange RF 1.5" ANSI B16.5 CLASS 600 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Function | Valve Normally Closed | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pressure range of control air | 5-10 bar | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flow Medium | Condensate | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valve Material | Carbon Steel | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duty | Isolation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valve Rating | CL600 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3- Function: This valve is ON/OFF valve and is used for isolation purpose in Condensate line. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4- Material: Body carbon steel, material of internals to be selected by supplier and to be informed to purchaser for their comments, if any. Also refer clause 4.0 of ST47025. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | NAME | SIGNATURE & DATE | | | | | | | | | | | | | | | | | | | | | | |
| | | | WORKED BY | SUNIL KR. SHARMA | | | | | | | | | | | | | | | | | | | | | | | |
| | | | CHECKED BY | ANIL KUMAR | | | | | | | | | | | | | | | | | | | | | | | |
| | AGREED DEPTT. | NAME | DATE & SIGNATURE | APPROVED BY | S.K.GUPTA | | | | | | | | | | | | | | | | | | | | | | |



PNEUMATIC GLOBE VALVE

Doc. No: - 413137U8103

Page 2 of 2

5.0 For completion of this specification, read this specification along with purchase specification of valve ST47025 & its addendum.

6.0 in continuation to the clause 15.0 of specification ST47025, the min. test requirement envisaged by BHEL are as follows.

6.1 Testing of materials: The material of components of valve such as body, bonnet, stem & fasteners shall be tested as per relevant specification for its chemical composition and mechanical properties. For remaining components compliance certificate shall be furnished.

6.2 Functional Test: Smooth operation for opening/closing.

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| | | | | | | |
|---------------|------|------------------|-------------|------------|------------------|--|
| | | | | NAME | SIGNATURE & DATE | |
| | | | | | | |
| | | | | WORKED BY | SUNIL KR. SHARMA | |
| | | | CHECKED BY | ANIL KUMAR | | |
| AGREED DEPTT. | NAME | DATE & SIGNATURE | APPROVED BY | S.K.GUPTA | | |

TECHNICAL REQUIREMENTS (PNEUMATIC GLOBE Valve-Actuator & accessories)

1) General : 24V DC for on-off action.

Tolerance : (+10 & -15%)

Enclosure :IP 65

2) Solenoid valve

Connection : Plug and socket type

Energised time :constant rated

coil isolation : class F

Nominal current :≤ 1A

TYPE : BOSCH make, model 0 820 022 987, namur interface or equivalent

3) Proximity switch :- inductive

switching element

function : PNP close (normal open)

Connection : 3 pole

Connection : Plug and socket type

Shield : wired if available

Qty : 2 nos

TYPE : BALLUFF make, model BES-516 300 S321 NEX S4 D or equivalent

4) Pneumatic actuation : Pressure range 3-10 bar. Following are in Vendor scope:-

a) Adaptor (with ferrule fitting for connecting to G1/2" air supply line (BHEL scope)

b) Impulse line (G1/8") : Two meters to be provided along with adaptor for connection to this valve.

c) Suitable Air filter Regulator

5) Normal operation : Valve close

6) Fail safe position :Valve close

7) Hook up diagram : To be provided

8) Write up on operation of valve: To be provided

9) The Limit Switches and Solenoid Valve of each globe valve are to be loosely supplied in the main package along with all cables/fittings for termination to the Junction Box. Junction box is in scope of vendor

10) The Limit Switches and Solenoid Valve shall be packed in separate wooden box/compartment to avoid breakage.

11) Proper Labeling such as 'item name", "P.O." etc. shall be clearly indicated on the loose package Box for identification in case of misplacement.



उत्पाद मानक

STEAM TURBINE ENGINEERING
PRODUCT STANDARD

ST47025
HW0690097

पृष्ठ 4 का 1


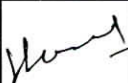
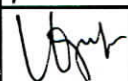
Page 1 of 4


GENERAL PURCHASE SPECIFICATION OF VALVES

- 1.0 SCOPE :-** This specification covers the general technical requirements for all valves to be used in turbine integral system handling hot condensate, superheated steam, air steam mixture, steam water mixture, oil & oil vapours, fire resistant fluid & its vapours. Separate specifications to indicate specific requirements e.g. design parameters, nominal size etc. have been prepared for each valve which shall be enclosed with this specification whenever any requirement arises.
- 2.0 RATING:-** Rating of the valves shall be selected by valve supplier for the working conditions as specified in separate specification / documents / drawings / enquiry of desired valve to which specification is enclosed. The rating shall be as per ANSI B16.34 or approved equivalent.
- 3.0 END CONNECTION**
- 3.1** Butt weld end connections of valves shall be suiting to pipe size as mentioned in enclosed specification of valve.
- 3.2** In case of flanged end valves, the supplier shall separately quote for the counter flanges, gaskets, O-ring & fasteners of required pressure-temperature rating.
- 4.0 MATERIAL :-** All materials used in the construction of the valve body and other component shall be selected from the best available material for the purpose. The purchaser / owner reserves the right to review the material specification of valve components and to ask changes in selection of material. Any specific material for particular valve has been mentioned in the valve specification.
- 5.0 DRAINAGE OF VALVE BODY :-** Depending on the construction and placement of the valve in piping system, a drain tapping in the body may be required for valves used in oil, steam and water lines. This shall be checked and intimated by purchaser / owner after the receipt of offer or at the time of placement of order. The tapping shall be at the lowest point and on the center line, which shall be suitably plugged with a threaded plug & washer. The drain size for various valve sizes shall be as follows:-
- NB50 to 100 - 15 mm
NB125 to 300 - 20 mm
NB350 & above - 25 mm
- 6.0**
- Each valve shall be marked with an arrow on body showing direction of flow of medium, not applicable for gate valve which can be mounted with either of the sides.
 - Handwheel shall have the indication for opening & closing direction.

| | |
|--|--|
| हस्ताक्षर एवं दिनांक SIGN & DATE | 26.7.04 |
| नाम NAME | दिनांक एवं हस्ताक्षर SIGNATURE & DATE |
| अनुवादक TRANSLATED BY | |
| TSX | D.L. OBEROI |
| QAX | S.S. CHAUHAN |
| सहमत विभाग AGREED DEPT. | नाम NAME |
| दिनांक एवं हस्ताक्षर DATE & SIGNATURE | पर्यवेक्षणकर्ता SUPERVISED BY |
| REAFFIRMED | APPROVED |
| WORKED BY | निर्माण PREPARED |
| REV. NO. 03 | STE |
| Dt. 29.02.20 | ISSUED: STE (TL) HARDWAR |
| C/A No. TSX(STE)20-49 | DATE: 26.3.84 |

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|--|---|--|-----------------------------|--|--------------------------------------|--------|--------|
| दिनांक एवं हस्ताक्षर SIGN & DATE | | उत्पाद मानक STEAM TURBINE ENGINEERING PRODUCT STANDARD | ST47025 HW0690097 | | | | |
| | | | पृष्ठ 4 का 2 Page 2 of 4 | | | | |
| सामग्री सूची संख्या को INVENTORY NO. | SUPERSEDES INVENTORY NO. | <p>3. GLAND SEALING :- Valves working under vacuum are to be provided with gland sealing arrangement.</p> <p>7.0 HYDRAULIC TEST :- Hydraulic test shall be carried out on each valve. After the hydraulic test the internals shall be wiped, cleaned and dried. The body & seat shall be tested hydraulically in accordance with ANSI B16.34. For steam & air service valves, seat leakage shall additionally be tested by air as per ANSI B16.34. Purchaser/owner shall have the right to witness the test. However the test certificates mentioning about test pressure & duration of test along with following informations shall be furnished to purchaser.</p> <ol style="list-style-type: none"> Valve identification No. Type of valve & description Valve size Name of manufacturer Project name Date of testing <p>8.0 CLEANING & SURFACE PROTECTION :- The surfaces shall be rubbed with a solvent (e.g white spirit) to clean & prepare them for the application of the paints. Unmachined surface shall be blast cleaned to remove any rust. Stainless steel portion shall not be painted.</p> <ol style="list-style-type: none"> Outer surface to be protected by painting with two coats of Red oxide Zinc chromate primer. Inside surface to be protected against rusting and corrosion. <p>9.0 IDENTIFICATION PLATE :- Following information in English shall be engraved on a metal sheet properly fixed at a convenient location on the body or body cover.</p> <ol style="list-style-type: none"> Identification No. as specified in enclosed valve specification. Valve type & Description Valve size Pressure rating Manufacturer Year of manufacturing Project name | | | | | |
| COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company. | स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है। इसका प्रयोग एवं अनावश्यक रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए। | दिनांक SIGN & DATE 26.7.04 | REV. NO. 03 | निर्माणकर्ता WORKED BY S.K.GUPTA | जांचकर्ता CHECKED BY V.K.GUPTA | 9/7/04 | 9/7/04 |
| सामग्री सूची संख्या INVENTORY NO. | P-5522 | | | | | | |

| | | | | |
|---|--|---|---|-------------|
| दिनांक एवं हस्ताक्षर SIGN & DATE |  | उत्पाद मानक STEAM TURBINE ENGINEERING PRODUCT STANDARD | ST47025 HW0690097 | |
| | | | पृष्ठ 4 का 3 Page 3 of 4 | |
| सामग्री सूची संख्या को INVENTORY NO | SUPERSEDES INVENTORY NO | <p>10.0 STANDARD :- Latest issue and amendments of all applicable international standard shall apply.</p> <p>11.0 PACKING :- Valve ends, machined and unmachined surface, etc. shall be protected against rusting & corrosion and valve shall be packed according to mode of transport and storage in top shade store gantry in tropical climatic conditions for a period of 8-12 months.</p> <p>12.0 GUARANTEE :- The supplier shall guarantee trouble free operation of the equipment for a period of 2 years after installation and commissioning or a period of 3 years from the date of dispatch of equipment whichever is earlier. If during erection/commissioning and operation at site, any defect in any component is detected, purchaser's / owner's site representative shall prepare the assessment report and a copy of the same shall be forwarded to the supplier. The supplier shall replace / rectify the concerned items free of charge. The supplier, if he so desires, may depute his representative to site at his own cost otherwise the report of purchaser's / owner's site representative shall be binding on the supplier.</p> <p>13.0 SPARES :- The offer of valves shall include the requirement of spares to be made available at the time of erection & commissioning. A separate offer of spares to be required for 3 to 5 years of operation shall also be separately enclosed along with main offer.</p> <p>14.0 SPECIAL TOOLS & TACKLES :- Any special tools & tackles, required for erection, commissioning and maintenance of valves shall be included in main offer per set of valves.</p> <p>15.0 QUALITY ASSURANCE, INSPECTION AND TESTING :-</p> <p>15.1 The manufacturer shall conduct all tests required to ensure all the component parts of the valve offered conform to the requirements of the specification and in compliance with requirements of applicable codes and standards.</p> <p>15.2 The bidder shall submit along with his offer quality plan in the prescribed BHEL's format.</p> <p>15.3 The particulars of the proposed shop tests and procedures for the tests shall be submitted to the BHEL / owner for approval along with quality plan.</p> <p>15.4 The equipment shall be dispatched only after inspection and clearance of material by BHEL / owner and approval of test certificates by BHEL / owner.</p> <p>15.5 The minimum tests/ checks to be carried out on the valve as envisaged by purchaser shall be as per the specification of desired valve to which this specification is enclosed. This is, however not intended to form a comprehensive testing programme as it is supplier's responsibility to prepare the detailed quality plan, which should also include tests, checks carried out by supplier as a part of their normal practice. This quality plan is subject to the approval of BHEL and owner. BHEL/owner reserves the right to ask for any more checks at the time of quality plan finalisation.</p> | | |
| सामग्री सूची संख्या INVENTORY NO A-5522 | COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited it must not be used directly or indirectly in any way detrimental to the interest of the company. | स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत (पीडी) इलेक्ट्रिकल्स की सम्पत्ति है इस्तेमाल प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में एविकाकारक हो न किया जाए। | दिनांक SIGN & DATE 26.7.04 | REV. NO. 03 |
| | | निर्माणकर्ता WORKED BY S.K.GUPTA |  | 9/7/04 |
| | | जांचकर्ता CHECKED BY V.K.GUPTA |  | 9/7/04 |

| | | | | |
|--|--|---|--------------------------------------|------------------|
| SIGN दिनांक एवं हस्ताक्षर & DATE |  | उत्पाद मानक STEAM TURBINE ENGINEERING PRODUCT STANDARD | ST47025 HW0690097 | |
| | | | पृष्ठ 4 का 4 Page 4 of 4 | |
| सामग्री सूची संख्या को अभिलेखित करें | SUPERSEDES INVENTORY NO | 16.0 ACTUATORS :- As mentioned in valve specification, separately enclosed with this specification, the actuators shall be supplied along with handwheel to facilitate manual operation of valve. Direction of rotation of handwheel for opening and closing of valve shall be indicated on handwheel. | | |
| COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company. | | 17.0 DOCUMENTS 17.1 Documents required along with the offer / at the time of registration :- The supplier shall submit 6 copies of following documents in English language along with the offer to enable purchaser for complete technical scrutiny of the offer. | | |
| स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है, इसका प्रयोग एवं अवलोकन केवल उस व्यक्ति से किया जाना चाहिए जो कि कंपनी के हित में हानिकारक हो न किया जाए। | | 1. Cross sectional & dimensional drawing of valve along with actuator (if required) in assembled condition giving items nos. description, material specification of all components, details of bypass valve (if envisaged), gland sealing arrangement, end connection details, clear space required for operation & dismantling of valve & actuator for maintenance for approval by the purchaser. 2. Quality plan for approval by purchaser. 3. List of commissioning spares, maintenance spares for 3 to 5 years of operation for reference. 4. Any special requirements of lubricant for reference. The document submitted along with the offer at the time of registration and approved by purchaser / owner shall be the basis of the order and no changes shall be made with out permission of purchaser / owner. Scrutiny and approval of documents, submitted along with the offer, by purchaser / owner shall not release the supplier and his sub-vendors of their responsibility under the contract . | | |
| दिनांक एवं हस्ताक्षर SIGN & DATE 26.7.04 | | 17.2 Documents to be submitted after placement of the order :- 1. 10 copies of finalised contract drawing within 8 weeks. 2. 10 copies operation/ maintenance/ erection instructions for each station within 12 weeks. 3. Instruction of conservation and deconservation within 12 weeks. 18.0 Six copies of all actual test certificates and quality documents shall be furnished to purchaser/owner. 19.0 If there are any deviation from this specification in offer, the same shall be clearly spelled out clausewise by supplier. 20.0 Cross referred standards :- ANSI B16.34 | | |
| सामग्री सूची संख्या INVENTORY NO P-5522 | REV. NO. 03 | निर्माणकर्ता WORKED BY S.K.GUPTA | जांचकर्ता CHECKED BY V.K.GUPTA | 9/7/04 9/7/04 |

ADDENDUM TO ST47025**APPLICATION : STEAM TURBINE****Date : 16.11.2011****ITEM : GENERAL SPECIFICATION OF VALVES****Rev : 01****ADDITIONAL SPECIFICATION :**

- a) Pressure retaining parts of valves shall be subjected to NDT as per Table-I.
- b) Bar stock / forging above 50mm diameter for valve trim shall be subjected to UT.
- c) Hardened / stellitted valve disc and seat are to be subjected to LPI and hardness check.
- d) Colour matching of valve disc / plug and seat shall be carried out to ensure contact.
- e) Hydraulic pressure test and seat leak test shall be carried out as per ANSI 16.34.
- f) Air seat leak test shall be carried out as per applicable standards / codes.
- g) Functional testing shall be carried out on each valve to check the following as per the approved valve data sheet :
 - (i) Smooth operation
 - (ii) Valve travel, closing and opening time
 - (iii) Current drawn by actuators
- h) Springs for safety valves shall be tested with suitable NDT and for spring rate.
- i) Safety and safety relief valves shall be tested for performance.

TABLE-I

| Valve Size NB in mm | ANSI Class UPTO 300 | ANSI Class ABOVE 300 UPTO 600 | ANSI Class ABOVE 600 BELOW 900 | ANSI Class 900 & ABOVE & BELOW 4500 |
|-------------------------------------|------------------------|-------------------------------------|--|---|
| Less than 50 | Visual | Visual | Visual | MPI |
| 50 & above but below 100 | Visual | Visual | MPI | MPI & RT (on 10% of valves on 100% area) |
| 100 & above but less than 300 | Visual | MPI | MPI & RT (on 10% of valves on change of section & weld ends) | MPI & RT (on 100% area) |
| 300 & above | MPI | MPI | MPI & RT (on change of section & weld ends) | MPI & RT (on 100% area) |

NOTE : 1. For body and bonnet forgings UT with MPI may be adopted in place of RT.

2. For austenitic steel MPI may be replaced by LPI.

3. Outer surface of valve shall be painted as per following painting scheme

Painting Scheme

| Paint (Coat) | Paint Type | No. of coat | DFT* |
|----------------------|--|-------------|------|
| Primer Paint | : Epoxy base Zinc rich primer paint | 1 Coat | 35 |
| Intermediate Paint | : Epoxy TiO ₂ Pigmented Polyamide Cured Paint | 1 Coat | 70 |
| Finish (Final) Paint | : Aliphatic Acrylic 2 Pack Polyurethane Finish paint | 2 Coats | 75 |
| Total DFT | | 180 | |

DFT – Dry Film Thickness (final) in microns.

- Shade as per RAL – Grey 9002
- Identification Tag/Band of white 9010 color. Legend in Black letters.

This supersedes clause 8 (i) of ST47025.

4. Valve made of stainless steel shall not be painted.

5. Valve body material for the following temperature parameter shall be as follows :-

- Upto 400°C - Carbon steel
- 401°C - 495°C - Alloy steel (15Mo3 or equivalent)
- 496°C - 550°C - Alloy steel (10CrMo910 or equivalent)
- Above 550°C - Alloy steel (X10CrMoVNb9-1 or equivalent)

6. Each type of Angle Drain valve (MAL valves) and Temperature control valve offered should have a minimum of two years of operational experience in similar application at the time of offer submission.


(S.K.Gupta)

QAX, BHEL, HARDWAR

PED, BHEL, HARDWAR

DOC. NO.- 10870-ENGG-N001A

Project: Lara 2X800MW

Dated: 23.11.2024

PAINTING SCHEME FOR VALVES

Following Painting Scheme is applicable for valves of Lara 2X800MW:

Painting Scheme .

| Paint (Coat) | Paint Type | No. of coat | DFT* |
|----------------------|--|-------------|------|
| Primer Paint | : Epoxy base Zinc rich primer paint | 1 Coat | 35 |
| Intermediate Paint | : Epoxy TiO ₂ Pigmented Polyamide Cured Paint | 1 Coat | 70 |
| Finish (Final) Paint | : Aliphatic Acrylic 2 Pack Polyurethane Finish paint | 2 Coats | 75 |
| | | Total DFT | 180 |

* DFT – Dry Film Thickness (final) in microns.

FINAL SHADE SHALL BE AS PER RAL/IS:5 IS GREY 9002

Prepared By

Navneet Chakrapani

MGR/STE-TL

| MANUFACTURER'S NAME AND ADDRESS | | | STANDARD QUALITY PLAN | | | | TO BE FILLED BY BHEL | | TO BE FILLED BY BHEL | | | | | |
|---------------------------------|------------------------|-----------------|-----------------------|--------|---------------------|------------------|----------------------|------------------|----------------------|---|--------|---|--|---------|
| BHEL | VENDOR'S NAME | ITEM | PNEUMATIC GLOBE VALVE | QP NO. | QA_BI_QP_903, REV01 | | | | | | | | | |
| | | | | DATED | 30.04.2025 | | | | | | | | | |
| | | DRG. NO. | AS PER PO | | | | | | | | | | | |
| | | SPEC. | AS PER PO | | | | | | | | | | | |
| | | REV | AS PER PO | | Page 1 of 2 | | | | | | | | | |
| SL. NO. | COMPONENT & OPERATIONS | CHARACTERISTICS | | CLASS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORDS | | AGENCY | | | REMARKS |
| | | | | | | | | | | M | B | N | | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | D | 10 | | | 11 |

| 1.0- RAW MATERIALS & BOUGHT OUT ITEMS | | | | | | | | | | | | | |
|---------------------------------------|---------------------------------|--|-------|-----------------------|------|---------------------------|---------------------------|---------------------------|---|---|---|--|--|
| 1.1 | BODY, BONNET, TRIM | CHEMICAL COMPOSITION | MAJOR | CHEMICAL | 100% | BHEL SPEC. & APPROVED DRG | BHEL SPEC. & APPROVED DRG | TEST CERTIFICATE | √ | P | V | | |
| | | MECHANICAL PROPERTIES | MAJOR | MECHANICAL | 100% | BHEL SPEC. & APPROVED DRG | BHEL SPEC. & APPROVED DRG | TEST CERTIFICATE | √ | P | V | | |
| 1.2 | OTHER ITEMS | CHEMICAL COMPOSITION & MECHANICAL PROPERTIES | MINOR | CHEMICAL & MECHANICAL | 100% | BHEL SPEC. & APPROVED DRG | BHEL SPEC. & APPROVED DRG | CERTIFICATE OF COMPLIANCE | √ | P | V | | |
| 2.0- IN PROCESS INSPECTION | | | | | | | | | | | | | |
| 2.1 | MACHINING OF BODY, BONNET, TRIM | DIMENSIONS | MAJOR | MEASUREMENT | 100% | MACHINING DRAWING | MACHINING DRAWING | IR | √ | P | - | | |
| 2.2 | | SURFACE CRACK EXAMINATION | MAJOR | NDT | 100% | BHEL SPEC. & APPROVED DRG | BHEL SPEC. & APPROVED DRG | TEST CERTIFICATE | √ | P | V | | |

| | | | | |
|----------------------------|--|---|------------------|-------------|
| | | LEGEND: | FOR CUSTOMER USE | |
| MANUFACTURER/SUBCONTRACTOR | | ! RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. | | |
| | | M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER | | |
| | | INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION | | |
| | | ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER | | |
| | | | | APPROVED BY |

| MANUFACTURER'S NAME AND ADDRESS | | | STANDARD QUALITY PLAN | | | | TO BE FILLED BY BHEL | | TO BE FILLED BY BHEL | | | | |
|---------------------------------|------------------------|-----------------|-----------------------|------------|---------------------|------------------|----------------------|------------------|----------------------|---|--------|---|---------|
| BHEL | VENDOR'S NAME | ITEM | PNEUMATIC GLOBE VALVE | QP NO. | QA_BI_QP_903, REV01 | | | | | | | | |
| | | DATED | | 30.04.2025 | | | | | | | | | |
| | | DRG. NO. | AS PER PO | | | | | | | | | | |
| | | SPEC. | AS PER PO | | | | | | | | | | |
| | | REV | AS PER PO | | Page 2 of 2 | | | | | | | | |
| SL. NO. | COMPONENT & OPERATIONS | CHARACTERISTICS | | CLASS | TYPE OF CHECK | QUANTUM OF CHECK | REFERENCE DOCUMENT | ACCEPTANCE NORMS | FORMAT OF RECORDS | | AGENCY | | REMARKS |
| | | | | | | | | | | M | B | N | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | D | 10 | | 11 |

| 3.0- FINAL INSPECTION & TESTING | | | | | | | | | | | | | |
|--------------------------------------|------------------------------|---------------------------------------|----------|-----------------|------|---|---|---------------------|---|---|---|--|--|
| 3.1 | ASSEMBLY OF VALVE | DIMENSIONS | MAJOR | MEASUREME NT | 100% | BHEL APPROVED DRAWING | BHEL APPROVED DRAWING | Test Certificate | √ | P | W | | |
| 3.2 | FUNCTIONAL TEST | OPENING AND CLOSING, SET PRESSURE, | MAJOR | OPERATION | 100% | BHEL APPROVED DRAWING PROCEDURE/NORM S | BHEL APPROVED DRAWING PROCEDURE/NOR MS | Test Certificate | √ | P | W | | |
| 3.3 | BODY | LEAKAGE | CRITICAL | HYDRAULIC | 100% | BHEL APPROVED DRAWING/ PROCEDURE | BHEL APPROVED DRAWING/ PROCEDURE | Test Certificate | √ | P | W | | |
| 3.4 | SEAT TIGHTNESS TEST | LEAKAGE | CRITICAL | HYDRAULIC | 100% | BHEL APPROVED DRAWING/ PROCEDURE | BHEL APPROVED DRAWING/ PROCEDURE | Test Certificate | √ | P | W | | |
| 4.0 PAINTING, PRESERVATION & PACKING | | | | | | | | | | | | | |
| 4.1 | PRESERVATION AND PAINTING | | MAJOR | VISUAL | 100% | BHEL APPROVED DRAWING/ PROCEDURE | BHEL APPROVED DRAWING/ PROCEDURE | IR | - | P | V | | |

NOTE:

1. TEST CERTIFICATES SHALL BE SUBMITTED QP CLAUSE WISE MENTIONING CLASE ON EACH PAGE.
2. CALIBRATED INSTRUMENTS SHALL BE USED FOR TESTING.

| | | | | |
|----------------------------|--|---|------------------|-------------|
| | | LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER | FOR CUSTOMER USE | |
| MANUFACTURER/SUBCONTRACTOR | | | | APPROVED BY |
| | | | | |