



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

BHEL Ref. No.: **B/4066/2026/1275V1**

Tender Enquiry for the requirement of Pneumatically Operated Globe Valves For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines for 1 X 250 MW JSW Dolvi Project

Bids are invited from bidders for the requirement of item **Pneumatically Operated Globe Valves For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines for 250 MW JSW Dolvi project** 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.	BUYER ADDED BID SPECIFIC ADDITIONAL TERMS & CONDITIONS (ANNEXURE-A) (in addition to General terms and conditions on GeM 4.0 latest version as applicable)	14
2.	Checklist & Annexures (Modal Tender Document Set)	12
3.	PQR (PRE-QUALIFICATION REQUIREMENT)	01
4.	TECHNICAL SPECIFICATION & DOCUMENTS comprising of following: a) Document No. 413137S7005 Rev.00 b) Technical Specification Document No. ST47025 Rev. 03 c) Painting Scheme Rev.00 Dated 15.07.2025	11
5.	BHEL STANDARD QUALITY PLAN NO. QA_BI_QP_903, Rev-01 Dated 30.04.2025	02



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

PACKAGE- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

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

1. E-bids on GeM are invited from bidders for the supply of **Pneumatically Operated Globe Valves For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines for 250 MW JSW Dolvi Project** as per requirements mentioned below:

Sl. No.	Material Code & Item Description	Total Quantity	Lot Quantity (In Nos.)	Delivery Completion schedule	Present Material Requirement at
1.	WS9731371117 PNEUMATICALLY OPERATED GLOBE VALVES FOR REGULATION/ ISOLATION PURPOSE AS PER DOC. NO. 413137S7005 REV.00 FOR TURBINE DRAIN LINES SPEC: ST47025 REV.03	1 Set	Refer Doc. No. 413137S7005 Rev.00	Supply completion by 60 days from date of PO	30/01/2027

2. **Consignee Details:**

BHEL Site Office, 1X250 MW STG for CPP-4 JSW Dolvi, JSW Steel Ltd, Dolvi – 402107, Maharashtra

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 1.29) Dt. 25th March 2026 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.	Public Procurement (Preference to Make in India)	Compliance to Restrictions under Rule 144 (xi) of GFR 2017: I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process. III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means: - a. An entity incorporated established or registered in such a country; or b. A subsidiary of an entity incorporated established or registered in such a country; or c. An entity substantially controlled through entities incorporated, established or registered in such a country; or d. An entity whose beneficial owner is situated in such a country; or	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

		e. An Indian (or other) agent of such an entity; or f. A natural person who is a citizen of such a country; or g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above. IV. The beneficial owner for the purpose of (III) above will be as under: 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or- capital or profits of the company. b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements. 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership. 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals. 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official; 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person. Note: (i) The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-13. Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids.	
3.	Documents Checklist:	Please submit signed and stamped copy of your offer on each page along with following documents: • Buyers' Added Bid Specific Additional Terms And Conditions. • Checklist & Annexures • Technical Document No. 413137S7005 Rev.00 • Purchase Specification Document No. ST47025 Rev.03 • Painting Scheme Rev.00 Dated 15.07.2025 • BHEL Standard Quality Plan No. QA_BI_QP_903 Rev.01 dated 30.04.2025 • Replica of Price bid schedule without prices with Part-I offer.	



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

PACKAGE- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

4.	Scope of Enquiry	The scope/ requirement of item(s) covered in this tender enquiry are detailed below:			
		Sl. No.	Material Code and Item Description	Quantity	Project
			Material Code: WS9731371117		
		1.	PNEUMATICALLY OPERATED GLOBE VALVES FOR REGULATION/ ISOLATION PURPOSE AS PER DOC. NO. 413137S7005 REV.00 FOR TURBINE DRAIN LINES SPEC: ST47025 REV.03	1 Set	250 MW JSW Dolvi Project
5.	Submission of Offer	The offer/ bid shall be signed and stamped on each page by authorized representative of the bidder.			
6.	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.			
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 BHEL project site 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 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 and not to be included in the prices. Bidder to quote 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 Site for processing of your invoice. No demurrage charges would be borne by BHEL.			
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.			

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

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. Bidders to read all specification / documents thoroughly and submit their 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.	For Mat Code WS9731371117: Bidder to refer document no. 413137S7005 Rev.00 & ST47025 Rev.03 for detailed description/specification.
		2.	Materials are to be despatched on Door Delivery Basis to BHEL project site. Bidder to note that Invoice, GR/LR, Packing List, Test Certificates, Inspection Reports, Guarantee Certificate & GST Compliance Certificate are required in Original along with Copy of E-way bill after dispatch.
		3.	Vendor to ensure for the supply of complete lot quantity including Commissioning Spares & Mandatory Spares (if any).
		4.	Commissioning Spares needs to be packed in separate boxes and same is required to be marked on the box.
		5.	Advance Shipping Notification is mandatory before dispatching the material as ASN is mandatory for vehicle entry at JSW.
		6.	Two sets of O&M Manual (Hard Copies – Bound) are to be dispatched along with the items to Site. Bidder to keep Two sets of O&M Manuals inside the dispatch boxes and also to mention same in vendor's shipping list at the time of dispatches. Also submit PDF copy of O&M Manuals to BHEL Haridwar.
		7.	Bidders to refer SCOPE OF SUPPLY mentioned in Doc. No. 413137S7005 Rev.00 and submit compliance of all points tabulated in Part-A & Part-B of Doc. No. 413137S7005 Rev.00.
		8.	Item Tag Slip (KKS) with Each & Individual Item of Box contents with proper wrapping/ packaging to take care item safety and its identification upon opening of Box.
14.	Quality Requirement	Vendor to confirm and endorse BHEL SQP QA_BI_QP_903, Rev-01.	
		Inspection shall be done by BHEL/BHEL TPIA (M/s QUEST) As Per BHEL SQP No. QA_BI_QP_903 Rev.01. Please confirm.	
		Painting requirements shall be as per enclosed Painting Scheme Rev.00 dated 15.07.2025. Please confirm.	
		Bidders to submit Credentials for arranging Customer approval. Please confirm and submit the same along with offer.	
15.	Engineering Document approval	BHEL/ Customer approval may required on drawings/ datasheet of item. The documents shall be submitted to BHEL/ Customer (if required) for approval within 7 days of Purchase Order. BHEL will arrange the approval of the same within 7 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.	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

16.	Payment Terms	Payment shall be made within 45/ 60/ 90 days (as applicable for MSE, Medium and Non-MSME bidders respectively) from the material entry date in BHEL, subject to submission of non-discrepant documents by the vendor, uploading of all documents on BHEL's SUVIDHA portal at the time of dispatch, and the acceptance of material by BHEL after receipt. <u>Note: This is in supersession of 10 days' time as provided in Clause 12 of GeM GTC and also 45 days from CRAC as provided in the standard format of GeM Bid under Payment Timelines.</u> In line with MSME Gazette Notification dated 30-06-2026: MSME enterprises (MSMEs), the settlement of invoice shall be only through any of the TReDS platform (i.e (1) RXIL, (2) MI exchange, (3) Invoicemart, (4) KReDX and (5) C2FO, authorized by the Reserve Bank of India. Such MSME suppliers to select their preferred TReDS platform before award of contract so that the data is captured in the Order /Contract database/ Suvidha Portal.	
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.	MDCC clause	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 TCs/IRs/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. Material is to be dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.	
20.	Delivery Schedule/ Period	Please note that materials are required as per delivery schedule mentioned in above clause 4 of Scope of Enquiry. Early delivery with respect to above lot wise delivery will be accepted only after written confirmation 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. 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. Please note that BHEL reserve right to reject the offer of any bidders not meeting our project delivery requirement.	
21.	Liquidated Damages (LD) for late delivery	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 per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value without any controversy/dispute of any sort whatsoever. The date of dispatch mentioned on LR/GR would be treated as the date of delivery for penalty purposes.	
22.	GST Penalty	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.	
23.	Guarantee Period	Kindly confirm that Guarantee would be provided for a period of "18 months from the date of last dispatch or 12 months from the date of commissioning, whichever is earlier". Supplier shall be responsible for free replacement of defective equipment / material at our site. Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

24.	Make in India & MSE Purchase Preference guidelines:	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) dated 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. As per Make in India Order, only Class-1 and Class-2 local supplies are eligible to bid in this tender enquiry. 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.	
25.	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.	
26.	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.	
27.	Documents required for Bill processing:	The following documents are required to be sent for Bill Processing: • Original Tax Invoice (E-invoice, if the turnover exceeded Rs. 5 cr. in any financial year from 2017-18, else, a declaration for the same is required for processing of bill.) • Original LR • Packing list • Copy of E-way Bill • Guarantee/Warranty certificate • Test Certificates/ Inspection Reports • Copy of MDCC issued by BHEL/ End Customer. • Receipted Copy of LR / Proof of delivery (POD) / Material Receipt Certificate (MRC) from BHEL site • GST Compliance declaration • GeM Invoice • Consignee Receipt Cum Acceptance Certificate (CRAC) • Digitally Signed Invoice along with supporting documents to be uploaded at B2B Portal of BHEL Haridwar. https://suvidha.bhel.in/suvidha/ • Rest documents as mentioned in the PO remarks.	
28.	Settlement of Dispute, Conciliation & Arbitration:	Settlement of Dispute 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	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

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.

CONCILIATION:

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 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



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

PACKAGE- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

		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 clause. 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.	
29.	Breach of Contract, Remedies and Termination:	The following shall amount to breach of contract: 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. 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. III. The Supplier/Vendor delivers equipment/ material not of the contracted quality. IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause. V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract. 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. VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor. 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. 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. 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. 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. 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. Remedies in case of Breach of Contract. 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. 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	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

		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 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. 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: 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. 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: a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract. 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. 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. 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. 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. Note: 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: (a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor. (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.	
30.	Suspension of Business Dealings with Suppliers / Contractors:	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. 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.	



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

PACKAGE- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

31.	Conflict of Interest Among Bidders/ Agents	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: a) they have controlling partner (s) in common; or b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or c) they have the same legal representative/agent for purposes of this bid; or 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 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 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: 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal, - or 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 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. "													
32.	Micro and Small Enterprises (MSE):	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. <table><tr><th>Type under MSE</th><th>SC/ST owned</th><th>Women owned</th><th>Others (excluding SC/ ST & Women Owned)</th></tr><tr><td>Micro</td><td></td><td></td><td></td></tr><tr><td>Small</td><td></td><td></td><td></td></tr></table> Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category. 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.	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															

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

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	"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. 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. 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. 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. Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not 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. 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.	
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.	Order of Precedence:	In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below: - Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL. - Buyer Added Bid Specific ATC - GeM Bid Technical Conditions of Contract (TCC) - GeM GTC	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

PROJECT: 250 MW JSW Dolvi Project

38.	Digitally Signed Invoice:	For supply orders placed under this GEM Tender Irrespective of the value of the invoice amount, the bidder / vendor should necessarily upload the dispatch documents & invoice details on BHEL SUVIDHA portal at https://suvidha.bhel.in/suvidha/ . All documents as per PO checklist , along with additional documents (if any), must be uploaded on the portal. It is mandatory that tax invoices with a net amount (including taxes) exceeding Rs five lakhs uploaded on the portal are digitally signed using a Class 3 Digital Signature Certificate (DSC) issued by a licensed Certifying Authority. Submission of invoice document in hard copy is allowed for invoices with a net amount (including taxes) equal to and upto Rs five lakhs , in case they were not digitally signed and uploaded on the portal. Vendor Invoice will not be processed in absence of the above.	
39.	Action against Bidder/ vendor/ supplier/ contractor in case of default:	In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc. Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website. https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors	
40.	Note:	1. 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 at any stage of execution. 2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation. Any deviation from the conditions specified in Techno-Commercial Terms and Conditions - Buyer Added Bid Specific Additional Terms & Conditions (ATC) and Technical specifications and requirements will lead to rejection of offer. 3. Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected. 4. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit. 5. The offers of the bidders who are under suspension and 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 website www.bhel.com. 6. Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt. Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor.	
41.	Enclosures:	1. Annexure-1: Check List. -Applicable 2. Annexure-2: Offer forwarding letter / tender submission letter -Applicable 3. Annexure-3: No Deviation Certificate -Applicable 4. Annexure-4: Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings -Applicable 5. Annexure-5: Declaration by Authorized Signatory -Applicable (if required) 6. Annexure-6: Declaration by Authorized Signatory regarding Authenticity of submitted Documents -Applicable	

(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- Pneumatically Operated Globe Valve For Regulation/ Isolation purpose As Per Document No. 413137S7005 Rev.00 & ST47025 Rev.03 For Turbine Drain Lines

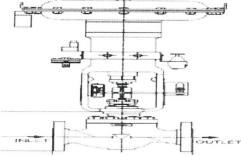
PROJECT: 250 MW JSW Dolvi Project

		7. Annexure-7: Non-Disclosure Certificate –Not Applicable 8. Annexure-8: Integrity Pact –Not Applicable 9. Annexure-9: Declaration confirming knowledge about Site Conditions –Not Applicable 10. Annexure-10: Declaration reg. Related Firms & their areas of Activities –Applicable 11. Annexure-11: Declaration for relation in BHEL –Applicable 12. Annexure- 12: Declaration reg. minimum local content in line with revised public procurement –Applicable 13. Annexure- 13: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 –Applicable 14. Annexure-14: Bank Account Details for E-Payment – Applicable for Successful Vendor 15. Annexure-15: Power of Attorney for submission of tender. –Not Applicable 16. Annexure-16: Proforma of Bank Guarantee for Earnest Money. –Not Applicable 17. Annexure-17: Proforma of Bank Guarantee for Performance Security. –Not Applicable 18. Annexure-18: List of Consortium Bank. –Not Applicable 19. Annexure-19: Declaration for treatment of cases regarding conflict of interest. – Applicable			
42.	Contact detail of Bidder:	For necessary communication, bidders are requested to provide the below details - 1.Name of Contact Persons & Mobile numbers: 2. Official email ids (at least two or three email id): 3. Works address / Location:			
43.	For Clarifications:	Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following BHEL concerned before Part I opening - <table><tr><td> Mr. Rahul Kumar Rahi Designation: Sr. Engineer (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: rkrahi@bhel.in Tel: +91 1334 28 1707 </td><td> Mr. Sagar Gupta Designation: Manager (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: sagargupta@bhel.in Tel: +91 1334 28 1045 </td></tr></table>	Mr. Rahul Kumar Rahi Designation: Sr. Engineer (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: rkrahi@bhel.in Tel: +91 1334 28 1707	Mr. Sagar Gupta Designation: Manager (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: sagargupta@bhel.in Tel: +91 1334 28 1045	
Mr. Rahul Kumar Rahi Designation: Sr. Engineer (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: rkrahi@bhel.in Tel: +91 1334 28 1707	Mr. Sagar Gupta Designation: Manager (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Email ID: sagargupta@bhel.in Tel: +91 1334 28 1045				

(Signature of the Vendor with Seal)



44. **PRE-QUALIFICATION REQUIREMENTS:**

		PRE-QUALIFICATION REQUIREMENT(PQR) FOR PNEUMATIC GLOBE VALVE (BI159)	STE-TL Page 1 of 1 TL/159/02 dt 11.09.2025			
DESCRIPTION: Pneumatic Globe Valve is used for supplying water to the LP turbine hoods during turbine trip case in order to decrease the temperature of LP turbine. It is a pneumatically operated ON/OFF globe type valve with Flanged ends. It has a very quick opening and closing response and is designed to allow water flow in a very less time to ensure safety of LP turbine.						
MANDATORY REQUIREMENTS FOR PRE-QUALIFICATION:						
1. The bidder*/bidder's OEM should have successfully designed, manufactured, tested & supplied Pneumatic Globe valve (as indicated in Fig.1) & should have an experience of supply of min. one (1) no. of Pneumatic Globe valve to at least one power/process plant in last seven (7) years from the date of issuance of our enquiry with following technical details as mentioned in Table-1 below:						
		Table-1				
		Valve Type	2/2-way Globe Valve			
		Valve Size Range	NB25 & above			
		Valve Class Rating	CL300 or higher as per ASME16.34 or equivalent standard			
		Valve Body Material	Cast Steel-A216 Gr.B, equivalent or higher grade			
		Actuation	Pneumatic			
*- In case, the bidder is a non-manufacturer, valid authorisation certificate from the OEM to be submitted along with the offer. The bidder to fill the P.O. ref. no. & date in below table, which meets all check marked criteria:						
P.O. Ref. No.	P.O. date	Valve type 2/2-way Globe Valve ✓	Valve Size NB25 & above ✓	Valve Class Rating CL300 or higher as per ASME16.34 ✓	Valve Body material Cast Steel-A216Gr.B equivalent or higher grade ✓	Actuation Pneumatic ✓
2. The below mentioned documents in support of PO mentioned above are to be furnished along with the offer:-						
i) Unpriced PO copy & other technical documents like GAD, Datasheet, Test certificates etc in support of technical parameters mentioned in table above. Executed unpriced Purchase order (P.O.) should not be older than seven (7) years from the date of issuance of enquiry.						
ii) Detailed documents w.r.t supply viz.: Tax invoice/ Inspection report/ Lorry way bill etc for our review.						
iii) Suppliers, who have supplied above mentioned valve to BHEL-Haridwar, to furnish only P.O No. for our review.						
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.						

SPECIAL NOTE FOR BIDDER:

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. Any other documents required to be submitted as per your offer.
3. In case of blank document of Annexure-A of Buyer's Specific Terms & Conditions will be endorsed and submitted by bidder then it shall be deemed acceptable.
4. Copy/Replica of Price schedule (without prices) mentioning "Quoted' in place of price along with your techno-commercial (Part-1) offer.

(Signature of the Vendor with Seal)

ANNEXURE- 1**CHECK LIST**

NOTE: - Suppliers are required to fill in the following details in their Letterhead and no column should be left blank

A	Name and Address of the Supplier		
B	GSTN No. the Supplier (Place of Execution of Contract / Purchase Order)		
C	Details of Contact person for this Tender	Name: Mr./ Ms. Designation: Telephone No: Mobile No: Email ID:	
D	EMD DETAILS		
E	DESCRIPTION	APPLICABILITY (BY BHEL)	ENCLOSE BY BIDDER
i.	Whether Pre - Qualification Criteria is understood and provided proper supporting documents.	Applicable/ Not Applicable	YES / NO
ii.	Whether all pages of the Tender documents are read and understood	Applicable/ Not Applicable	YES / NO
iii.	Audited Balance Sheet and profit & Loss Account for the last three years	Applicable/ Not Applicable	YES / NO
iv.	Copy of PAN Card & GST registration	Applicable/ Not Applicable	YES / NO
v.	Submission of MSE certificate as specified in Tender	Applicable/ Not Applicable	YES / NO
vi.	Offer forwarding letter / tender submission letter as per Annexure – 2	Applicable/ Not Applicable	YES / NO
vii.	Submission of Certificate of No Deviation as per Annexure – 3	Applicable/ Not Applicable	YES / NO
viii.	Declaration regarding Insolvency/ Liquidation/Bankruptcy Proceedings as per Annexure – 4	Applicable/ Not Applicable	YES / NO
ix.	Declaration by Authorized Signatory as per Annexure – 5	Applicable/ Not Applicable	YES / NO

x.	Declaration by Authorized Signatory regarding Authenticity of submitted Documents Annexure – 6	Applicable/ Not Applicable	YES / NO
xi.	Submission of Non-Disclosure Certificate as per Annexure – 7	Applicable/ Not Applicable	YES / NO
xii.	Submission of Integrity Pact as specified in Tender as per Annexure – 8	Applicable/ Not Applicable	YES / NO
xiii.	Declaration confirming knowledge about Site Conditions as per Annexure – 9	Applicable/ Not Applicable	YES / NO
xiv.	Declaration reg. Related Firms & their areas of Activities as per Annexure – 10	Applicable/ Not Applicable	YES / NO
xv.	Declaration for relation in BHEL as per Annexure – 11	Applicable/ Not Applicable	YES / NO
xvi.	Declaration reg. minimum local content in line with revised public procurement as per Annexure – 12	Applicable/ Not Applicable	YES / NO
xvii.	Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 as per Annexure – 13	Applicable/ Not Applicable	YES / NO
xviii.	Bank Account Details for E-Payment as per Annexure – 14	Applicable/ Not Applicable	YES / NO
xix.	Power of Attorney for submission of tender as per Annexure – 15	Applicable/ Not Applicable	YES / NO
xx.	Proforma of Bank Guarantee for Earnest Money as per Annexure – 16	Applicable/ Not Applicable	YES / NO
xxi.	Proforma of Bank Guarantee for Performance Security as per Annexure – 17	Applicable/ Not Applicable	YES / NO
xxii.	List of Consortium Bank as per Annexure – 18	Applicable/ Not Applicable	YES / NO
xxiii.	Declaration for treatment of cases regarding conflict of interest as per Annexure – 19	Applicable/ Not Applicable	YES / NO

NOTE: Strike off 'YES' or 'NO', as applicable. Tender not accompanied by the prescribed **above applicable documents** are liable to be summarily rejected.

DATE:

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:

Date:

To,

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

Dear Sir,

Sub: Submission of Offer against Tender Enquiry No:

Having examined the tender documents against your Tender Enquiry No. _____
_____ dated _____ and having understood the provisions of the said tender documents
and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection
with _____ (name of work & project site), we hereby submit
our offer for the proposed work in accordance with terms and conditions mentioned in the tender
documents, at the prices quoted by us and as per the indicated delivery schedule.

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Performance Security'
for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by
BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms
and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the
Check List.

Authorized Representative of Bidder

Signature:

Name:

Address:

Place:

Date:

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

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

Dear Sir,

Subject: **No Deviation Certificate**

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

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred Tender Enquiry.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

**(Signature, date & seal of authorized
representative of the bidder)**

Date:

Place:

UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

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

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: Tender Enquiry Specification No:

I/We, _____ declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

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

Dear Sir,

Sub: **Declaration by Authorised Signatory**

Ref: 1) Tender Enquiry Specification No:

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorized to represent on behalf of my Company/Firm for the above-mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

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

Date:

Enclosed: Power of Attorney

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

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

Dear Sir,

Sub : **Declaration by Authorised Signatory regarding Authenticity of submitted documents.**

Ref : 1) Tender Enquiry No. & Date:

2) All other pertinent issues till date

I/We, hereby certify that all the documents submitted by us in support of possession of “Qualifying Requirements” are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

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

Date:

DECLARATION

Date: _____

To,

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

Dear Sir/ Madam,

Sub: **Details of related firms and their area of activities**

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, _____ (NA, if not applicable)

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
...		

Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.

Regards,

(_____)

From: M/s _____

Supplier Code: _____

Address: _____

DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

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

Dear Sir,

Sub: Declaration for relation in BHEL

Ref: 1) Tender Enquiry Specification No:

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/ Director(s) employed in BHEL

Tick (✓) any one as applicable:

1. The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:
 - i.
 - ii.

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

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.

**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 19th July, 2024 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.**

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(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 regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

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

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that _____ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

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

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

Declaration for treatment of cases regarding conflict of interest

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

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

Dear Sir,

Sub: Declaration for treatment of cases regarding conflict of interest

Ref: Tender Reference No:

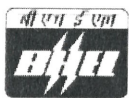
The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i. If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;
- ii. The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii. Procurement of goods directly from the manufacturers/suppliers shall be preferred. However, if the OEM/Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorized distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv. A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. 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, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

(Signature of the authorized signatory of the bidder)



PRE-QUALIFICATION REQUIREMENT(PQR)
FOR
PNEUMATIC GLOBE VALVE (BI159)

STE-TL

Page 1 of 1
TL/159/02 dt
11.09.2025

DESCRIPTION:

Pneumatic Globe Valve is used for supplying water to the LP turbine hoods during turbine trip case in order to decrease the temperature of LP turbine. It is a pneumatically operated ON/OFF globe type valve with Flanged ends. It has a very quick opening and closing response and is designed to allow water flow in a very less time to ensure safety of LP turbine.

MANDATORY REQUIREMENTS FOR PRE-QUALIFICATION:

1. The bidder*/bidder's OEM should have successfully designed, manufactured, tested & supplied Pneumatic Globe valve (as indicated in Fig.1) & should have an experience of supply of min. one (1) no. of Pneumatic Globe valve to at least one power/process plant in last seven (7) years from the date of issuance of our enquiry with following technical details as mentioned in Table-1 below:

Fig.1

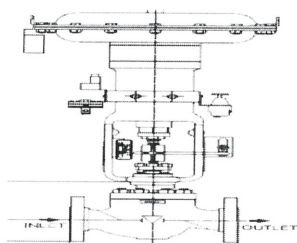


Table-1

Valve Type	2/2-way Globe Valve
Valve Size Range	NB25 & above
Valve Class Rating	CL300 or higher as per ASME16.34 or equivalent standard
Valve Body Material	Cast Steel-A216 Gr.B, equivalent or higher grade
Actuation	Pneumatic

*- In case, the bidder is a non-manufacturer, valid authorisation certificate from the OEM to be submitted along with the offer.

The bidder to fill the P.O. ref. no. & date in below table, which meets all check marked criteria:

P.O. Ref. No.	P.O. date	Valve type	Valve Size	Valve Class Rating	Valve Body material	Actuation
		2/2-way Globe Valve	NB25 & above	CL300 or higher as per ASME16.34	Cast Steel-A216Gr.B equivalent or higher grade	Pneumatic
		✓	✓	✓	✓	✓

2. The below mentioned documents in support of PO mentioned above are to be furnished along with the offer:-

i) Unpriced PO copy & other technical documents like GAD, Datasheet, Test certificates etc in support of technical parameters mentioned in table above. Executed unpriced Purchase order (P.O.) should not be older than seven (7) years from the date of issuance of enquiry.

ii) Detailed documents w.r.t supply viz.: Tax invoice/ Inspection report/ Lorry way bill etc for our review.

iii) Suppliers, who have supplied above mentioned valve to BHEL-Haridwar, to furnish only P.O No. for our review.

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.

WORKED BY	NAVNEET CHAKRAPANI, Manager /STE-TL	
CHECKED & AGREED BY	ANJANI KUMAR, Manage/CIE	
APPROVED BY	ANUJ JAIN, Sr. DGM /STE-TL	
	SASWATI SRIVASTAVA, AGM/CIE	



DOC. TITLE: TECHNICAL SPECIFICATIONS FOR PNEUMATIC GLOBE VALVES FOR TURBINE DRAIN LINES

INTRODUCTION:

Pneumatically operated Globe Valves for Turbine Drain Lines are required as per details below for use in 250MW Thermal Sets. These valves shall serve the intended purpose of regulation/isolation of the several drain lines originating from various components like HP Turbine Casing, HP Valves, IP Valves, Cold Reheat Line and other extraction lines from various turbines. These valves shall be connected to Condenser through various headers. The design code for these drain lines is ASME B31.1 and these valves are expected to operate reliably and trouble free in the long term under severe steam applications. Bidders to note that these valves are to be installed in vertical lines.

Suppliers are required to go through this document along with other listed specifications vide table below and furnish their Technical Offers accordingly.

SCOPE OF SUPPLY

Scope of 1 SET of Valves comprises of below listed KKS:

Sl. no.	KKS	Nominal Size (NB)	Inlet Pipe Size (ODxTh) mm	Outlet Pipe Size (ODxTh) mm	Design Pr. Bar(g)	Design Temp. °C	Outlet Parameters	Class rating	Type of actuator	Fail Safe Criteria	Flow Medium	End Conn. Type	Edge preparation as per	MOC	Indicative Lift (mm)	Indicative Seat Dia. (mm)	Duty	Matching adaptor with ferrule fitting	Filter reducer	Solenoid valve	Limit switch	Junction box	SMART Positioner with integrated Position Transmitter	QTY (NOS)
1	MAL11AA011	50	60.3X11.07	Same as inlet	144	536	Vacuum	2500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	36	28.6	REGULATING	Applicable	Applicable	Not Applicable	Not Applicable	Applicable	Applicable	1
2	MAL12AA011		60.3X11.07	Same as inlet	144	536	Vacuum	2500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	36	28.6	REGULATING	Applicable	Applicable	Not Applicable	Not Applicable	Applicable	Applicable	1
3	MAL26AA011	40	48.3X5.08	Same as inlet	35	537	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	42	34.9	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
4	MAL27AA011		48.3X5.08	Same as inlet	35	537	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	42	34.9	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
5	MAL66AA011	65	73.0X7.01	Same as inlet	38.8	490	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A217 WC9	38	60	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
6	MAL22AA011	25	33.4X6.35	Same as inlet	134	532	Vacuum	2500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	15	14.3	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
7	MAL31AA011	25	33.4X4.55	Same as inlet	33.8	537	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	15	17.5	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
8	MAL47AA011	25	33.4X4.55	Same as inlet	16.5	423	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A182 F22	15	17.5	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
9	MAL35AA011	40	48.3X5.08	Same as inlet	6.79	306	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A 105	42	34.9	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
10	MAL81AA011	25	33.4X3.38	Same as inlet	1.03	328	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A 105	15	17.5	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
11	MAL51AA011	40	48.3X5.08	Same as inlet	6.79	306	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A 105	42	34.9	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
12	MAL54AA011	25	33.4X3.38	Same as inlet	2.29	192	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A 105	15	17.5	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1
13	MAL55AA011	25	33.4X3.38	Same as inlet	0.93	109	Vacuum	1500	Pneumatic	Pneu - Fail to Open	Wet Steam	BW	ASME B16.25	SA/A 105	15	17.5	ON/OFF	Applicable	Applicable	Applicable	Applicable	Applicable	Not Applicable	1

PART A:

The below mentioned general guidelines are to be followed by bidders and are to be treated as part of Scope of Supply:

GENERAL TERMS & CONDITIONS OF COMPLIANCE		Supplier Compliance (YES/NO)	Remarks
1. Class Ratings (as per ASME B16.34) are indicative. Higher Class ratings shall also be acceptable subject to review of valve weight at our end.			
2. Suppliers to confirm compliance of ASME B16.10, ASME B16.34 & ASME B16.25 (Latest editions) & BHEL standard ST47025 for TDC.			
3. Lift (mm) & Seat Dia (mm) are indicative, and suppliers to offer accordingly.			
4. BHEL specific painting shall apply to these valves.			
5. Valve Body (65NB & above only) can be offered in equivalent Casting variant also, however, acceptance of the same shall be subject to review at our end. Cast valves shall be subject to RT/UT. Forged valves shall be applicable for 50NB & below. MoC shall be as per table above.			
6. Suppliers to furnish dimensional dwg with valve datasheet for further review at our end. The Dimensional Dwg shall indicate weight of valve including actuator and accessories.			
7. Handwheel and/or manual bypass system required in the actuator.			
8. Solenoid valve should be suitable for 24V DC (power supply tolerance +10%, -15%), Degree of Protection , atleast IP65.			
9. Limit switches should be inductive, 3 wire, PNP (Normally open). Qty = 2 NOS.			
10. Actuator should be assembled with valve. Solenoid valve and limit switches are to be supplied loose (i.e. not mounted on valve) in the main package with proper label for identification. Vendor to supply the loose items with proper identification and specially mentioning the same in packing list for tracing at site.			
11. Junction box shall be provided with double compression cable glands and cage clamp terminals.			

12. Matching adaptor with ferrule fitting to be provided by bidder, for connecting to BHEL pneumatic line (G1/2").		
13. These valves are to be installed in high energy steam drain lines, and hence all valves are to be offered with zero leakage and suitable for reliable long term operation while handling high parameter steam.		
14. Hook up drawing to be provided.		
15. Write up operation to be provided.		
16. Wiring diagram to be provided.		
17. Actuator response time to be mentioned in datasheet.		
18. Position transmitter shall be non-contact type with 4-20 mA DC, 2 wire suitable for 12-30V DC, 1% accuracy or better.		
19. Type test report to be furnished by bidder. Compliance for type test/Cv Test at Govt. approved laboratory prior to dispatch also shall be required. If type test report is not available, wherever applicable, Cv test shall be carried out for each size, type and design of the valves as per ISA 75.02 standard and test report shall be furnished for our information & records purpose.		
20. The offered ON/OFF valves must be of quick opening and closing type. The opening & closing time must be indicated in datasheet.		
21. The offered valves must be suitable for allowing full choked flow for the valve body sizes furnished herein. Vendor shall furnish sizing calculation for the offered valves clearly highlighting the standard used for the calculation, noise level (<= 90 dB), cavitation or flashing, Cv selected, % opening at minimum, normal, maximum flow (wherever applicable), inlet & outlet velocity etc.		
22. The offered valves shall be suitable for vertical installation (i.e. actuator in horizontal axis). Limitation, if any, in changing actuator orientation at site to be informed. Vendor to ensure their GAD includes an actuator support/bracing bracket design in their dimensional drawing as per Clause 6 above.		
23. Supplier to confirm whether their offer includes all required spares for Erection and Commissioning and recommended spares for long term operation (if applicable) or not.		
24. MoC of Yoke, Handwheel etc. shall not be brittle, and must be clearly indicated in Datasheet. Vendor to explicitly confirm that the yoke material can handle the bending stress initiated due to Clause 22 above.		
25. This specification is to be read with our standard TDC vide our document ST47025.		
26. Cv range for above valves of 3 (min.) to 60 (max.) may be considered only as a reference by bidders.		
27. The offered globe valves must have an Integral Type seat & where the valve has been specified for regulation purpose, the disc shall be tapered plug type and suitable for controlling throughout its lift.		
28. For all valves, the direction of flow shall be clearly stamped on the body of the valve.		

PART B:

The below mentioned specific requirements are to be followed by bidders and are to be treated as part of Scope of Supply:

SPECIFIC REQUIREMENTS FOR PNEUMATIC GLOBE VALVES FOR TURBINE DRAIN LINES	Supplier Compliance (YES/NO)	Remarks
1) Requirements for Cast Steel Valves (65 NB & above):-		
1.1 Construction - Bonnet/Cover : Pressure Seal		
1.2 Disc - Throttling type plug		
1.3 Seat - Integral type		
1.4 MoC of Stem - 13% Chrome Steel ASTM A182 Gr.F6a or equivalent		
1.5 MoC of Disc and seat ring (heat treated & hardened) - ASTM A217 Gr.WC9		
1.6 MoC of Back seat/ stem guide Bushing - ASTM A182, Gr. F6a 13% Cr. SS (or equivalent) with stellite hard facing		
2) Requirements for Forged Alloy Steel Valves (50 NB & below):-		
2.1 Construction - Bonnet/Cover : Seal Welded Type		
2.2 Construction - Seat : Integral Type		
2.3 MoC of Stem - 13% chrome steel ASTM-A-182 Gr.F6a		
2.4 MoC of Disc and seat ring : ASTM A182 Gr.F22 hard faced with stellite minimum hardness 350 HB		

2.5 MoC of Body & Bonnet - ASTM A-182 Gr.F22		
3) Requirements for Forged Carbon Steel Valves (50 NB & below):-		
3.1 Construction - Bonnet/Cover : Seal Welded Type		
3.2 Construction - Seat : Integral Type		
3.3 MoC of Stem - 13% chrome steel ASTM-A-182 Gr.F6a		
3.4 MoC of Disc and seat ring : ASTM A105 hard faced with stellite minimum hardness 350 HB		
3.5 MoC of Body & Bonnet - ASTM A-105		
4) Requirements of Angle Globe Valve:		
4.1 Moc of Body & Bonnet: A182 Gr.F22 or better (Alloy Steel); A105 or better (Carbon Steel)		
4.2 MoC of Spindle/Disc : 17% Chrome steel or better		
4.3 Moc of Disc Seat, Body Seat & back seat : Stellite		
4.4 MoC of Gland Packing: Graphite		
4.5 Construction: 4.5.1 Valve type : Outside Screw & Yoke Type 4.5.2 Body & Bonnet: Forged body with integral /welded bonnet construction 4.5.3 Disc type: Taper plug or Parabolic type to suit system requirement 4.5.4 End Connection : Butt weld end (ANSI B16.25). 4.5.5 Pressure rating : To suit the service condition. However, minimum pressure rating shall be corresponding to ANSI Class 1500		
5) General Requirements		
5.1 All globe valves shall be capable of being closed against the design pressure.		
5.2 Where globe valve has been specified for regulation purpose, the disc shall be tapered plug type and suitable for controlling throughout its lift.		
5.3 All globe valves shall have bonnet-back seating arrangement to facilitate easy replacement of packing with the valves in service.		
5.4 All globe valves shall be designed for reconditioning seating surfaces and replacement of stem and disc without removing the valve body from the line.		
5.5 Manual gear operators shall be provided to open/close the valve against the maximum differential pressure across the valve such that the effort required to operate the valve does not exceed 25 kgf.		
5.6 All valves shall be provided with proper name plates indicating complete information about the valves.		
5.7 All valves shall be full port. The class of the valves shall be compatible to the service requirements.		
5.8 Valves shall have butt welded ends as per ANSI B16.25 and socket weld ends as per ANSI B16.11		
5.9 Valves shall be tested in accordance to ANSI B 16.34.		
5.10 All globe valves shall be with outside screw and yoke with rising stem. Globe valves shall be regulating type wherever the service intends so. The material of body and trim shall be suitable to the class of valve.		
5.11 Stem for all valves shall be heat treated and hardened - minimum, hardness 200 HB and surface finish of 16 RMS or better in area of stem packing.		
5.12 Gland packing for globe valves shall be alloy steel/SS wire reinforced asbestos with stem corrosion inhibitor.		
5.13 All bolts and nuts for carbon steel valves shall be ASTM A-193 Gr. B 7 and ASTM A-194 Gr. 2N respectively. For alloy steel valves, same shall be ASTM A-193 Gr B16 and A-194 Gr 4/7.		
5.14 Hand wheels for valves shall be of malleable iron.		
5.15 Minimum differential hardness between seat and other disc material shall be 50 HB in case of 13% chrome hardened with heat treatment of steel.		
5.16 Hydrostatic test (valve closure test) shall be as per ANSI B16.34 and MSS-SP-61. Acceptable seat leakage shall be 2 ml of water per hour per 25 mm of nominal pipe size.		
5.17 All regulating valves shall be designed to prevent erosion of the valve plugs and seats when the valves are operated partially opened. The valves shall have contoured plug.		
5.18 All valves shall be fitted with position indicators so that it may be readily seen whether the valves are open or shut. In the case of those valves fitted with extended spindles, indicators shall be fitted both to the extended spindles and to the valve spindles.		



5.19 Each valve hand-wheel shall be fitted with a circular nameplate of an approved material indicating in the valve tag number and the function of the valve. The name plates shall incorporate the colour code corresponding to the service of the piping.		
5.20 Eyebolts shall be provided where necessary to facilitate handling heavy valves or parts of valves.		
5.21 Regulating valves shall be capable of regulating the flow of medium through the valve from zero flow to full flow. The valves shall be specifically designed for this purpose. The valves shall be fitted with indicators, showing accurately the amount the valve is open. The graduations on the indicator shall be engraved or stamped on. The valves shall be of the outside screw type and all valves seats and faces shall be readily renewable and be made from materials that are corrosion and wear resistant. The valves shall be supplied with hand-wheels in line with the requirements indicated earlier.		

Key Abbreviations:
BW: Butt Weld
MOC: Material of Construction
OD×Th: Outer Diameter × Thickness

Prepared By	Navneet Chakrapani, MGR/STE-TL	22.07.2026	-sd-
Checked By	Navneet Chakrapani, MGR/STE-TL	22.07.2026	-sd-
Agreed By	M JAIN, Sr MGR/CIE	22.07.2026	-sd-
Approved By	A Jain, SDGM/STE-TL	22.07.2026	-sd-



उत्पाद मानक

STEAM TURBINE ENGINEERING
PRODUCT STANDARD

ST47025
HW0690097

पृष्ठ 4 का 1

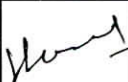
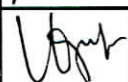
Page 1 of 4

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

	उत्पाद मानक STEAM TURBINE ENGINEERING PRODUCT STANDARD		ST47025 HW0690097	
			पृष्ठ 4 का 2 Page 2 of 4	
दिनांक एवं हस्ताक्षर SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	3. GLAND SEALING :- Valves working under vacuum are to be provided with gland sealing arrangement. 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. - Valve identification No. - Type of valve & description - Valve size - Name of manufacturer - Project name - Date of testing 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. - 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. 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. - Identification No. as specified in enclosed valve specification. - Valve type & Description - Valve size - Pressure rating - Manufacturer - Year of manufacturing - Project name		
हस्ताक्षर एवं दिनांक SIGN & DATE 26.7.04	सामग्री सूची संख्या INVENTORY NO. P-5522	REV. NO. 03	निर्माणकर्ता WORKED BY S.K.GUPTA	जांचकर्ता CHECKED BY V.K.GUPTA

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	10.0 STANDARD :- Latest issue and amendments of all applicable international standard shall apply. 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. 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. 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. 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. 15.0 QUALITY ASSURANCE, INSPECTION AND TESTING :- 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. 15.2 The bidder shall submit along with his offer quality plan in the prescribed BHEL's format. 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. 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. 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.		
सामग्री सूची संख्या INVENTORY NO A-5522	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

	STEAM TURBINE ENGINEERING BHEL, HEPP, HARIDWAR INDIA		Dolvi 250 MW	
			REV. - 00	DATE: 15.07.25

TURBINE INTEGRAL AUXILIARIES

Painting Scheme .

Paint (Coat)

Paint Type

No. of coat

DFT*

Primer Paint

: Epoxy base Zinc rich primer paint

1 Coat

35

Intermediate Paint

: Epoxy TiO₂ 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.

Details of Color Scheme :

(Legend : W-at BHEL works; V- at vendor’s works; S-at site; NA-Not applicable)

No	Assembly	Shade/ RAL	Primer	Int. Pai nt	Final Paint	Touch -up	Remarks
1	Turbine Integral Piping for Control Fluid System	NA	NA	NA	NA	NA	Painting is not applicable because the piping is in stainless steel.
2	Turbine Integral Piping for Lube Oil System	Grey 9002	V	V	V	S	Stainless Steel lines (wherever applicable) are not to be painted.
4	Turbine Integral Piping for CW to Lub Oil Coolers.	Grey 9002	V	V	V	S	Stainless Steel lines (if applicable) are not to be painted. Identification Tag/Band of Sea green colour.
5	Turbine Integral Piping for CW to HPSU	Grey 9002	V	V	V	S	Stainless Steel lines (if applicable) are not to be painted. Identification Tag/Band of Sea green colour.
6	Turbine Integral Piping for Turbine Drainage System	Grey 9002	V	NA	NA	S	Pipes are insulated at site. Only Primer Paint (with min. DFT as 35 microns) as per table above shall be applicable.
7	Turbine Integral Piping for Seal Steam System	Grey 9002	V	NA	NA	S	Pipes are insulated at site. Only Primer Paint (with min. DFT as 35 microns) as per table above shall be applicable. Identification Tag/Band of Sky Blue colour.
9	Spring Cages	Black 9011	V	V	V	S	

	STEAM TURBINE ENGINEERING BHEL, HEEP, HARIDWAR INDIA					Dolvi 250 MW	
						REV. - 00	DATE: 15.07.25

10	Hangers and supports for turbine integral piping	Black 9011	V	V	V	S	
11	Dampers	Black 9011	V	V	V	S	
12	Valves of Turbine Integral Piping	Grey 9002	V	V	V	S	Painting is not applicable for Stainless Steel Valves of TIP. Painting is only applicable for Carbon Steel Valves of TIP Identification Tag/Band of White 9010 color. Legend in black letters.
13	Control Panel For Lube Oil Purifier	<u>External (Front & Rear)</u> – Grey 9002 <u>External (Side)</u> - Blue 5012 <u>Internal</u> - Blue 5012	V	V	V	S	
14	Lube Oil Purifier	Grey 9002	V	V	V	S	Identification Tag/Band of White 9010 colour. Legend in black letters.
15	Gear Pump & return Pump (with motors)	Pumps : Grey 9002 Motors : Blue 5012	V	V	V	S	Identification Tag/Band of White 9010 colour. Legend in black letters.
16	Oil tank (MOT), Leakage/Dirty oil tank & waste oil tank	Grey 9002	V	V	V	S	Identification Tag/Band of White 9010 colour. Legend in black letters.
17	Spray Nozzle	Grey 9002	V	V	V	S	BOI Identification Tag/Band of White 9010 color. Legend in black letters. Stainless Steel lines (wherever applicable) are not to be painted.

	STEAM TURBINE ENGINEERING BHEL, HEER, HARIDWAR INDIA				Dolvi 250 MW	
					REV. - 00	DATE: 15.07.25

18	AOP, EOP, JOP (With Motors)	<u>Pumps :</u> Grey 9002 <u>Motors :</u> Blue 5012	V	V	V	S	BOI Identification Tag/Band of White 9010 color. Legend in black letters.
19	Oil Vapour Exhauster (including Motor)	<u>Exhauster :</u> Grey 9002 <u>Motors :</u> Blue 5012	V	V	V	S	BOI Identification Tag/Band of White 9010 color. Legend in black letters.
20	Duplex Filter (Lub oil)	Grey 9002	V	V	V	S	BOI Identification Tag/Band of White 9010 color. Legend in black letters.
21	Duplex Filter (Jacking Oil)	Grey 9002	V	V	V	S	BOI Identification Tag/Band of White 9010 color. Legend in black letters.

Surface Preparation: -

1. It is necessary that the surface to be painted is free from loose dust, mill scale, rust, grease, oil, old film etc. Surface cleaning and preparation shall be done for all the components as per BHEL/Vendor standard practice. The surfaces before painting shall correspond to standard degree of purity SA 2.5.
2. Checking of surface preparation, measurement of dry paint thickness, adhesion, gloss & finish of painted surface shall be done as per BHEL/Vendor standard practice.

Notes:-

1. Stainless Steel Surfaces shall not be painted.

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 CERTIFIC ATE	√	P	V		
		MECHANICAL PROPERTIES	MAJOR	MECHANICAL	100%	BHEL SPEC. & APPROVED DRG	BHEL SPEC. & APPROVED DRG	TEST CERTIFIC ATE	√	P	V		
1.2	OTHER ITEMS	CHEMICAL COMPOSITION & MECHANICAL PROPERTIES	MINOR	CHEMICAL & MECHANICAL	100%	BHEL SPEC. & APPROVED DRG	BHEL SPEC. & APPROVED DRG	CERTIFIC ATE OF COMPLIAN CE	√	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 CERTIFIC ATE	√	P	V		

		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

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