

**Buyer Specific Special Terms and conditions****Item Name: NRV with Aluminium Flap,****Projects: Singrauli & Sipat Projects****1. Scope of Enquiry**

E-bids on GeM portal are invited from bidders for the supply of NRV with AI Flap 3 Sets (1 SET =2-NOS) for **NTPC Singrauli & Sipat Projects** (tabulated) as per requirement mentioned below:

Sl. No.	Material Code & Item Description	Project Name	Qty (SET)	Lot No.	Lot Qty (SET)	Date Supply Completion for
1	<b>W90313137684,</b> NRV with Aluminium Flap, NB 200  (1 SET = 2 Nos)  Total = 3 SET =06 Nos.	NTPC Singrauli	2 SETS	1	1	01.09.2026
				2	1	01.01.2027
		NTPC Sipat	1 SET	1	1	20.05.2027

**2. Project / Consignee Detail**

Sl. No.	Project Name	Site/ Project Address
1	NTPC Singrauli	SINGRAULI SUPER THERMAL POWER PROJECT, SHAKTI NAGAR, SHAKTI NAGAR, Sonbhadra, Uttar Pradesh, 231222
2	NTPC Sipat	Sipat Super Thermal Power Project, Stage-III (1X800 MW) P.O : Ujjwal Nagar, District : Bilaspur, Chhattisgarh - 495555

**3. EARNEST MONEY DEPOSIT (EMD): NIL****Annexure A: Buyers Specific Additional Terms & Conditions in addition to GTC**

Sl. No.	Terms	Description	Your confirmation
1.	<b>Confirmation to compliance of GeM GTC</b>	General terms and conditions on GeM 4.0 (Version 1.23) or subsequent rules/policies issued by GeM shall be applicable. <b>Please confirm.</b>	
2.	<b>Pre-Qualification Requirements (PQR)</b>	The Pre-Qualification Requirements have been compiled and submit supporting documents in line with PQR- (TL/NRV/PQR/20200002 Rec-00) i.e. PO copy, unpriced dispatch document, approved GA drawing, inspection report etc. 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.	
3.	<b>Special Instruction of Technical requirement</b>	➤ Material specification as per Spec ST 47034 & ST47025 rev 02 & its ADDENDUM only.	
		➤ Required quantity is defined as set (ST) and one ST is equal to 2 Nos. of "NRV with Aluminium Flap".	
		➤ Kindly confirm that quoted offer by you have been complied all technical requirements as given in tender documents and submit all documents to BHEL as per tender specifications and drawings without any deviations.	
4.	<b>Quality Requirements</b>	➤ Please confirm acceptance for QAP No. QA/BI/QP/117 Rev 00 and submit endorsed copy of this QAP along with offer. ➤ Please confirm that inspection shall be by BHEL Nominated inspection agency (M/s TUV) as per BHEL QAP No. QA/BI/QP/117 Rev 00. ➤ Please note that BHEL will pay directly to BHEL's nominated TPI. ➤ Inspection call shall be raised by the vendor at least 07 days in advance of readiness of material. If inspection is not attended by the inspection agency within 07 days of inspection call, delivery shall be re-scheduled accordingly.	

5.	Evaluation criteria	Evaluation will be done on the basis of total landed cost to BHEL with cost involved for delivery up to all respective project site (considering material cost, taxes & duties, Freight etc.									
6.	Price basis, Evaluation Currency, Firm prices & Transit Insurance	Prices should be quoted on door delivery basis up to respective site basis i.e. including freight, packing & forwarding charges, GST etc.  The evaluation currency for this tender shall be INR.  Price will remain firm and fixed during entire execution of tender/supply.  Transit insurance shall be arranged by BHEL and not to be included in the prices.									
7.	Consignee Address Declaration	Consignee mentioned in ATC/ GeM enquiry are mentioned as actual and may differ during ordering. However, material to be dispatched by vendor to respective site as actual.									
8.	BID to RA	Applicable as per GeM NIT									
9.	Payment Terms	The payment term shall be done after issue of consignee receipt-cum acceptance certificate (CRAC) as per the below details: <table><tr><td>Type of Bidder</td><td>Payment Terms (Number of Days) from MRC</td></tr><tr><td>Micro &amp; Small Enterprises (MSEs)</td><td>45 days</td></tr><tr><td>Medium Enterprises</td><td>60 days</td></tr><tr><td>Non MSME</td><td>90 days</td></tr></table> Subject to submission of non-discrepant documents. MSE benefits shall be as per GeM/ GeM NIT.	Type of Bidder	Payment Terms (Number of Days) from MRC	Micro & Small Enterprises (MSEs)	45 days	Medium Enterprises	60 days	Non MSME	90 days	
Type of Bidder	Payment Terms (Number of Days) from MRC										
Micro & Small Enterprises (MSEs)	45 days										
Medium Enterprises	60 days										
Non MSME	90 days										
10.	Document submission for approval BHEL	Drawings/Data sheets, Quality Plan etc. as called for in the specifications shall be submitted for approval to BHEL for BHEL approval within 30 days of purchase order. Approved documents/QP are to be followed by the supplier without any price implication. Any delay in delivery on account of late submission of drawings/data sheets/QAP/documents shall be to vendors account. BHEL will arrange the approval of the drawings/data sheets/ documents within 30 days of their receipt provided those are complete in all respect. Delays in approval shall be dealt on merit basis.									
11.	Manufacturing clearance	In case of ordering, vendor has to take manufacturing clearance from BHEL before starting manufacturing of material. No manufacturing is to be started without getting clearance from BHEL. Kindly confirm.									
12.	Manufacturing cum Delivery Period	Kindly quote your minimum <b>delivery period in no. of weeks. (time taken including manufacturing + Joint inspection + 07 days for MDCC issuance and up to Dispatch)</b>  From the date of manufacturing clearance.....  Early delivery will be accepted as per BHEL site requirement.									
13.	MDCC clause	Material shall be dispatched only after issue of material dispatch clearance certificate (MDCC) by BHEL. All test certificates and relevant documents are to be sent to BHEL before dispatch of material for issue of MDCC, which will be issued after review of test certificates 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.  In case any material is dispatched without MDCC and any loss is incurred by Supplier/Vendor for any reason whatsoever, BHEL shall not be responsible in any manner to compensate the supplier in this regard.  Material is to dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.									
14.	Guarantee	Kindly confirm that all equipment shall be guaranteed for trouble free & satisfactory									

		operation for minimum period of 36 months from the date of delivery or 24 months from date of commissioning, whichever is earlier.	
		Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.	
15.	<b>Liquidated Damages</b>	<p>If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract, the Buyer will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.</p> <p>The date of dispatch mentioned on LR/GR would be treated as the date of delivery for penalty purposes.</p>	
16.	<b>HSN Code &amp; Other Instructions</b>	<p>8 DIGIT GST HSN CODE OF ITEM MAY PLEASE BE FREEZED WITH VENDOR BEFORE PO PLACEMENT. PLEASE PROVIDE.....</p> <ol style="list-style-type: none"> <li>1. INVOICE, GR/LR, MDCC, PKG LIST ALONG WITH E-WAY BILL IS REQUIRED FOR BILLING.</li> <li>2. DOCUMENTS (GR/LR, PACKING LIST, TEST CERTIFICATES) ARE REQUIRED IN ORIGINAL.</li> </ol>	
17.	<b>Packing and Dispatch Instructions</b>	<ul style="list-style-type: none"> <li>➤ Vendor to ensure proper and sturdy packing suitable for handling during transportation up to site in healthy condition.</li> <li>➤ Material of unit-1 &amp; unit-2 need to be packed in separate boxes.</li> <li>➤ Before shipment of material, vendor has to obtain QR code from BHEL and same to be fixed on packages with laminated. Vendor to be insured for correct QR fixing on Boxes.</li> </ul>	
18.	<b>Settlement of Dispute, CONCILIATION &amp; ARBITRATION:</b>	<p><b>Settlement of Dispute</b></p> <p>If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Officer / IEM for amicable resolution by the parties. Designated Officer / IEM who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not. If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per 'CONCILIATION' Clause.</p> <p><b>CONCILIATION:</b></p> <p>Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of 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 <a href="http://www.bhel.com">www.bhel.com</a>).</p> <p>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.</p> <p><b>ARBITRATION:</b></p> <p>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.</p> <p>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 &amp; Conciliation Act, 1996 (hereinafter referred to as</p>	

		<p>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.</p> <p>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.</p> <p>The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.</p> <p>The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be at the court(s) of Haridwar.</p> <p>Subject to the above, the provisions of Arbitration &amp; 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.</p> <p>Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.</p> <p>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.</p> <p>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.</p> <p>In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause mentioned above. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.</p>	
19.	<b>BREACH OF CONTRACT, REMEDIES AND TERMINATION:</b>	<p>The following shall amount to breach of contract:</p> <p>I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.</p> <p>II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.</p> <p>III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.</p> <p>IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.</p> <p>V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.</p> <p>VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.</p> <p>VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.</p> <p>VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.</p> <p>IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.</p> <p>X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall</p>	

		<p>business of BHEL/ Owner.</p> <p>Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.</p> <p>In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.</p> <p><b>Remedies in case of Breach of Contract.</b></p> <p>i) Wherein the period as stipulated in the notice issued under above clause has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.</p> <p>ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.</p> <p>iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:</p> <p>iv) In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.</p> <p>v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:</p> <p>a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.</p> <p>b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.</p> <p>vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.</p> <p>vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.</p> <p>viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.</p> <p>Note:</p> <p>1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:</p> <p>(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.</p> <p>(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.</p>	
20.	<b>Suspension of Business Dealings with Suppliers / Contractors:</b>	<p>The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site <a href="http://www.bhel.com">www.bhel.com</a>.</p> <p>If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860( Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on <a href="http://www.bhel.com">www.bhel.com</a> and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: <a href="http://www.bhel.com/vendor_registration/vendor.php">http://www.bhel.com/vendor_registration/vendor.php</a>.</p>	
21.	<b>CONFLICT OF INTEREST AMONG</b>	<p>A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict</p>	

	<b>BIDDERS/ AGENTS</b>	<p>of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <p>a) they have controlling partner (s) in common; or</p> <p>b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or</p> <p>c) they have the same legal representative/agent for purposes of this bid; or</p> <p>d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or</p> <p>e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from. one bidding manufacturer in more than one bid; or</p> <p>f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:</p> <p>1. The principal manufacturer directly or through one Indian agent on his behalf; and</p> <p>2. Indian/foreign agent on behalf of only one principal, -</p> <p>or</p> <p>g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or</p> <p>h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "</p>													
22.	<b>MICRO AND SMALL ENTERPRISES (MSE):</b>	<p>Any Bidder falling under MSE category shall furnish the following details &amp; submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.</p> <table border="1"> <thead> <tr> <th>Type under MSE</th><th>SC/ST owned</th><th>Women owned</th><th>Others (excluding SC/ ST &amp; Women Owned)</th></tr> </thead> <tbody> <tr> <td>Micro</td><td></td><td></td><td></td></tr> <tr> <td>Small</td><td></td><td></td><td></td></tr> </tbody> </table> <p>Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.</p> <p>a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS &amp; DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.</p>	Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)	Micro				Small				
Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)												
Micro															
Small															
23.	<b>JURISDICTION:</b>	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.													
24.	<b>Force Majeure</b>	<p>"Force Majeure" shall mean circumstance which is: a) beyond control of either of the parties to contract, b) either of the parties could not reasonably have provided against the event before entering into the contract, c) having arisen, either of the parties could not reasonably have avoided or overcome, and d) is not substantially attributable to either of the parties And Prevents the performance of the contract, Such circumstances include but shall not be limited to: i) War, hostilities , invasion, act of foreign enemies. ii) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii) Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv) Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors. v) Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi) Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc. vii) Epidemic, pandemic etc.</p> <p>The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.</p> <p>If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.</p> <p>The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.</p> <p>Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure</p>													

		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	
25.	<b>Cartel Formation</b>	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.	
26.	<b>Fraud Prevention Policy:</b>	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 <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	
27.	<b>Order of Precedence:</b>	In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below: a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL. b. Buyer Added Bid Specific ATC c. GeM Bid Technical Conditions of Contract (TCC) d. GeM GTC	
28.	<b>Contact details</b>	Please provide 2 Nos of contact details (email id and contact no.) for clarifications.  1..... 2.....	

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

**SPECIAL NOTE FOR BIDDERS:**

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

1. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of "Buyers Specific Terms & Conditions and its clause wise supporting documents where required.
2. Please submit signed & stamped copy (each page) of PQR documents with proper filled information and related supporting documents as mentioned in PQR.
3. Please submit endorsed copy of quality plan "QA\_BI\_QP\_117 Rev-00"
4. Please submit MSE certificate (if have)
5. Please submit endorsed copy of respective offering equipment drawing.

**BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR**

STE-TL ENGINEERING DEPARTMENT

**PRE-QUALIFICATION REQUIREMENT****NRV WITH ALUMINIUM FLAP**

DOCUMENT NO.

TL/NRV/PQR/20200002

Rev:00 Dt:13.11.2021

**Description:**

These valves are single plate (Material-aluminium) type valve and are installed in horizontal run of pipe after each vapour exhauster to prevent the backward flow of air+steam mixture in case of vapour exhauster is under maintenance.

**Mandatory requirement for Pre-Qualification:**

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

**Table-1**

Valve Type	Single Plate Check/NRV Valve
Valve Size Range	NB200 & above
Body Type	Wafer
Valve Rating	CL150 & above as per ASME B16.34 or equivalent
Valve Body Material	Cast Steel-A216Gr.B or higher grade
Flow Medium	Air+Steam Mixture

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

**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.

<b>Prepared By</b>	<b>Checked By</b>	<b>Approved By</b>
SUNIL KR. SHARMA Dy. Engineer/TL <i>Sunil Sharma</i> 13.11.21	ANIL KUMAR Sr. Engineer/TL <i>Anil Kumar</i> 18/11/21	S.K SONKAR Sr. Manager/TL <i>Sankar</i> 18/11/2021



QUALITY PLAN										Page 1 of 2		
BHEL	QP NO.	QA_BI_QP_117		REV.	00	DESCRIPTION			LEGENDS			
	SPEC. NO.	AS PER PO		REV.	AS PER PO				P- PERFORMED BY		1- BHEL REP	
	DRG. NO.	APPROVED DRAWING AS PER PO		REV.	AS PER PO	W- WITNESSED BY		2- VENDOR				
							V- VERIFIED BY		3- SUBVENDOR			
SL. NO	COMPONENT OPERATION	CHARACTERISTICS	CLASSIFI- CATION	TYPE OF CHECK	QUANTUM	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									P	W	V	

1	MATERIAL											
1.1	BODY, DISC	CHEMICAL COMPOSITION MECHANICAL PROPERTIES	MAJOR	CHEMICAL  MECHANICAL	1 / HEAT	ORDERING SPEC. / BHEL APPD. DRG.	ORDERING SPEC. / BHEL APPD. DRG.	MILL TC	3/2	-	2/ 1	
		SURFACE DEFECTS	MAJOR	VISUAL	100%	MSS-SP-55	MSS-SP-55	TC	2	-	1	
		DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	TC	2	-	1	
2. IN PROCESS INSPECTION												
2.1	MACHINING OF BODY, DISC	DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	IR	2	-	-	
		SURFACE DEFECTS	MAJOR	DPT	100%	ASTM E165 ASME B16.34	ASME B16.34	TC	2	-	1	
2.2	HARD FACING ON DISC & SEAT	HARDNESS	MAJOR	HARDNESS	10%	BHEL APPD. DRG.			2	-	1	IF CALLED IN DRAWING
3	FINAL INSPECTION											
3.1	ASSEMBLY OF VALVE	DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	TC	2	1		
3.2	FUNCTIONAL TEST	SMOOTH OPERATION OPENING & CLOSING	MAJOR	OPERATION	100%	SMOOTH OPERATION OF VALVE		TC	2	1*		* 10% (MIN. 2 NO.)
3.3	HYDRAULIC TEST	LEAKAGE	CRITICAL	HYDRAULIC	100%	ORDERING SPEC. / BHEL APPD. DRG	NO LEAKAGE	TC	2	1*	-	* 10% (MIN. 2 NO.)

		<b>LEGEND:</b> ! 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

QUALITY PLAN									Page 2 of 2			
BHEL	QP NO.	QA_BI_QP_117	REV.	00	DESCRIPTION				LEGENDS			
	SPEC. NO.	AS PER PO	REV.	AS PER PO	NRV WITH ALUMINIUM FLAP				P- PERFORMED BY		1- BHEL REP	
	DRG. NO.	APPROVED DRAWING AS PER PO	REV.	AS PER PO					W- WITNESSED BY		2- VENDOR	
									V- VERIFIED BY		3- SUBVENDOR	
SL. NO	COMPONENT OPERATION	CHARACTERISTICS	CLASSIFICATION	TYPE OF CHECK	QUANTUM	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
.									P	W	V	
3.4	SEAT LEAK TEST	LEAKAGE	CRITICAL	HYDRAULIC	100%	ORDERING SPEC. / BHEL APPD. DRG	NO LEAKAGE	TC	2	1*	-	* 10% (MIN. 2 NO.)
3.7	PRESERVATION & PAINTING		MAJOR	VISUAL	100%	BHEL SPEC		IR	2	-	-	

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

APPLICATION : STEAM TURBINE  
ITEM : NRV WITH ALUMINIUM FLAP  
DOC. NO. : 41313795992  
MATERIAL CODE : W90313137684

REVISION-01

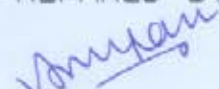
SCOPE:

NRV WITH ALUMINIUM FLAP DN200, PN16 TAG NO. MAW80AA031 & MAW80AA036.

FLOW THROUGH THE VALVE -  $0.7\text{m}^3/\text{sec.}$   
MEDIUM - HOT AIR/WATER VAPOUR  
PRESSURE -  $1.1\text{kg}/\text{cm}^2$   
TEMPERATURE -  $100^\circ\text{C}$   
PD ALLOWED - 100 mmwc  
GENERAL REQUIREMENTS - ST47025/ST47034

NOTE: ABOVE SCOPE REPLACES THE SCOPE GIVEN IN TABLE AT  
CLAUSE NO. 1 OF ST47034.

PREPARED BY



( ANUPAM )


PED, BHEL, HARDWAR

APPROVED BY



( S.K.GUPTA )

PED, BHEL, HARDWAR

SIGN & DATE		PRODUCT STANDARD STEAM TURBINE ENGINEERING	ST 47034
			PAGE 1 OF 3

Own Experience

**TECHNICAL SPECIFICATION OF NON-RETURN VALVES  
FOR LUBE OIL AND FIRE RESISTANT FLUID VAPOUR  
EXHAUST LINE.**

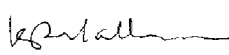

**1.0 SCOPE**

This specification covers design, manufacturing assembly, testing and supply of Non-return valves as per sketch 1.0 to be installed in turbine lube oil and FRF vapour exhaust line with identification number as tabulated below:

SL. NO.	Identification Number.	Size No	Flow medium	Working Para-meters	End conn- ection
1	MAV82AA001	125	Servo	Pressure	To be fitted
2	MAV82AA002	125	-prime	2 kg/cm <sup>2</sup>	between
3	MAX82AA002	80	46 of	abs.	flanges
			10C	Temp.	as per
			Fire	70°C	DIN 2633
			resis- tant		
4	MAX82AA003	80	Fluid (Phosp- oric ester)		

**2.0 FUNCTION**

These valves are to be installed on main oil tank and FRF tank after each vapour exhausters to prevent back flow of vapours in case one vapour exhauster is under maintenance.

SIGN & DATE	INVENTORY NO.	AGREED.	TSX	B.M. BANSAL	EWS 24.3.84	DRAWN	NAME	SIGN. & DATE
P-5515	15/5/84		QAX	H.C. UPADHYA	HW 9.3.84	WORKED	A. K. JAIN	19.3.84
			DEPT	NAME	SIGN. & DATE	SUPERVISED	S. S. KULKARNI	19.3.84
REVISION : 02			Distribution		Qty.	Approved : 		ST
Name			Sign		Date	ENGG. DEV. MANAGER		8.20
S.K. Gupta					12.2.08	Prepared		Date
Reaffirmed						STE		26.3.84
Feb, 2008						Issued		
						STE ( TL )		
						HARDWARE		

INVENTORY No. P-5515	SIGN & DATE 15/10/04	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.	SUPERSEDES INVENTORY No.	SIGN & DATE

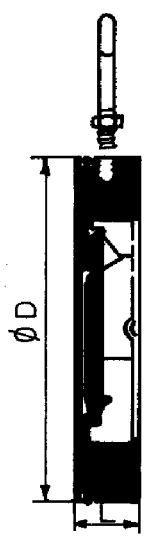


**PRODUCT STANDARD**  
**STEAM TURBINE ENGINEERING**

ST 47034

PAGE 2 OF 3



- 3.0 RATING : Nominal pressure rating = 16 kg/cm<sup>2</sup>
- 4.0 MATERIAL *Flap of Aluminium* <sup>other</sup>  
Body of Carbonsteel, Material of Internals to be selected by supplier and to be informed to purchaser for their comments, if any. Also refer clause 4.0 of ST 47025.  
All gaskets shall be of VITON.
- 2.0 END CONNECTIONS  
Valves are to be fitted between flanges as per DIN 2633.
- 6.0 SPECIAL FEATURE:  
Maximum permissible pressure drop across the valve at sl.Nos. 1 & 2 with 0.11 m<sup>3</sup>/sec flow of air shall be 60 mmwc and across the valve at sl.Nos. 3 & 4 with 0.02 m<sup>3</sup>/sec flow of air shall be 20 mmwc.
- 7.0 For completion of this specification, read this specification alongwith general purchase specification of valves ST 47025.



SKETCH-1

NOM. DIA.	DIM. IN MM		WT. APPX. IN KG.
MM.	L	D	K.G.
80	24	134	1.80
100	27	154	2.50

Revision: 02

SIGN & DATE			PRODUCT STANDARD		ST 47034
SIGNATURE			STEAM TURBINE ENGINEERING		PAGE 3 OF 3
SUPERSEDES INVENTORY No.		<p>8.0 In continuation to clause 15.0 of Specification ST 47025, the min. test requirement envisaged by BHEL are as follows:-</p> <p>8.1 <u>Testing of Materials:</u> The material of components of valve such as body &amp; disc shall be tested as per relevant specification for its chemical composition and mechanical properties. For remaining components compliance certificate shall be furnished.</p> <p>8.2 DPT on seat.</p> <p>8.3 Functional test. <i>smooth movement of the flap.</i> </p>			
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SIGN & DATE		<p>REVISION: 02</p>			
INVENTORY No.					



उत्पाद मानक

STEAM TURBINE ENGINEERING  
PRODUCT STANDARD

ST47025  
HW0690097

पृष्ठ 4 का 1

Page 1 of 4

SUPERSEDES  
INVENTORY NO.

सामग्री सूची संका को  
अधिकृत किया है

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स्वाधिकार एवं गोपनीय

इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं आरक्षण इस से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।

हस्ताक्षर एवं दिनांक  
SIGN & DATE

26.7.04


सामग्री सूची संका INVENTORY  
NO.

P-5522



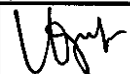
GENERAL PURCHASE SPECIFICATION OF VALVES


- 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 & fastners 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.

				नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE
			अनुवादक TRANSLATED BY		
TSX	D.L. OBEROI		निर्माणकर्ता WORKED BY	S.K. GUPTA	26.7.04
QAX	S.S. CHAUHAN		जांचकर्ता CHECKED BY	V.K. GUPTA	26.7.04
सहमत विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY	V.K. GUPTA	26.7.04
			स्वीकृति APPROVED :		
			निर्माण PREPARED : STE	जारी ISSUED : STE (TL) HARDWAR	दिनांक DATE : 26.3.84

दिनांक एवं हस्ताक्षर SIGN & DATE		<b>उत्पाद मानक</b>  <b>STEAM TURBINE ENGINEERING</b>  <b>PRODUCT STANDARD</b>	<b>ST47025</b> HW0690097	
			पृष्ठ 4 का 2 Page 2 of 4	
सामग्री सूची संख्या को INVENTORY NO.	SUPERSEDES INVENTORY NO.	<p>3. <b>GLAND SEALING</b> :- Valves working under vacuum are to be provided with gland sealing arrangement.</p> <p>7.0 <b>HYDRAULIC TEST</b> :- Hydraulic test shall be carried out on each valve. After the hydraulic test the internals shall be wiped, cleaned and dried. The body &amp; seat shall be tested hydraulically in accordance with ANSI B16.34. For steam &amp; 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 &amp; duration of test along with following informations shall be furnished to purchaser.</p> <ol style="list-style-type: none"> <li>Valve identification No.</li> <li>Type of valve &amp; description</li> <li>Valve size</li> <li>Name of manufacturer</li> <li>Project name</li> <li>Date of testing</li> </ol> <p>8.0 <b>CLEANING &amp; SURFACE PROTECTION</b> :- The surfaces shall be rubbed with a solvent (e.g white spirit) to clean &amp; prepare them for the application of the paints. Unmachined surface shall be blast cleaned to remove any rust. Stainless steel portion shall not be painted.</p> <ol style="list-style-type: none"> <li>Outer surface to be protected by painting with two coats of Red oxide Zinc chromate primer.</li> <li>Inside surface to be protected against rusting and corrosion.</li> </ol> <p>9.0 <b>IDENTIFICATION PLATE</b> :- Following information in English shall be engraved on a metal sheet properly fixed at a convenient location on the body or body cover.</p> <ol style="list-style-type: none"> <li>Identification No. as specified in enclosed valve specification.</li> <li>Valve type &amp; Description</li> <li>Valve size</li> <li>Pressure rating</li> <li>Manufacturer</li> <li>Year of manufacturing</li> <li>Project name</li> </ol>		
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दिनांक एवं हस्ताक्षर SIGN & DATE	दिनांक एवं हस्ताक्षर SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	REV. NO. 02	निर्माणकर्ता WORKED BY S.K.GUPTA
दिनांक एवं हस्ताक्षर SIGN & DATE	दिनांक एवं हस्ताक्षर SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	REV. NO. 02	जांचकर्ता CHECKED BY V.K.GUPTA
दिनांक एवं हस्ताक्षर SIGN & DATE	दिनांक एवं हस्ताक्षर SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	REV. NO. 02	दिनांक एवं हस्ताक्षर SIGN & DATE



दिनांक एवं हस्ताक्षर SIGN & DATE			<p style="text-align: center;"><b>उत्पाद मानक</b></p> <p style="text-align: center;"><b>STEAM TURBINE ENGINEERING</b></p> <p style="text-align: center;"><b>PRODUCT STANDARD</b></p>		<p><b>ST47025</b> HW0690097</p> <p><b>पृष्ठ 4 का 3</b> Page 3 of 4</p>	
सामग्री सूची संख्या को अधिकृत करता है	SUPERSEDES INVENTORY NO.	<p><b>10.0 STANDARD :-</b> Latest issue and amendments of all applicable international standard shall apply.</p> <p><b>11.0 PACKING :-</b> Valve ends, machined and unmachined surface, etc. shall be protected against rusting &amp; corrosion and valve shall be packed according to mode of transport and storage in top shade store gantry in tropical climatic conditions for a period of 8-12 months.</p> <p><b>12.0 GUARANTEE :-</b> 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.</p> <p style="padding-left: 40px;">If during erection/commissioning and operation at site, any defect in any component is detected, purchaser's / owner's site representative shall prepare the assessment report and a copy of the same shall be forwarded to the supplier. The supplier shall replace / rectify the concerned items free of charge. The supplier, if he so desires, may depute his representative to site at his own cost otherwise the report of purchaser's / owner's site representative shall be binding on the supplier.</p> <p><b>13.0 SPARES :-</b> The offer of valves shall include the requirement of spares to be made available at the time of erection &amp; commissioning. A separate offer of spares to be required for 3 to 5 years of operation shall also be separately enclosed along with main offer.</p> <p><b>14.0 SPECIAL TOOLS &amp; TACKLES :-</b> Any special tools &amp; tackles, required for erection, commissioning and maintenance of valves shall be included in main offer per set of valves.</p> <p><b>15.0 QUALITY ASSURANCE, INSPECTION AND TESTING :-</b></p> <p><b>15.1</b> The manufacturer shall conduct all tests required to ensure all the component parts of the valve offered conform to the requirements of the specification and in compliance with requirements of applicable codes and standards.</p> <p><b>15.2</b> The bidder shall submit along with his offer quality plan in the prescribed BHEL's format.</p> <p><b>15.3</b> The particulars of the proposed shop tests and procedures for the tests shall be submitted to the BHEL / owner for approval along with quality plan.</p> <p><b>15.4</b> The equipment shall be dispatched only after inspection and clearance of material by BHEL / owner and approval of test certificates by BHEL / owner.</p> <p><b>15.5</b> The minimum tests/ checks to be carried out on the valve as envisaged by purchaser shall be as per the specification of desired valve to which this specification is enclosed. This is , however not intended to form a comprehensive testing programme as it is supplier's responsibility to prepare the detailed quality plan, which should also include tests, checks carried out by supplier as a part of their normal practice. This quality plan is subject to the approval of BHEL and owner. BHEL/owner reserves the right to ask for any more checks at the time of quality plan finalisation.</p>				
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		<p style="text-align: center;"><b>स्वत्वाधिकार एवं गोपनीय</b></p> <p style="font-size: small;">इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है इसका प्रयुक्त एवं आगे के रूप में किसी भी तरह प्रयोग, जो कि कंपनी के हित में अनुकारक हो न किया जाए।</p>				
सामग्री सूची संख्या INVENTORY NO.	P-5522	REV. NO. 02		निर्माणकर्ता WORKED BY.	S.K.GUPTA	 9/7/04
				जांचकर्ता CHECKED BY	V.K.GUPTA	 9/7/04

SIGN दिनांक एवं हस्ताक्षर	SIGN & DATE		<b>उत्पाद मानक</b> <b>STEAM TURBINE ENGINEERING</b> <b>PRODUCT STANDARD</b>		<b>ST47025</b> <b>HW0690097</b>	
					<b>पृष्ठ 4 का 4</b> <b>Page 4 of 4</b>	
सामग्री सूची संख्या को अतिरिक्त करता	SUPERSEDES INVENTORY NO.	<p><b>16.0 ACTUATORS :-</b> 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.</p> <p><b>17.0 DOCUMENTS</b></p> <p><b>17.1 Documents required along with the offer / at the time of registration :-</b> 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.</p> <ol style="list-style-type: none"> <li>1. Cross sectional &amp; 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 &amp; dismantling of valve &amp; actuator for maintenance for approval by the purchaser.</li> <li>2. Quality plan for approval by purchaser.</li> <li>3. List of commissioning spares, maintenance spares for 3 to 5 years of operation for reference.</li> <li>4. Any special requirements of lubricant for reference.</li> </ol> <p>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.</p> <p>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 .</p> <p><b>17.2 Documents to be submitted after placement of the order :-</b></p> <ol style="list-style-type: none"> <li>1. 10 copies of finalised contract drawing within 8 weeks.</li> <li>2. 10 copies operation/ maintenance/ erection instructions for each station within 12 weeks.</li> <li>3. Instruction of conservation and deconservation within 12 weeks.</li> </ol> <p><b>18.0</b> Six copies of all actual test certificates and quality documents shall be furnished to purchaser/owner.</p> <p><b>19.0</b> If there are any deviation from this specification in offer, the same shall be clearly spelled out clausewise by supplier.</p> <p><b>20.0</b> Cross referred standards :- ANSI B16.34</p>				
<b>स्वत्वाधिकार एवं गोपनीय</b> इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कम्पनी के हित में हानिकारक हो न किया जाए ।		<b>समग्री सूची संख्या</b> <b>INVENTORY NO.</b> <b>P-5522</b>				
<b>हस्ताक्षर एवं दिनांक</b> <b>SIGN &amp; DATE</b> <b>26.7.04</b>		<b>REV. NO. 02</b>				
<b>निर्माणकर्ता</b> <b>WORKED BY</b>		<b>S.K.GUPTA</b>		<b>9/7/04</b>		
<b>जांचकर्ता</b> <b>CHECKED BY</b>		<b>V.K.GUPTA</b>		<b>9/7/04</b>		

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

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

**TABLE-I**

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

**NOTE :** 1. For body and bonnet forgings UT with MPI may be adopted in place of RT.  
 2. For austenitic steel MPI may be replaced by LPI.  
 3. Outer surface of valve shall be painted as per following painting scheme

**Painting Scheme**

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

DFT – Dry Film Thickness (final) in microns.

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

This supersedes clause 8 (i) of ST47025.

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

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

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

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

  
(S.K.Gupta)

QAX, BHEL, HARDWAR

PED, BHEL, HARDWAR

QUALITY PLAN										Page 1 of 2		
BHEL	QP NO.	QA_BI_QP_117		REV.	00	DESCRIPTION			LEGENDS			
	SPEC. NO.	AS PER PO		REV.	AS PER PO				P- PERFORMED BY		1- BHEL REP	
	DRG. NO.	APPROVED DRAWING AS PER PO		REV.	AS PER PO	W- WITNESSED BY		2- VENDOR				
							V- VERIFIED BY		3- SUBVENDOR			
SL. NO	COMPONENT OPERATION	CHARACTERISTICS	CLASSIFI- CATION	TYPE OF CHECK	QUANTUM	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									P	W	V	

1	MATERIAL											
1.1	BODY, DISC	CHEMICAL COMPOSITION MECHANICAL PROPERTIES	MAJOR	CHEMICAL  MECHANICAL	1 / HEAT	ORDERING SPEC. / BHEL APPD. DRG.	ORDERING SPEC. / BHEL APPD. DRG.	MILL TC	3/2	-	2/ 1	
		SURFACE DEFECTS	MAJOR	VISUAL	100%	MSS-SP-55	MSS-SP-55	TC	2	-	1	
		DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	TC	2	-	1	
2. IN PROCESS INSPECTION												
2.1	MACHINING OF BODY, DISC	DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	IR	2	-	-	
		SURFACE DEFECTS	MAJOR	DPT	100%	ASTM E165 ASME B16.34	ASME B16.34	TC	2	-	1	
2.2	HARD FACING ON DISC & SEAT	HARDNESS	MAJOR	HARDNESS	10%	BHEL APPD. DRG.			2	-	1	IF CALLED IN DRAWING
3	FINAL INSPECTION											
3.1	ASSEMBLY OF VALVE	DIMENSIONS	MAJOR	MEASUREMENT	100%	BHEL APPD. DRG.	BHEL APPD. DRG.	TC	2	1		
3.2	FUNCTIONAL TEST	SMOOTH OPERATION OPENING & CLOSING	MAJOR	OPERATION	100%	SMOOTH OPERATION OF VALVE		TC	2	1*		* 10% (MIN. 2 NO.)
3.3	HYDRAULIC TEST	LEAKAGE	CRITICAL	HYDRAULIC	100%	ORDERING SPEC. / BHEL APPD. DRG	NO LEAKAGE	TC	2	1*	-	* 10% (MIN. 2 NO.)

		<b>LEGEND:</b> ! 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

QUALITY PLAN									Page 2 of 2			
BHEL	QP NO.	QA_BI_QP_117	REV.	00	DESCRIPTION				LEGENDS			
	SPEC. NO.	AS PER PO	REV.	AS PER PO	NRV WITH ALUMINIUM FLAP				P- PERFORMED BY		1- BHEL REP	
	DRG. NO.	APPROVED DRAWING AS PER PO	REV.	AS PER PO					W- WITNESSED BY		2- VENDOR	
									V- VERIFIED BY		3- SUBVENDOR	
SL. NO	COMPONENT OPERATION	CHARACTERISTICS	CLASSIFICATION	TYPE OF CHECK	QUANTUM	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
.									P	W	V	
3.4	SEAT LEAK TEST	LEAKAGE	CRITICAL	HYDRAULIC	100%	ORDERING SPEC. / BHEL APPD. DRG	NO LEAKAGE	TC	2	1*	-	* 10% (MIN. 2 NO.)
3.7	PRESERVATION & PAINTING		MAJOR	VISUAL	100%	BHEL SPEC		IR	2	-	-	

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