 432-003	ENQUIRY VALVES	Bharat Heavy Electricals Limited (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.	Phone:04312577913 FAX :0431-2520383 Email: fayasmalik@bheltry.co.in	
		ENQUIRY NO.	DATE	DUE DATE FOR QUOTATION
		EN:SFV:138	18.05.2015	08.06.2015
Please quote Enquiry No., and due date in correspondences This is only a request for quotation and not an order.				
Supply of Pressure Reducing Valve. <u>Date , Time & Venue of tender opening :</u> 08.06.2015 at 14.30 Hrs. at Valves Purchase Conference Hall , Building No 24, III Floor BHEL, Tiruchirappalli-620 014, Tamil Nadu State, India.	<u>Scope of supply</u> Supply of Pressure Reducing Valve as per the purchase specification enclosed. -List of Annexures Annexure 1A- Scope of Supply Annexure 1B- Specification Annexure 2- General terms & Conditions Annexure 3A- Schedule of Deviation Format Annexure 3B- Performance Bank Guarantee Annexure 4- Unpriced format Annexure 5- Priced format			
<p>The rate of Excise Duty and Sales Tax, Prevalent on the date of quotation, should be clearly indicated in the quotation itself.</p> <p>Please, submit your lowest quotation in duplicate subject to our terms and conditions , for the above materials, so as to reach us on or before the due date by 14.00 Hrs. (IST)</p> <p>Quotation will be opened at 14.30 Hrs. (IST) on the due date in the presence of tenderers who may like to be present.</p> <p>Late tenders will not be considered.</p>			<p style="text-align: center;">Yours faithfully,</p> <p style="text-align: center;">For Bharat Heavy Electricals Ltd</p> <p style="text-align: center;">Fayaz Malik K Engineer/Purchase/Valves</p>	

	Material	Sales Order Description	Order Quantity	Spec
10	974510120000	PRESSURE REDUCING VALVE WITH HYD.ACT	2	SPEC:HP:0050



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PE/ VALVES
BHEL/TRICHY-14

**TECHNICAL SPECIFICATION FOR PRESSURE REDUCING
VALVE OF INCONEL MATERIAL WITH ELECTRO-HYDRAULIC
PACK**

**TECHNICAL SPECIFICATION FOR
PRESSURE REDUCING VALVE OF
INCONEL MATERIAL WITH ELECTRO-
HYDRAULIC PACK**

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1.1. This specification, together with the data sheet attached herewith covers the requirements for the design, materials, construction details, manufacture, name plate marking, inspection, and testing of Pressure reducing valves and hydraulic system. The offer shall be submitted along with all the documents mentioned in this specification.

1.2. Data sheet indicates the selection parameters of the Pressure reducing valves, actuators, and associated hydraulic system components. However, bidder shall be responsible for sizing and selection of proper valve and hydraulic actuator meeting the indicated operating and design conditions. The design, material, construction, manufacture, inspection and testing of valves shall conform to the latest applicable codes and standards.

1.3. The valves covered under this specification shall be governed by the following standards. However, the valves conforming to other International Standards may be acceptable, provided they are equivalent or superior to those listed below:

- ANSI- American National Standards Institute
- ASME- American Society of Mechanical Engineers
- ASTM- American Society for Testing and Materials.
- AWS- American Welding Society
- ISA- Instrument Society of America
- IBR- Indian Boiler Regulations
- OSHA- Occupational Safety and Health Administration
- DIN- Deutsche Industrie Norm
- BS- British Standards

1.4. All materials, construction and design of the pressure parts shall conform in all respects to the applicable standards.

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VALVE OF INCONEL MATERIAL WITH ELECTRO-HYDRAULIC
PACK**

- 1.5. All materials shall be readily identifiable. Mill test reports shall be provided for all pressure boundary parts. These test reports shall be available for review at the Bidder's shops. Copies of these are to be submitted to Purchaser.
- 1.6. The material specification shall be as per ASTM B564 UNS N06617/ DIN material no. 2.4663
- 1.7. The valves covered under this specification shall be manufactured to suit the design temperatures and pressures as mentioned in Annexure I.
- 1.8. Nothing in this Specification shall be construed as relieving the Bidder of his responsibility for compliance with all applicable codes and regulations.

2. Application

- 2.1. This specification is for two Pressure Reducing Valves PRV1A & PRV1B as depicted in the scheme provided under S.No.13.

3. Scope

- 3.1) Scope of supply shall include two pressure reducing steam control valve (tagged PRV1A & PRV1B), self contained electro-hydraulic actuator (and associated hydraulic power unit) for the above valve and final control elements (servo valve / proportional valve)
- 3.2) The self contained hydraulic actuator shall have built-in hydraulic power unit with necessary fittings for intended service conditions. Necessary accumulator shall form part of hydraulic power unit. Additional scope (loose supply) as indicated in clause 5.16.

4. Function of PRV1A & PRV1B

- 4.1) The task of the Pressure Reducing Valve (PRV1A & PRV1B) is:
- to reduce upstream steam pressure to suit downstream pressure
 - to control the steam capacity of about 3.7t/h - 20 t/h
 - design fail safe open to reduce the steam temperature in an emergency case.

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BHEL/TRICHY-14**TECHNICAL SPECIFICATION FOR PRESSURE REDUCING VALVE OF INCONEL MATERIAL WITH ELECTRO-HYDRAULIC PACK****5. Design and Construction****5.1. General**

- 5.1) The control valves used in the systems shall be of tight shut off design (zero leak, Class V as per ANSI/FCI 70-2 on Control Valve Seat Leakage) with maximum shut off differential acting across the valve. All control valves covered fall under the purview of IBR.
- 5.2) Valve parts shall not vibrate or chatter and shall not be unduly noisy. Low noise trim, if required, shall be provided to ensure the noise level within limit.
- 5.3) Special throttling devices shall be located down-stream of bypass system control valve outlet as required to limit the control valve outlet velocity and noise level.
- 5.4) Valve seat areas shall be hard-faced. Sealing arrangement shall be provided so that no leakage takes place through valve glands. Graphoil packing rings or equivalent arrangement shall be provided for valve glands.
- 5.5) All Pressure reducing valves shall be butt weld type. Edge Preparation shall be as indicated under S.No. , edge preparation details of which shall be submitted by bidder.
- 5.6) The oil system for bypass system electro-hydraulic actuators shall be self-contained unit and shall meet system demand for all operating conditions. Hydraulic system components shall be designed for the intended service conditions.
- 5.7) To prevent over-pressure in the oil system, safety valves as necessary shall be provided.
- 5.8) Hydraulic actuators shall have the facility to keep the PRV1 "fail safe open" on oil supply failure or electric power failure.
- 5.9) Local position indicator scale shall be provided on actuator yoke to indicate position of valve locally.
- 5.10) Pressure gauges shall be provided to indicate the oil system supply pressure to actuators.
- 5.11) Nameplates shall be of white non-hygroscopic material with engraved black lettering and shall be suitably fixed on both front and rear sides. The nameplates shall have the following details minimum.

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- i) Manufacturer's Model number
- ii) Manufacturer's Serial number
- iii) Size and pressure rating for Inlet & Outlet
- iv) Manufacturer's name/trade mark.
- v) Month & Year of manufacture.

5.12) Write up on the function/ operation of the offered Pressure reducing valves and hydraulic system shall be provided along with the offer.

5.13) The following details of final control elements like servo valves/proportional valves, fast opening solenoid valves, feedback transmitter/ limit switch shall be provided along with the offer.

- a) Supply Voltage and variation in voltage
- b) Power rating
- c) Operating pressure
- d) Operating temperature
- e) Electrical connection details, etc,

5.14) Write up on recommended control system logic and interface requirements with input signals shall be provided along with the offer.

5.15) Pressure reducing valves:

- (a) Pressure reducing steam control valves shall be selected for the steam parameters indicated in datasheet of this specification.
- (b) Pressure Reducing Steam Control Valve Connections (for piping)

Inlet side

Size : As per datasheet

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Material : As per datasheet

Outlet side

Size : As per datasheet

Material : As per datasheet

- (c) Maximum noise level : 85 dB(A) at 1 metre distance
- (d) Valve with actuators shall be installed horizontally. Support paws shall be welded with valve body.
- (e) Hydraulic scheme for all actuators shall be provided by bidder for Purchaser approval.
- (f) Pressure reducing valve (PRV1A & PRV1B) opening & closing time (modulating control) shall be <2 sec for full stroke.
- (g) For all actuators, a drip tray shall be provided to collect oil, in case of leakage.

5.16) Additional scope (Loose supply):

5.16.1) Special Tools & Tackles And Special Equipment

Bidder shall supply with the equipment, complete set of all special tools & tackles & special equipment required for site erection, assembly, disassembly and proper maintenance of equipment covered under the scope of supply of this specification. **The price of these tools and tackles will be considered for evaluation of offer.**

5.16.2) Spare Parts For Erection & Commissioning

It will be the responsibility of the bidder to provide all commissioning spares required for initial operation till satisfactory completion of the trial operation. One set of seal kit (packing rings and gaskets) for pressure reducing valves, one set of seal kit for each actuator and set of filter elements shall be supplied as commissioning spare. **The price of these spares will be considered for evaluation of offer.**

5.16.3) Spare parts for 3 years of operation

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Recommended spare parts list for 3 years of operation shall be furnished for each valve, actuator and HPU. Detailed list of spare parts with position no. shall be furnished in the O&M manual. Bidder shall indicate price of each spare part along with the offer. **The price of the recommended spares will be considered for evaluation of offer.** BHEL reserves the right to order any or all of the components/items/quantity offered as recommended spares.

5.2 Minimum Electrical and C&I specification

1. One number 415 V, 3 Ø, AC, 50Hz, 3 WIRE for power supply and One number 240 V, AC, 1 PH, 50Hz UPS control supply feeder will be provided for the hydraulic power pack including the valve. It is vendor's responsibility to further distribute the same to different points and further derivation of various control supplies/power supplies. Vendor shall indicate their overall power rating requirements (in KW) of the above mentioned power supplies in the offer for their system.
2. The hydraulic power pack unit and the valve shall have their own control system. Vendor shall offer the latest version of control system/positioners. Vendor shall provide the software required for configuring/programming, commissioning and diagnostics of the control system.
3. The system shall be capable of receiving start/stop commands from DCS and providing status feedback signals to DCS as indicated below for interfacing with BHEL's DCS. These signals shall be terminated in the respective control panel's terminal boxes/junction boxes. In addition to these signals, if any other additional command/feedback signals are envisaged as per vendor's design, vendor shall indicate the same in the offer.

Position Demand (from DCS)	4-20 mA DC
Valve Position feedback (to DCS)	4-20 mA DC
Position Failure (to DCS)	Dry Contact
Quick Opening or closing	
(Valves group may please check the applicability)	
(from DCS)	Dry Contact
Valve Opened (to DCS)	Dry Contact
Valve Closed (to DCS)	Dry Contact
Hydraulic Power Unit On (from DCS)	Dry Contact

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Hydraulic Power Unit Off (from DCS)	Dry Contact
Hydraulic Power Unit Pressure too low (to DCS)	Dry Contact
Hydraulic Power Unit Auto (to DCS)	Dry Contact
Hydraulic Power Unit Alarm (to DCS)	Dry Contact
Hydraulic Power Unit Fault (to DCS)	Dry Contact
Motor tripped (Main) (to DCS)	Dry Contact
Motor tripped (stand by) (to DCS)	Dry Contact
Hydraulic Power Unit Oil Temperature – (to DCS)	4-20mA

4. The offered Hydraulic Power Unit and the Control system/panels shall be suitable for outdoor applications. The Canopy for the control panel/hydraulic power pack shall be provided for protection from falling objects, water and dust.
5. All Cables (Power cables/Control Cables/Instrumentation cables) run between various equipment supplied by vendor and accessories i.e cable glands, cable tray, cable tray supports, lugs, ferrules, intermediate junction boxes, mounting accessories required for the system, shall be in vendor's scope.
6. All glands shall of Double compression, weather proof, Brass with Nickel plated cable glands.
7. Necessary instruments required for operation and protection of the equipments shall be provided by the vendor.
8. Necessary tools, tackles required for commissioning/ calibration of the system shall be provided by the vendor.
9. Copper with nickel plated terminals shall be provided for the terminals of Junction box, terminal blocks and panels.
10. Vendor to provide suitable cable glands for all interfacing cables from/to DCS. Cable sizes will be indicated during engineering stage.
11. Test Certificates and Calibration Certifications shall be provided for all Instruments and Motors as applicable.
12. The above is only a brief basic requirements of the system. It is the responsibility of the vendor to take care of other basic and essential requirements. In case of any discrepancy in the contents expressed in the specification, vendor shall include all

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items required for completeness of the system even if it is not specified explicitly in this specification.

6. Inspection & Testing

- 6.1. All pressure reducing valves shall be inspected, tested and stamped as per applicable code.
- 6.2. Material, mechanical and chemical tests shall be performed in a manner as specified in the relevant codes.
- 6.3. All valve pressure retaining parts shall be subjected to hydrostatic test pressure as required by the IBR. The bidder shall guarantee his valve as capable of withstanding such hydrostatic tests and shall repair or replace, at his expenses, any item which fails to pass such tests at site.
- 6.4. Quality assurance plan for all components included in the scope shall be submitted along with the offer for Purchaser's approval.
- 6.5. The material test certificates (correlated to melt number) shall be furnished by the bidder for identification and correlation.
- 6.6. For components like body, inlet and outlet nozzles, seat, stem/ plug, disc, actuator cylinder, yoke etc., material test certificates shall be furnished for identification & correlation.
- 6.7. 100% Blue matching of seats shall be carried out and records shall be maintained for verification by Purchaser.
- 6.8. Each Pressure reducing valve and pressure retaining parts shall undergo hydrostatic test as per IBR. Valves shall be inspected by independent inspecting authority approved by Indian Boiler Board and the test certificate in IBR Form IIIC duly countersigned by approved authority shall be submitted.
- 6.9. Seat Leakage test shall be conducted. There shall not be any visible leakage during this test.
- 6.10. Cv test shall be carried out for Pressure reducing valves as per IEC 60534-2-3 Mod and

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test report shall be submitted for Purchaser's approval. In case, the test report is already available on the same model/ type/ rating of the valve proposed to be supplied under this specification and the Cv test has been either conducted at any independent laboratory or has been witnessed by a client, the same can be considered if Cv test has been carried out within 5 years from the date of bid opening.

7. Additional Requirements

- 7.1. Machined surfaces shall be suitably protected.
- 7.2. Valve ends shall be protected by means of metallic covers/polythene caps/rubber and protectors to prevent damage to ends & also to avoid foreign material entering the valve during transit & storage.
- 7.3. All the valves shall be packed suitably in wooden cases in order to avoid damage during transit and also during storage at site.
- 7.4. The Bidder shall adequately crate, block, anchor and protect equipment as required to prevent damage during overseas shipment and outdoor storage for a period of one (1) year at the site.
- 7.5. All threaded connections shall be plugged or capped with standard pipe plugs or caps.

8. Document Requirements

The following documents shall be submitted with the quotation.

- 8.1) Materials of all parts & trim details to be furnished by Bidder.
- 8.2) General arrangement and cross section drawing with mounting details, BOM, Face to Face & overall dimensions, marking for identification of recommended spare components.
- 8.3) Valve sizing calculations.
- 8.4) Sound Pressure level calculations.

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- 8.5) Drawings/ documents submission schedule. The mere approval of documents like drawings, data sheets, wiring diagrams, actuator sizing calculations, flow calculations, etc., will not however relieve the bidder from meeting our specification requirements, relevant product and testing standard requirements and generally accepted engineering principles. Ultimately, the system has to perform satisfactorily at the service conditions and at the end user place.
- 8.6) Weight of valve, product catalogue and filled in data sheets.
- 8.7) Valve opening/ closing time details.
- 8.8) If the bid submitted has got any deviation from this technical specification, the bidder shall furnish full particular of such deviations. Deviations are to be furnished with specific mention to clause number. Only such deviations will be discussed and resolved. Reasons/ explanation for such deviations shall be furnished. Any other notes/ comments viz. "refer to forwarding letter" etc. is not acceptable.
- 8.9) Even if there is no deviation from the tender document, the Bidder shall indicate as "no deviations".

The following documents shall be provided after placement of order.

- 8.15 Shipment weight & volume details.
- 8.16 Equipment preservation procedure during shipment, pre-erection storage period & extended storage period.
- 8.17 Operation and maintenance manual consisting of details of all PRVs, hydraulic actuator, final control elements, feedback transmitters, solenoid valves and catalogues for bought out items – 4 hard copies and 5 soft copies.
- 8.18 All GA drawings, Test Certificates (in the form of IBR form IIIC as per IBR), Seat leakage test report, filled datasheets and Material test Certificates.
- 8.19 Bidder shall submit the list of items procured from sub vendors along with their model number and manufacturer details. In case of loose supply of components/systems, necessary drawings & instructions for assembly/subassembly shall be provided.

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8.20 Forces and moments calculations for pressure reducing valves, weight of valve, product catalogue and filled in data sheets.

9. Datasheet

Particulars	unit	Design Condn	Case 1	Case 2	Case 3
PRV1A & PRV1B					
No. of PRVs required		2 x 100% - Electro-hydraulic operation			
PRV Design Pressure	kg/cm ² (g)	164.4			
PRV Design Temperature	°C	735			
Upstream pipe size	mm	Dia 127 x 20 – UNS N06617			
Downstream Pipe Size	mm	Dia 168.3 x 20 – UNS N06617			
Flow through each PRV	t/hr.	20.00	14.21	7.03	3.52
Upstream Temperature	°C	720	720	720	720
PRV Upstream Pressure	kg/cm ² (g)	136.2	144.6	151.0	152.5
PRV Pressure Drop	kg/cm ²	94.3	104.5	112.3	114.2
PRV Downstream Pressure	kg/cm ² (g)	41.9	40.1	38.7	38.3
PRV Downstream Temp	°C	696	694	692	692

10. Supervision during Erection-Commissioning & training at Site

The supplier shall depute their representative at project site for erection & commissioning supervision. Charges for site supervision shall be included in the main offer for which the supplier has to provide justification in the offer. These charges shall be comprehensive and

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shall be inclusive of travel costs, accommodation and all other related expenses. **These charges will be considered for evaluation of offer.**

The bidder shall clearly indicate the extent of association of their service engineer during erection and commissioning of the supplied equipment in their offer. Further, special instructions which are required to be followed at site during erection and commissioning shall be furnished by the vendor.

11. Guarantee

The complete system shall be guaranteed for 24 months of trouble free performance from the date of shipment or 18 months from commissioning date whichever is earlier. In case of any failure or trouble reported from site, the supplier shall depute their representative immediately to attend the problem and replace the defective components/parts, if required.

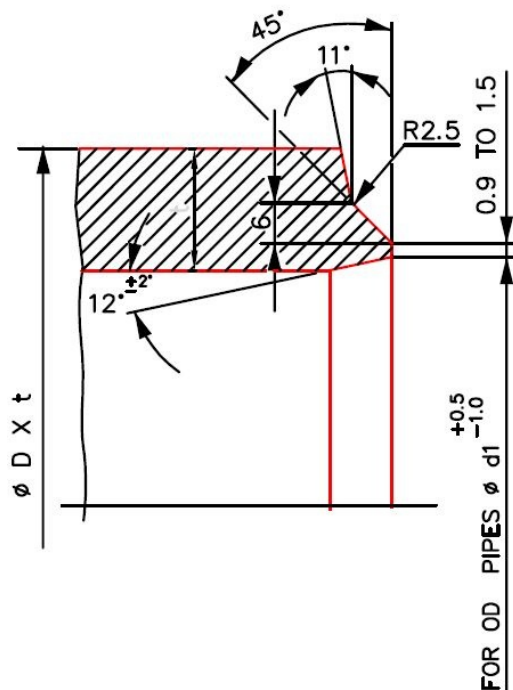
12. BREAK UP FOR SUPPLY OF PRESSURE REDUCING VALVES AND HYDRAULIC SYSTEM

S. No.	EQUIPMENT	PART NO.	QTY/ UNIT
1	Pressure reducing steam control valve with self-contained Electro-hydraulic actuator, feedback transmitter assembly, final control elements and electronic positioner	PRV1A & PRV1B	2 Nos.
2	Special Tools & tackles required for 1 No. of equipment offered against S.No. 1 above	---	1 SET
3	Spares parts for erection and commissioning	---	1 SET*
4	Spare parts for 3 years of operation	---	1 SET*

* 1 SET shall consist of spares required for 2 Nos. of Equipment offered against S.No. 1 above.

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13. Edge Preparation Details



	D (mm)	t (mm)	d1 (mm)
PRV Inlet	127	20	90.7
PRV Outlet	168.3	20	131.6

14. Record of revisions

Rev 00: First Release

Rev 01: Cl. 5.2 added and Cl. 9.0 revised. Schematic of pressure reducing valves removed.

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BHARAT HEAVY ELECTRICALS LTD

Annexure 2A

VALVES PURCHASE

Trichy - 620 014. India

GENERAL TERMS AND CONDITIONS

1. QUOTATIONS:

- a. **BID system:** The offers are invited in Three part bid system (Part I will be Prequalification bid, Part II will be Techno-commercial bid and part III will be Price Bid)
- b. **Submission of Tender:** Each offer should be sent in triple cover separately for each bid and the same should be sealed and super scribed with correct Tender No., description & due date of opening. The outer cover should only bear the address of this office and should not have any indication that a tender is within. Two or more quotations should not be sent in one cover. Tender should not be addressed to any individual's name but only by designation.

BOX NO 5, VALVES/PURCHASE, THE TENDER OPENING TEAM/MM
ROOM NO 26, GROUND FLOOR, BUILDING 24
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI – 620014, TAMILNADU, INDIA

- c. **Late tenders:** Late tenders will not be considered under any circumstance.
- d. **Regulations:** Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested. All amounts shall be indicated both in words as well as figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- e. **PVC:** Price Variation clause not acceptable. Prices should be firm.
- f. **Deviation.** Any deviations from the specification are to be furnished separately as "Annexure 3A Schedule of Deviation ".If there is no deviation vendor should indicate "No Deviation".
- g. **Confirmation:** Confirmation for compliance is to be given in the offer for all the techno commercial conditions specified in the specification.

2. COMMERCIAL TERMS & CONDITIONS:

- a. **Terms of Payment:**
 - Import:** Payment 100% against cash against documents after 45 days.
 - Indigenous:** Payment 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores. Offers requesting for advance payment will be rejected.
- b. **Liquidated Damage:** 0.5% of price for each week of delay up to a maximum of 10% of the undelivered goods.
- c. **Delivery Terms:**
 - Import:** Price should be quoted as CIF/C&F as per ICC Incoterms 2010.
 - Indigenous:** Prices should on FOR BHEL Trichy stores
- d. **Validity of Offer:** Prices should be valid for 120 days from the date of opening of this tender.
- e. **Custom Duties:** As per FTP 2009-2014.
- f. **Risk Purchase:** Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of seller either the whole of goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. Supplier shall be liable for any loss which the purchaser may sustain by reason for such risk purchases in addition to penalty.
- g. **TAXES/DUTY:** If taxes/Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted mentioned in the offer separately. Where ever MODVAT benefit can be availed same have to be passed on to purchaser.
- h. **Miscellaneous:** Any conditions quoted by the seller and are in contravention to the terms prescribed in order and which have not been specifically accepted by Purchaser will not be applicable to the contract.
- i. **Delivery period:** Delivery should be less than 6 months.
- j. **Bank Charges:** All Bank charges outside India are to vendor's account only.
- k. **Supply Record:** Vendor should submit Supply record of Valves with material SB564 UNS N06617 with application, end user details, raw material test certificate, unpriced Purchase order copy,
- l. **Performance Bank Guarantee:** Vendor should provide a performance bank guarantee (PBG) for 10% of the total Purchase order value valid for the guarantee period with an additional claim period of 2 months. Bank guarantee should be as per BHEL format from list of consortium Banks (Annexure 3B).



VALVES PURCHASE

Trichy - 620 014. India

GENERAL TERMS AND CONDITIONS

3. GENERAL CONDITIONS

- a. BHEL reserves the right to finalize the tender as per item sl no wise or as a total package or project wise. Separate orders will be released for each project and documents should be supplied for each order separately.
- b. BHEL reserves the right to increase or reduce or split the Tender Quantity and NOT to order for some or all material based on the changes in project.
- c. BHEL shall have the right to visit vendor works during the execution of contract along with end customer for verifying status, inspection and testing of the material.
- d. BHEL reserves the right to negotiate or re-float the tender in case the quoted prices are not acceptable.
- e. Supplier shall arrange packing to avoid lose or damages during Road Transport, Site handling & Storage.
- f. Purchase Order, PO Item SI No, Material code, Quantity should marked the Packing clearly.
- g. BHEL reserves the right to finalize the tender either through price bid opening or through Reverse Auction route.
- h. BHEL reserves the right to reject the offer of a particular bidder due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units.
- i. The Drawings and Technical documents given in this enquiry are the sole property of BHEL. This should not be misused in any form.

4. DOCUMENTATION:

- a. **With Consignment:**
 - One set of Non Negotiable Documents, O&M Manual, packing list, Fumigation Certificate.
- b. **Through Bank:** All originals in Triplicate, material description in all documents shall be exactly as indicated in PO.
 - Bill of lading /Airway Bill and Certificate of Origin.
 - The invoice indicating the Unit price & total price.
 - Packing List contains quantity, net & gross weight of each item, packing dimensions, PO, Item SI No.
 - Inspection test certificates as per PO, Guarantee/warranty certificates.
 - Original Performance Bank Guarantee in the BHEL format from list of consortium bank, If applicable
- c. **To Purchase :** In soft copy
 - Copy of All Test Certificates as per purchase order.
 - Certificate that materials shipped and shown in the packing list are not less than that invoiced.
 - Copy of Non-negotiable documents
- d. **Identification:** Material code, Purchase Order, PO item SI No, Unique SI No if any should be provided in all despatch documents, materials and packing clearly.

5. TENDER EVALUATION:

Part I-Pre Qualification Bid-

- All Vendors should submit supply record, end user certificate and PO reference, catalogue etc...
- Vendor who are not registered in BHEL Trichy Product Material Directory (PMD) should register online in <http://supplier.bhel.in/> and should submit copy of online registration form wit part I bid.
- BHEL reserves right to visit vendor works before registration for verification of facilities.
- Vendor who doesn't have manufacturing capacity/capabilities/credentials will be rejected.

PART II Techno-commercial Bid.

- All vendors should submit General arrangement drawing, datasheet and C&I diagrams of the offered product
- Point by point technical confirmation of all pages of our technical specifications and commercial conditions are required with your sign and seal along with techno commercial Offer.
- Filled Annexure 4A and Annexure 4B should be submitted.
- IBR certification of the factory should be confirmed with the offer.
- Offers from supplier not having technical capability or not agreed for commercial terms, will be rejected

PART III Price Bid.

- Bidders qualified for both part I and part II will be intimated for participating in priced bid opening/Reverse Auction.
- L1 bidder will be decided based on landed cost for the equipment to BHEL.
- Price Bid should be in BHEL format Annexure 4C
- For evaluation, the exchange rate shall be taken as TT selling rate of SBI on date of Part-1 bid opening.

Note: PART I and PART II will be opened together at time of tender opening

SCHEDULE OF DEVIATIONS

Enq Ref:

Offer Ref:

Date:

Commercial Deviation:

Annexure / Clause No.	Description	Supplier Deviation

Technical Deviation:

Annexure / Clause No.	Description	Supplier Deviation

We confirm acceptance of all the Technical and Commercial requirements as per BHEL Tender, except the above deviations.

Signature with Seal

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 60 DAYS FROM THE DATE OF COMPLETION OF WARRANTY PERIOD)

PERFORMANCE BANK GUARANTEE

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at "BHEL House", SIRI Fort, New Delhi 110 049) through its High Pressure Boiler Plant Division located at Tiruverumbur, Tiruchirapalli- 620 014 (hereinafter called 'the Company') having entered into a contract withhereinafter called ' the said contractor ' which term includes 'suppliers' for the purpose of this Bond and under the terms and conditions of the contract No..... Dt Between BHEL, Trichy and as per the contract, the contractor / supplier is to furnish a performance Bank guarantee for Rs. for the due performance of the equipment to be supplied under the above referred contract and for the fulfillment of all the terms and conditions of the contract, We(indicate the name of the bank) (herein after referred to as the bank) at the request of (Contractor(s)) do here by undertake to pay the company an amount not exceeding Rs.....against any loss or damage caused to or suffered or would be caused to or suffered by the company by reason of any breach by the said contractor (s) of any of the terms and conditions contained in the said agreement.

2. We(indicate the name of the bank with full address), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the contractor(s) 'failure to perform' the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs._____.

3. We undertake to pay unconditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(indicate the name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____Office / Department/ Division of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (I) Unless a demand or claim under this guarantee is made on us in writing on or before the _____ we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date.

(ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack.Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the bank personally.

6. We(indicate the name of Bank), further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. It shall not be necessary for the company to proceed against the contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained or obtain from the Contractor shall, at the time when proceedings are taken against the guarantor hereunder be outstanding or unrealised.

9. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirapalli.

10. The guarantor hereby declare that it has power to execute this guarantee and the executant has full powers to do so on its behalf under the proper authorities granted to him/them by the guarantor.

11. We(indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we....., (indicate the name of Bank) have hereunto setout Bank Seal the _____ day _____ month 200
BANK E-MAIL ID:
BANK PHONE NO.
BANK FAX NO:

				Annexure 4
BHEL Enquiry No. & Date		Vendor's Offer Ref No. & Date		
MODEL UNPRICE BID FORMAT				
	Currency			
Enq SI No.	Description	Unit	Qty	Unit Price in Currency
1				Quoted/Not Quoted
2				Quoted/Not Quoted
3				Quoted/Not Quoted
4				Quoted/Not Quoted
5				Quoted/Not Quoted
.				Quoted/Not Quoted
.				
	FOR/CIF Value in Currency			Quoted/Not Quoted
	Validity of Price			
	Consignment Package Details			
	Approximate Net / Cross Weight in Kgs			
	Dimension of Consignment			
	Delivery date from the date of Purchase Order			
		Signature & Seal of Vendor		
	NOTE:			
	The Unpriced Bid should be submitted strictly in line with the above FORMAT			

