

 434-003/A	ENQUIRY VALVES	Bharat Heavy Electricals Limited (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.	Phone: +91 (431) 257 7096/4032 Email: sivabala@bhel.in subhashini@bhel.in	
		ENQUIRY NO.	DATE	DUE DATE FOR QUOTATION
		ENSFV00219	19.06.2019	10.07.2019
		Please quote Enquiry No., and due date in correspondences <i>This is only a request for quotation and not an order.</i>		
<u>Date, Time & Venue of tender opening:</u> 10.07.2019 at 14.30 Hrs. at The Tender Opening Cell/Valves Room No. -26, Building -24 Bharat Heavy Electricals Limited Tiruchirappalli - 620014, Tamilnadu, India Email: tender_cell@bhel.in		<u>Scope of supply</u> Supply of Pressure Reducing Valve with hydraulic Actuator as per the purchase specification enclosed. -List of Annexures 00. Annexure 1A - SCOPE OF SUPPLY 01. Annexure 1B - SPEC:HP:0061/ Rev 02 03. Annexure 2A - GENERAL TERMS AND CONDITIONS 05. Annexure 2B - CONFIRMATION TO THE TERMS AND CONDITIONS		
The rate of Excise Duty and Sales Tax, Prevalent on the date of quotation, should be clearly indicated in the quotation itself. Please, submit your lowest quotation 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) Quotations will be opened at 14.30 Hrs. (IST) on the due date in the presence of tenderers who may like to be present. Late tenders will not be considered.			Yours faithfully, For Bharat Heavy Electricals Ltd Sivabala Shanmugam Sr. Engineer/Purchase/Valves	

ANNEXURE 1A

SCOPE OF SUPPLY

<u>ENSFV00204 - SCOPE OF SUPPLY</u>			
Material Code	Material Description	Qty	Specification No
979991140000	PRESSURE REDUCING VALVE WITH HYD.ACT	1	SPEC:HP:0061/ Rev 01
979991150000	COMMISSIONING SPARES FOR PRV-TEST LOOP	1	SPEC:HP:0061/ Rev 01
979991160000	OPERATIONAL SPARES FOR PRV-TEST LOOP	1	SPEC:HP:0061/ Rev 01
TOTAL		3	

ANNEXURE 1B

SPECIFICATION



**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0061** Rev: **02**

Effective Date: 02 November 2018

Page: **1** of **13**

Product: ALLOY STEEL PRESSURE REDUCING VALVE WITH ELECTRO-HYDRAULIC PACK

Revision Record:

Rev. No	Date	Details of Revision
00	13 March 2018	First Release
01	13 October 2018	Cl. 3.2, 5.1 and 8.2 revised. Clause 5.17 included, Figures 1&2 included
02	02 November 2018	Cl.9 included

1. GENERAL

- 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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- 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 valves shall be of standard/special class as per ASME B16.34
- 1.7) Nothing in this Specification shall be construed as relieving the Bidder of his responsibility for compliance with all applicable codes and regulations.

2. Application

This specification is for one Pressure Reducing Valve (PRV) viz., LTSH outlet PRV2 used in the test loop as depicted in Annexure-A.

3. Scope

- 3.1. Scope of supply shall include pressure reducing steam control valve (tagged PRV2), self-contained electro-hydraulic actuator (and associated hydraulic power unit) for the above valve and final control elements (servo valve / proportional valve). All the components shall be completely assembled at supplier's works before despatch.
- 3.2. The self-contained hydraulic actuator shall have built-in hydraulic power unit with necessary fittings for intended service conditions. Hydraulic oil used in the system shall be readily available in the Indian market. First fill of oil along with additional one full top-up requirement shall be in vendor's scope. Additional scope (loose supply) as indicated in clause 5.16.

4. Functions of LTSH Outlet PRV2

The task of the Pressure Reducing Valve is:

- to reduce the LTSH outlet steam pressure to suit mixing piece and further to HRH line pressure
- to control the steam capacity of about 1.8t/h - 10 t/h
- to control the temperature of the steam going to HRH line to 540°C with a tolerance of $\pm 5^{\circ}\text{C}$
- design fail safe open to reduce the steam temperature in an emergency case.

5. Design and Construction

- 5.1) The control valves used in the systems shall be of tight shut off design (zero leak) with maximum shut off differential acting across the valve. All control valves covered fall under the purview of IBR. For constructional requirements, please refer Cl. 5.17.
- 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

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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 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 PRV2 “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.

- 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

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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

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 (PRV2) opening & closing time (modulating control) shall be <2 sec for full stroke.

(g) For all actuators, a drip tray shall be provided to prevent oil from falling on valve body, in case of oil leakage.

5.16) Additional scope (Loose supply):

5.16.1) Special Tools & Tackles and Special Equipment

Bidder shall submit with the equipment, complete set of all special tools & tackles & special equipment required for site erection, assembly, disassembly and proper maintenance of Pressure reducing valves.

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, 100% solenoids, 100% connectors shall be supplied as commissioning spare.

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5.16.3) Spare parts for 3 years of operation

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.

5.17) Constructional details:

- The valve shall be in-line design. Any other design will NOT be considered.
- The end-to-end length of the valve shall be 640mm after edge preparation.
- The distance of the valve centreline to the bottom most point of the valve shall be approximately 250mm or less.
- The distance of the valve centreline to the topmost point of the valve actuator assembly shall not exceed 1250mm.
- The design of the valve+actuator assembly shall be such that the maintenance space required during disassembly shall not exceed 1000mm at the bottom of the valve and 1250mm at the top of the actuator.
- All the final control elements (proportional valves, servo valves, etc.,) and solenoid valves shall have manual overrides.
- One no. of 3 phase 3 wire, 400V supply feeder catering to max. 3KW will be provided by purchaser for hydraulic actuator system. Any other voltage required including 240V AC, 24V DC etc., for valve operation to be derived by the vendor.
- Terminal wiring diagram for interfacing with the purchaser's system shall be as per Figure-2 of this specification.
- Terminal wiring diagram of the hydraulic actuator shall be as per Figure-1 of this specification. Wiring between Terminal boxes as per Fig-1 and Fig-2 shall be in the vendor' scope.
- The following cables will be arranged by the purchaser for connecting the hydraulic actuator to DCS and PDB. Vendor to consider two sets of cable glands and lugs for these cables.
 - o Power cable from PDB to actuator – 3Cx6 sq.mm Al
 - o Power cable from DCS to Fail open solenoid – 3Cx6 sq.mm Al
 - o Instrumentation cable from DCS to valve – 8 Pair 0.5 sq.mm Cu. Pair and Over all shielded cable for analog signal. 8 Pair 0.5 sq.mm Cu. Pair and Over all shielded cable for binary signal.

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- Motor along with DOL starter shall be in vendor's scope and motor shall be suitable for 3-Phase, 400V, 50Hz with a max. rating of 0.25 kW.
- Supply voltage for instruments shall be 24 VDC.

6. Inspection and 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 or other applicable standards. 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 (typical) 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. Form IIIC certificate to be furnished.

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

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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/ drawings shall be submitted with the quotation.

8.1) Materials of all parts & trim details to be furnished by Bidder.

8.2) a. General arrangement drawing with mounting details, BOM, Face to Face & overall dimensions, marking for identification of recommended spare components, hydraulic scheme of the actuator, DOL starter circuit details, instrument list, terminal wiring diagrams, I/O list, Cable schedule.

b. Detailed list of spares along with quantity offered against commissioning spares and spares for 3 years' operation shall be included in the offer.

8.3) Valve sizing calculations.

8.4) Edge preparation details shall be submitted for Purchaser's approval.

8.5) Sound Pressure level calculations.

8.6) Shipment weight and volume details.

8.7) Equipment preservation procedure during shipment, pre-erection storage period and extended storage period.

8.8) 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.

8.9) 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 after PO placement and along with supply, as applicable.

8.10) 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

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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.

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

8.12) Valve opening/ closing time details.

8.13) 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.

8.14) Even if there is no deviation from the tender document, the Bidder shall indicate as “no deviations”.

DATASHEET

Particulars	Unit	Design Condn	Case 1	Case 2	Case 3
LTSH Outlet PRV2					
No. of PRVs required		1 x 100% - Electro-hydraulic operation			
Design Pressure	kg/cm ² (g)	173.3			
Design Temperature	°C	434			
Upstream pipe size	mm	127 x 20 – SA 335 P22			
Downstream Pipe Size	mm	127 x 8 – SA 106 Gr.B			
Flow through PRV	t/ hr.	10.30	8.23	3.71	1.85
LTSH Steam Temperature	°C	398	398	398	398
LTSH PRV Inlet Pressure	kg/cm ² (g)	160.0	160.7	161.8	162
LTSH PRV Pressure Drop	kg/cm ²	117.8	120.0	123.1	123.7
LTSH PRV Outlet Pressure	kg/cm ² (g)	42.1	40.7	38.7	38.3
LTSH PRV Outlet Temp	°C	296	294	292	291



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9. Supervision during Erection-Commissioning & training at Site - Optional

The vendor shall depute their representative at project site for erection & commissioning supervision. Charges for site supervision shall be indicated separately in the main offer for which the vendor has to provide justification in the offer. These charges shall be comprehensive and shall be inclusive of travel costs, accommodation and all other related expenses. Vendor shall consider maximum 2 visits with a total duration of 15 working days (including 2 days training program). This will be considered for offer evaluation.

The vendor shall conduct minimum 2 days training program at site regarding design/construction features, operation and maintenance of the supplied equipment (including C&I) for customer engineers and BHEL engineers during erection & commissioning.

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.

Separate PO will be placed for supervision of Erection and commissioning (training included) at site.

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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	979991140000	1 No.
2	Commissioning spares consisting of gaskets, O-rings, packings, solenoids, connectors, filter elements, seal kit of actuator, bladder for accumulator, etc., required for one assembly supplied against S.No.1 above	979991150000	1 SET
3	Operational spares for 3 years' of operation consisting of, but not limited to, valve internals, fasteners, gaskets, O-rings, packings, accumulator bladders, solenoids, connectors, feedback transmitter, final control element, electronic positioner and other electrical and C&I items required for one assembly supplied against S.No.1 above	979991160000	1 SET

BHEL reserves the right to finalise the list and quantity of the components/items/quantity offered under S.No. 2 and 3 above. BHEL reserves the right not to procure any of the items offered under S.No. 2 and 3 above. So, the offer for these items shall be provided individually.



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PURCHASE SPECIFICATION

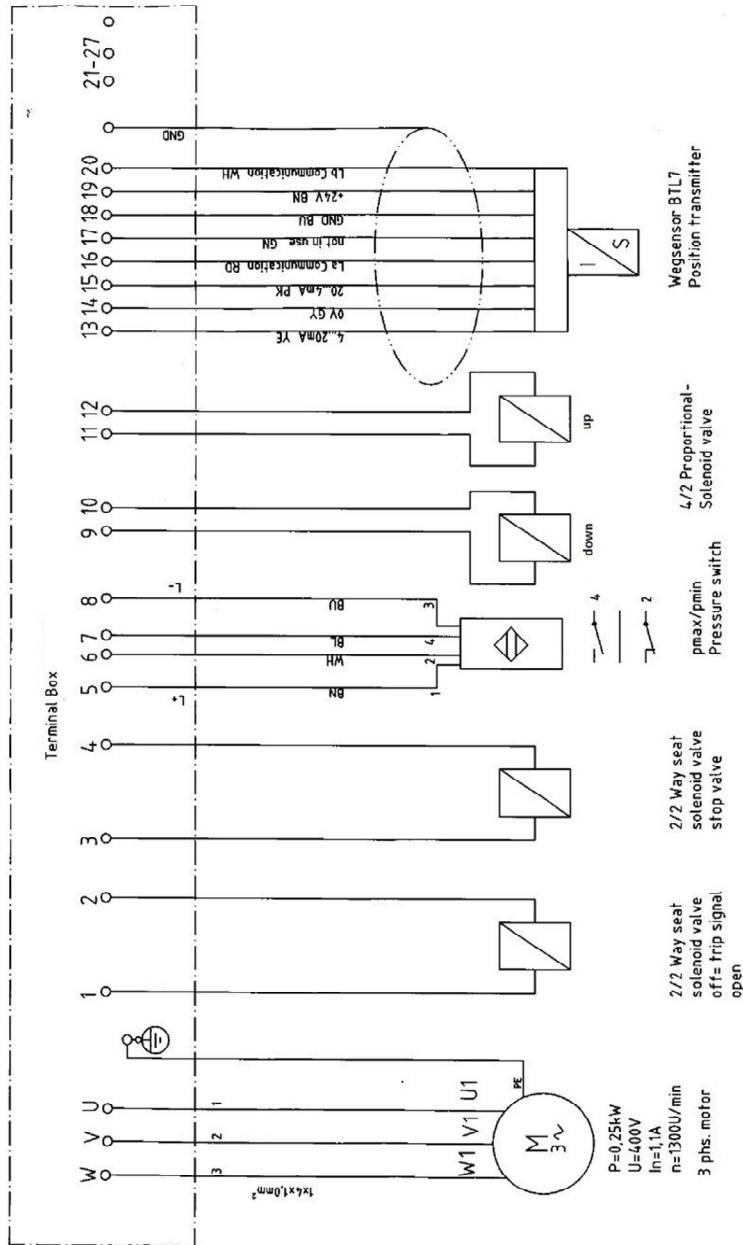
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FIGURE-1





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Figure-2 Terminal Plan Control Cabinet Electro Hydraulic Actuator

Contact Signification	Remarks
X0:	
PE	
L1 400V AC Line 1	
L2 400V AC Line 2	
L3 400V AC Line 3	
N Neutral conductor	May be omitted
PE PE Ground	
1 → Fail Open Valve	24V DC +
2	connected with 1
3 ← Fail Open Valve	0V DC -
4	connected with 3
5 → 24V DC +	COM for Digital Inputs (13-22)
6	
7	
8	
9 → Set Point Signal	4-20 mA + (control signal)
10 ← Set Point Signal	4-20 mA - (connected to 0V- cabinet side)
11 ← Process Value Signal (Feedback Position)	4-20 mA + (position feedback signal)
12 → Process Value Signal (Feedback Position)	4-20 mA -
13 ← Error Signal Motor Protection Switch	
14 ← Error Signal Positioning Controller	
15 ← Error Signal Motor Contactor	
16 ← Error Signal Maximal Load Cycles	
17 ← Error Signal Maximal Pump Load Time	
18 ← Cabinet OK Signal	
19 ← Reset Switch Signal	
20 (Spare)	
21 ← Remote Switch Signal	
22 ← Local Switch Signal	
23 → Positioning Start Signal	24V DC +
24 ← Positioning Start Signal	24V DC -
PE	



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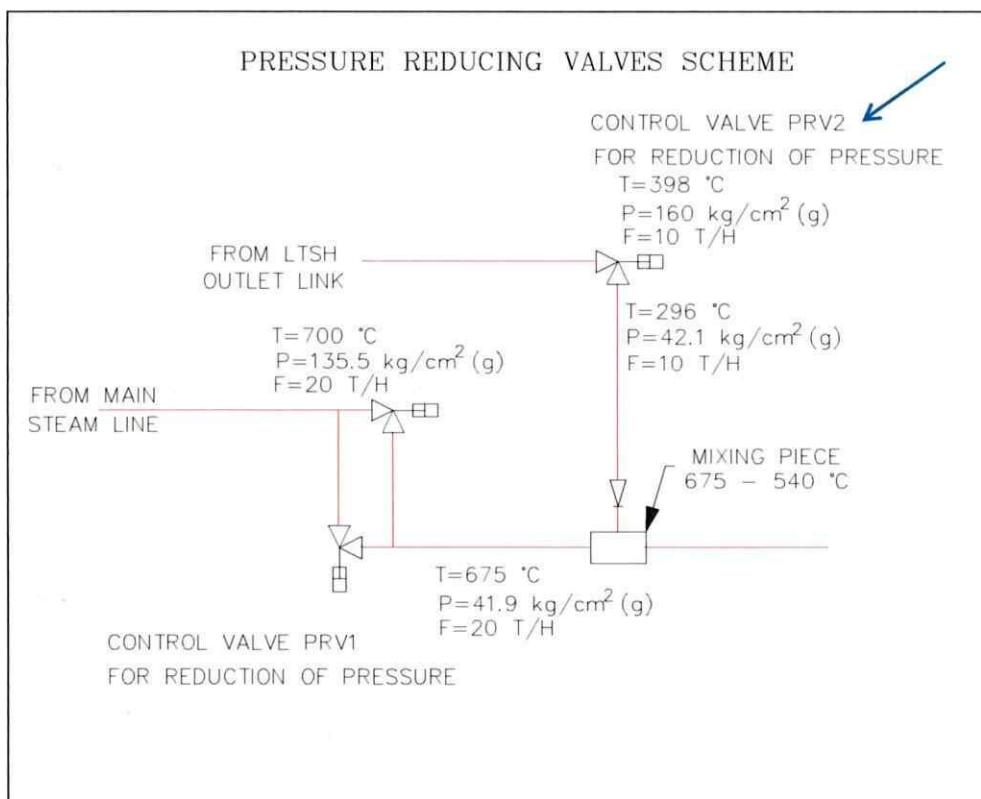
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ANNEXURE-A

SCHEMATIC OF PRESSURE REDUCING VALVES



Signature		
Name	Mallemala Sujana Vinod	D Kavitha
Designation	Manager	Deputy General Manager
Date	02 November 2018	02 November 2018
Action	Prepared By	Reviewed & Approved By

ANNEXURE 2A
GENERAL TERMS &
CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00219

1. QUOTATIONS:

- a. **BID system:** Offers are invited as per the format mentioned in "Confirmation to the Terms and Conditions" attached.
- Two part bid: The offers are invited in Two part bid system (Part I will be Techno-commercial bid and part II will be Price Bid). Techno-commercially suitable vendors alone will be intimated for price bid opening.
 - Single part bid: The offers are invited in Single part bid system (Price Bid alone). The vendor shall confirm to all of BHEL's technical & commercial conditions.

b. **Submission of tender:**

- Tender called through e-Procurement mode: The bidder shall submit the bid online in BHEL e-Procurement portal at <https://bhel.abcpocure.com/EPROC/>

The bidder would be required to register on the above e-procurement portal for submitting their bids. Offers through mail and Hardcopies are not acceptable.

- Tender called through Non-e-Procurement mode: Each offer should be sent in double cover separately and the same should be sealed and super scribed with correct Tender No., item of supply and due date of opening. Two or more quotations should not be sent in one cover. Price Bid should contain only "Price per unit" for each type. Tender should send to the below mentioned address:

The Tender Opening Cell / Valves
Room No. -26, Building -24
Bharat Heavy Electricals Limited
Tiruchirappalli - 620014, Tamil Nadu, India
Or
Email ID: tender_cell@bhel.in

- Late tenders:** Tender received after 2.00 pm on due date will be considered as Late tender. Late tenders will not be considered under any circumstance.
- 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.
- PVC:** Price Variation clause not acceptable. Prices should be firm.
- Catalogue:** Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation.
- Samples:** Samples should be submitted separately if specially requested in tender before due date of the enquiry. They should be clearly marked with the enquiry No and date on the outside cover to facilitate identification.
- GST Number:** GST registration number, HSN number (Item wise) with applicable taxes should be mentioned in quotation. If the vendor is not GST registered the offer is liable for rejection.
- Deviation.** Any deviations from the specification are to be furnished separately as "Schedule of Deviation". If there is no deviation vendor should indicate "No Deviation".
- 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:**

For Indigenous Suppliers:

If the materials are receivable at BHEL Stores, Trichy:

Payment term is 100% direct EFT Payment after 60 days from the date of receipt and acceptance of materials. (if PBG is not applicable)

(or)

Payment term is 100% direct EFT payment after 60 days from the date of receipt and acceptance of materials and against 10% PBG valid for the warranty period. (if PBG is applicable)



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00219

If the materials are receivable at site:

Payment term is 100% direct payment after 60 days from the date of dispatch against site acknowledgement (if PBG is applicable)

(or)

Payment term is 100% direct payment after 60 days from the date of dispatch against site acknowledgement and against 10% PBG valid for the warranty period (if PBG is applicable)

Any deviation in the above payment terms, any other conditions in payment terms or any other payment terms will not be accepted and offers will not be considered.

For Import Suppliers: Payment term is 100% payment on CAD basis after 60 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.

If supplier insists for LC, only Usance LC with 60 days' credit will be opened one month prior to material readiness. Further loading will be considered @ 1.5% on the offered value. Hence, supplier shall intimate the material readiness accordingly for opening LC. LC validity period will be 90 days and for any extension, applicable charges will be to suppliers account.

Any deviation in the above payment terms, any other conditions in payment terms or any other payment terms will not be accepted and offers will not be considered.

For New Suppliers: For new suppliers not registered with BHEL, Trichy for the product, payment shall be made 60 days after receipt and acceptance of materials.

In case of foreign supplier, first lot of mutually agreed quantities shall be supplied with payment as CAD basis after 60 days from the date of receipt and acceptance of material. If insisted for LC after acceptance of first lot, only usance LC with 60 days' credit will be opened one month prior to material readiness.

- b. Liquidated Damage:** Liquidated damages shall be 0.5% of the total order value or part thereof subject to a maximum of 10% of the total order value. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value.

Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value)

Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.

c. Delivery Terms:

For Indigenous Suppliers: FOR BHEL Trichy inclusive of freight and insurance

For import Supplies: FOB Nearest Airport as per incoterm 2010

- d. Validity of Offer:** Prices should be fixed and should be valid for period as mentioned in the "Confirmation to the Terms and Conditions" attached.
- e. Delivery period:** Delivery schedule will be as mentioned in the "Confirmation to the Terms and Conditions" attached. If supplier offers more than the required delivery period BHEL will operate 0.5% loading factor for evaluation of their offer for every week delay.
- f. Risk Purchase:** 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 at the rate mentioned in clause 2 b above. Non acceptance to risk purchase clause the offer is liable for rejection.
- g. Guarantee Clause:** The vendor shall give a guarantee for the performance of his supplies for a period of **eighteen months** from the date of dispatch or **twelve months** from the date of commissioning whichever is earlier.
- h. Miscellaneous:** Any conditions which might have been quoted by the seller and are in contravention to the terms of PO and which have not been specifically accepted by Purchaser will not be applicable to the contract/PO.
- i. Performance Bank Guarantee:** If tender Calls for Performance Bank Guarantee, vendor should provide a performance bank guarantee (PBG) in BHEL format for 10% of the total Purchase order value valid for warranty/guarantee period with an additional claim period of 2 months. PBG should be issued from list of consortium banks.



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- j. **Counter Offering:** If counter offering is applicable for the enquiry, the L1 rates will be counter-offered to other eligible vendors as per below points
- In case there are only two qualified offers for any item, the L1 rate will be counter-offered to the L2 vendor.
 - In case of more than two qualified offers for any item, the L1 rates will be counter-offered to maximum (n-1) vendors (where 'n' is the no. of techno-commercially qualified vendors) or the no. of vendors required as per the split ratio specified in the "Confirmation to the Terms and Conditions" attached, whichever is lower.
 - In case a lower ranked vendor does not accept the counter-offered rates, the rates may be offered to next higher ranked vendor.
 - The manner of splitting of the enquiry quantity across L1 and counter-offer accepted vendors will be as per the ratios mentioned in the "Confirmation to the Terms and Conditions" attached.

3. COMPLIANCE / ACCEPTANCE REQUIRED FOR FOLLOWING POINTS TO ENSURE INPUT TAX CREDIT

- a. Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
- b. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- c. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
- d. All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.
- e. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
- f. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty (if any) will be deducted/recovered for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.

4. SPECIAL PROVISIONS FOR MICRO AND SMALL ENTERPRISES (MSE):

- a. 25% of the tendered quantity is earmarked for MSE suppliers in this tender.
- b. Out of the 25% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC/ST entrepreneurs and 3% shall be earmarked for procurement from MSE owned by women entrepreneurs.
- c. In case MSE vendor participating in the tender quotes within the price band of LI +15%, they will be allowed to supply the portion of the requirement subject to acceptance of LI price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.
- d. MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.
- e. Payment for MSE vendors will be as per MSMED Act, 2006.



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5. GENERAL CONDITIONS

- a. The manner of finalization will be as mentioned in the "Confirmation to the Terms and Conditions" attached. 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 the Tender Quantity and to 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. BHEL reserves the right to finalize the tender either through price bid opening or through Reverse Auction route.
- g. 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.
- h. The Drawings and Technical documents given in this enquiry are the sole property of BHEL. This should not be misused in any form.
- i. Purchase Order, PO Item serial number, Material code, Quantity should be clearly marked on the packing
- j. Confirmation for compliance is to be given in the offer for all the conditions specified above and to the respective Purchase Specification.
- k. If any supplier is not honouring their own quotation or any of its conditions within the validity period, the action will be taken against those suppliers in line with "Guidelines for suspension of business dealings with suppliers/contractors" (refer www.bhel.com)
- l. The bidder along with its associate/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of the BHEL management about any fraud or suspected fraud as soon as it comes to their notice.
- m. For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of preference and/or local content in respect of this procurement, the same shall be applicable.

6. DOCUMENTATION:

- a. **With Consignment:** Duplicate for transporter copy, Original Invoice, Packing List, Delivery Challan, O&M manual (if applicable) Material Test Certificate, Test Certificates, Compliance Certificate, Guarantee/Warranty Certificate and other documents mentioned in PO/TDC/Drawing.
- b. **To Purchase:**
 - i. FOR BHEL TRICHY case- Original Invoice, Duplicate for transporter copy, Packing list, LWB and Delivery challan, GST declaration as mentioned in point 3c.
 - ii. FOR Site case- Original Invoice, Original LWB, Original Packing List, Original IBR documents, Original despatch clearance Certificate and Inspection report, Test certificates as per PO, Original Site Acknowledgment etc.
- c. **Identification:** Material code, Purchase Order, PO item serial number, Unique serial number if any should be provided in all despatch documents, materials and packing clearly.

7. TENDER EVALUATION:

- a. **PART I Techno-commercial Bid.**
 - i. All vendors should submit General arrangement drawing, datasheet and C&I diagram (if any) of the offered product
 - ii. 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.
 - iii. Offers from supplier not having technical capability or not agreed for commercial terms, will be rejected.
- b. **PART II Price Bid.**
 - i. Bidders qualified for both part I will be intimated for participating in priced bid opening/Reverse Auction.
 - ii. L1 bidder will be decided based on landed cost for the equipment to BHEL.
 - iii. For evaluation, the exchange rate shall be taken as TT selling rate of SBI on date of Part-1 bid opening.
 - iv. For tenders evaluated item sl. no. wise, in case there are multiple L1 offers for any item, the enquiry quantity for that item will be divided equally to all the L1 vendors.



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8. INTEGRITY PACT (IP)

- a. IP is a tool to ensure that activities and transactions between Company and its Bidders/Contractors are handled in affair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

Sl.	IEM	Address	Email
1	Shri D.R.S Chaudhary, IAS (Retd.)	E-1/164 Arera Colony Bhopal - 462016 (M.P.)	dilip.chaudhary@icloud.com
2	Mrs. Pravin Tripathi, IA & AS (Retd.)	D-423, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi - 110068	pravin.tripathi@gmail.com

- b. If IP is applicable for the enquiry, the IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with the techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this pact would be a preliminary qualification.
- c. Please refer Section-8 of the IP for Roles and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/post/email) regarding the clarifications, time extensions or any other administrative queries etc. on the tender issued. All such clarifications / issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below

(1)
S Sivabala
Sr. Engineer
Valves Purchase
24 Building, 3rd Floor,
BHEL, Trichy-620014
+91 431 2577096
sivabala@bhel.in

(2)
G Subhashini
DGM
Valves Purchase
24 Building, 3rd Floor,
BHEL, Trichy-620014
+91 431 2574032
subhashini@bhel.in

ANNEXURE 2B
CONFIRMATION TO TERMS
& CONDITIONS



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<u>TERMS & CONDITION</u>	<u>VENDOR CONFIRMATION</u>
a. Vendor should give confirmation to BHEL's Technical Specification. Any deviations from the specification are to be furnished separately as "Schedule of Deviation". If there is no deviation vendor should indicate "No Deviation".	
b. The offer has be submitted as a Two-part bid (Techno-commercial & Price bid)	
c. The tender will be finalized on package basis	
d. Terms of Payment: <u>Indigenous Supplier (Non-MSE):</u> 100% direct EFT Payment after 60 days from the date of receipt and acceptance of materials at BHEL stores / against site acknowledgement. <u>Indigenous Supplier (MSE):</u> Payment will be as per MSMED Act, 2006 <u>Import Supplier:</u> Payment term is 100% payment on CAD basis after 60 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.	
e. Liquidated Damage: Liquidated damages shall be 0.5% of the total order value or part thereof subject to a maximum of 10% of the total order value.	
f. Delivery Terms: Prices shall be quoted on " FIRM PRICE " basis only. <u>For Indigenous Supplies:</u> FOR BHEL Trichy <u>For import Supplies:</u> FOB Nearest Air Port as per incoterm 2010	
g. Validity of Offer: Prices should be valid for 120 days from the date of part-1 bid opening of this tender.	
h. Delivery period: Delivery period should be 16 weeks from the date of purchase order. If supplier offers more than the required delivery period BHEL will operate 0.5% loading factor for evaluation of their offer for every week delay	
i. Risk Purchase: 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. Non acceptance to risk purchase clause the offer is liable for rejection.	
j. Guarantee Clause: The vendor shall give a guarantee for the performance of his supplies for a period of eighteen months from the date of dispatch or twelve months from the date of commissioning whichever is earlier.	
k. Performance Bank Guarantee: Performance Bank Guarantee is not applicable for this enquiry	
l. Counter-offering Counter-offering is not applicable for this enquiry	
m. Integrity Pact Integrity pact is not applicable for this enquiry	