	<p align="center">ENQUIRY VALVES</p>	<p>Bharat Heavy Electricals Limited (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.</p>	<p>Phone: +91 (431) 257 4797 Email: vavinash@bhel.in</p>	
		<p align="center">ENQUIRY NO.</p>	<p align="center">DATE</p>	<p align="center">DUE DATE FOR QUOTATION</p>
		<p align="center">ENSFV00248</p>	<p align="center">04.12.2021</p>	<p align="center">27.12.2021</p>
<p align="center">Please quote Enquiry No., and due date in correspondences <i>This is only a request for quotation and not an order.</i></p>				
<p><u>Date, Time & Venue of tender opening:</u></p> <p>27.12.2021 at 14.30 Hrs. at The Tender Opening Cell/Valves Room No. -26, Building -24 Bharat Heavy Electricals Limited Tiruchirappalli - 620014, Tamilnadu, India</p> <p>Email: tender_cell@bhel.in</p>	<p><u>Scope of supply</u></p> <p>Supply of High Pressure Bypass Valves as per the purchase specification enclosed.</p> <p>-List of Annexures</p> <ol style="list-style-type: none"> 01. Annexure 1A - PRE QUALIFICATION CRITERIA 02. Annexure 1B - HSPEC0072R02 03. Annexure 2A - GENERAL TERMS AND CONDITIONS 04. Annexure 2B - CONFIRMATION TO THE TERMS AND CONDITIONS 05. Annexure 2C - UNPRICED FORMAT 06. Annexure 2D - PRICED BID FORMAT 07. Annexure 2E - SCHEDULE OF DEVIATIONS FORMAT 08. Annexure 3A - PBG FORMAT 09. Annexure 3B - LIST OF CONSORTIUM BANKS 10. Annexure X- BRIEF PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS 11. Annexure Y- INTEGRITY PACT 12. Annexure Z- SAMPLE LOCAL CONTENT CERTIFICATE 			
<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>Quotations 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 align="center">Yours faithfully,</p> <p align="center">For Bharat Heavy Electricals Ltd</p> <p align="center">Avinash Vijayagopal Sr. Engineer/Purchase/Valves</p>	

ANNEXURE 1A
PRE-QUALIFICATION
CRITERIA



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE
Trichy - 620 014, India

Ref: ENSFV00248

Product: HP TURBINE BYPASS SYSTEM – PATRATU 3 x 800 MW

Pre-Qualification Criteria

The Bidder is required to meet the provenness criteria and / or qualification requirement for HP turbine Bypass system as per criteria below:

1.1 The bidder offering HP Bypass system shall be a manufacturer who has previously designed (either by itself or under collaboration / licensing agreement), manufactured / got manufactured the respective equipment(s) of the type and minimum equipment rating 750 Ton/hr such that the respective equipment(s) are in successful operation in at least one (1) plant for a period not less than one (1) year. Capacity of each valve supplied should not be less than 750 Ton/hr at rated steam parameters as mentioned in technical specification.

1.2 In case the Bidder is not a manufacturer of proven equipment(s) as per clause 1.1 above but is a manufacturer for such equipment(s), for units of at least 500 MW rating, such Bidder can also participate in this tender and offer manufacture of such equipment(s) for 800 MW supercritical units also, provided it has collaboration or valid licensing agreement for design, engineering, manufacturing, supply of such equipment(s) in India with such manufacturer(s) who meet the requirements stipulated at clause 1.1 above for the respective equipment(s).

1.3 A JV / Subsidiary Company formed for manufacturing and supply of equipment(s) as listed at clause no. 1.1 above in India can also participate in this tender and offer manufacture of such equipment for 800 MW supercritical units, provided that it has a valid collaboration or licensing agreement for design, engineering, manufacturing of such equipment(s) in India with a qualified equipment manufacturer who meets the requirements stipulated at clause 1.1 above (or the technology provider of the qualified equipment manufacturer). Further, in such a case, the qualified equipment manufacturers should have, directly or indirectly through its holding company/ subsidiary company, at least 26% equity participation in the Indian Joint Venture Company/ Subsidiary Company, which shall be maintained for a lock-in period of seven (7) years from the date of incorporation of such Joint Venture/ Subsidiary or up to the end of defect liability period of the contract, whichever is later. The bidder shall submit the document/s showing their eligibility under clause 1.3. In addition, bidder shall furnish a letter of support from Collaborator/Licenser/Technology provider for successful performance of respective equipment valid for a period of 7 years or up to end of defect liability period of the contract whichever is later at the time of placement of order.



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Trichy - 620 014, India

Ref: ENSFV00248

1.4 Before taking up the manufacturing of such equipment(s) as per clause 1.2 and 1.3 above, the Bidder must create (or should have created) manufacturing and testing facilities at its works as per Collaborator / licensor's design, manufacturing and quality control system for such equipment duly certified by the Collaborator / licensor. Bidder should have these facilities at the time of Price bid opening.

Further, the Collaborator / Licensor shall provide (or should have provided) all design, design calculation, manufacturing drawings and must provide (or should have provided) technical and quality surveillance assistance and supervision during manufacturing, erection, testing, commissioning of equipment.

1.5 The Owner (NTPC) reserves the right to fully satisfy himself regarding capability and capacity of Bidder and the proposed arrangement and may prescribe additional requirement before allowing manufacture of the equipment listed above for this contract. Part-II (price) bids of the bidders who are NOT approved by the end-customer will NOT be considered.

ANNEXURE 1B
VALVE SPECIFICATION



365-147/B
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PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **1** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

Revision Record:

Rev. No	Date	Details of Revision
00	06 June 2020	First Release
01	25 May 2021	Cl. Nos. 4.1.25, 4.6.1 (c) and 4.6.1 (d) revised for better clarity.
02	19 November 2021	Clause no. 4.1.34 and “General Requirements” in clause 4.4 included. Sl.No.7 of clause 10 revised for better clarity

Contents

1. GENERAL.....	2
2. APPLICATION	2
3. SCOPE	2
4. DESIGN AND CONSTRUCTION	3
4.1 GENERAL.....	3
4.2 STEAM AND WATER VALVES	6
4.3 INSTRUMENTS IN OIL SYSTEM	7
4.4 C&I REQUIREMENTS.....	7
4.5 MOTORS.....	15
4.6 ADDITIONAL SCOPE (LOOSE SUPPLY)	16
5 INSPECTION & TESTING	17
6 ADDITIONAL REQUIREMENTS	17
7 DOCUMENT REQUIREMENTS	18
8 SELECTION DATA FOR H.P. BYPASS VALVES.....	20
9 SUPERVISION DURING ERECTION-COMMISSIONING & TRAINING AT SITE.....	21
10 BREAK UP FOR SUPPLY OF HP BYPASS VALVES AND HYDRAULIC SYSTEM	22



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **2 of 22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

1. GENERAL

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 HP Bypass valves and hydraulic system. The offer shall be submitted along with all the documents mentioned in this specification.

- 1.1. Data sheet indicates the selection parameters of the HP Bypass 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.
- 1.2. 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
 - IS – Indian Standards
 - IEC - The International Electrotechnical Commission
- 1.4. All materials, construction and design of the pressure parts shall conform in all respects to the applicable standards.
- 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 BHEL.
- 1.6. Nothing in this Specification shall be construed as relieving the Bidder of his responsibility for compliance with all applicable codes and regulations.

The Maximum temperature recorded at the project location is 50 °C

The Minimum temperature recorded at the project location is 6 °C

2. APPLICATION

The bypass system would work in parallel with Turbine during load rejection in a coordinated manner with steam generator. However, during start-up of Boiler, to build matching steam parameters required for turbine and also during load transfer to turbine, the bypass system would function in a non-coordinated manner as per the operator demand. The bypass system in all cases establishes a parallel path of HP and IP/LP turbine through re-heater, which would enable the boiler to maintain the steam parameters ahead of HP and IP control valve as governed by Turbine requirement.

3. SCOPE

For each 800 MW unit, scope of supply shall include HP Bypass steam control valves (2), Spray water isolation (1) and spray water control valves (2), electro-hydraulic actuators for the above valves and



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
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Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **3** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

final control elements (proportional valves) and associated hydraulic power unit (HPU), stainless steel piping connecting the HPU and actuators, connecting fittings, filters, hoses, additional accumulators, fast opening device, and all accessories required to make the HP Bypass system complete in all respects.

All accessories, including but not limited to, steam blowing device, flushing device for oil pipeline flushing, filling and gauging device for accumulators, etc., required for initial commissioning and ensuring continuous commercial operation shall also be in vendor's scope of supply.

From BHEL DCS, command of 4-20mA will be available to the vendor's equipment. Vendor shall be responsible for positioning the valves as per BHEL DCS's command. All the necessary equipment lie in the scope of the vendor.

Additional scope (loose supply) as indicated under Clause 4.6.

Clause 10 shall be referred for breakup of supply.

BHEL reserves the right to order any or all of the components / equipment included in the scope of supply.

4. DESIGN AND CONSTRUCTION

4.1 GENERAL

- 4.1.1 Seat tightness of the HP bypass valves shall be equivalent to block valve tightness conforming to MSS SP61.
- 4.1.2 All other control valves used in the systems shall be of tight shut off design (zero leak) at room temperature with maximum shut off differential acting across the valve. All steam and water valves covered fall under the purview of IBR.
- 4.1.3 Maximum allowable stress values for ASME SA-182 F92 as per code shall be reduced by 10% for calculating the thickness of pressure parts.
- 4.1.4 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.
- 4.1.5 Design of the HP Bypass valves shall be such that the velocity of steam exiting the valve shall not exceed 100 m/s.
- 4.1.6 Valve seat shall be welded and the valve seat areas shall be stellited. Sealing arrangement shall be provided so that no leakage takes place through valve glands.
- 4.1.7 The spray water valves shall be designed such that no separate warm up arrangement is required for spray water piping.
- 4.1.8 Necessary details for providing warming up arrangement of HP bypass valves shall be submitted along with the offer.
- 4.1.9 The spray valves for HP bypass shall have tight sealing arrangement in closed position so that no water can penetrate into the turbine with bypass valve closed.
- 4.1.10 The entire atomization and evaporation of spray water shall be complete within shortest possible distance but not exceeding 1.0m from the spray point.
- 4.1.11 All HP Bypass valves shall be butt weld type, edge preparation details of which shall be submitted by bidder for approval by the purchaser.
- 4.1.12 HP bypass valve body should be forged.



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
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Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **4 of 22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- 4.1.13 Maximum allowable stress values for ASME SA-182 F92 material as per code shall be reduced by 10% for calculating the thickness of pressure parts.
- 4.1.14 All valves (both in steam and spray water service) shall be electro-hydraulically operated.
- 4.1.15 The positioning electronics between the respective process controller and the actuator control shall have all necessary positioners for continuously controlled actuators, power modules, various converters, power supply & other fault monitoring & alarming modules, position transmitters, etc.
- 4.1.16 The oil system for HP bypass system electro-hydraulic actuators shall be self-contained unit and shall meet system demand for all operating conditions. Oil system for HP bypass system shall be with 100% redundant pumps, motors, accumulators and control cubicles etc. A suitable filter shall be placed before each actuator. Oil used in hydraulic system is 'SERVO CONVAL-46', a mineral oil with viscosity grade ISO VG46.
- 4.1.17 All the fittings used in the hydraulic piping and hydraulic hoses connecting the HPU and the valve actuators shall be in METRIC only.
- 4.1.18 2x100% separate cooling-cum-filtration circuits (with 3 μ absolute filters) shall be provided in order to maintain the cleanliness of the system and to ensure proper cooling. Cooling circuit shall cut in and out depending upon the control fluid temperature. Cooling can be with air/water. In case of water cooling, water quantity and quality requirements shall be furnished by the vendor along with the offer for arranging the same by purchaser.
- 4.1.19 Hydraulic Supply Unit circuit diagrams drawn on either metallic or plastic sheet in colour shall be riveted inside the door panel. Arrangements shall be made for mounting electric lamps inside the housing. Hydraulic power unit shall be with IP55 class protection or more.
- 4.1.20 Hydraulic accumulators shall be provided in the system to ensure positive supply of adequate oil to the hydraulic actuators, even when oil pump is not available. The accumulators shall be sized to ensure oil supply for two (2) complete stroking operations of actuators in the bypass system.
- 4.1.21 The accumulators shall be provided with Nitrogen pressurization system with bladder, shut off valves as required for the control system.
- 4.1.22 Provision shall be made to isolate any of the provided accumulators for maintenance without switching off the oil System.
- 4.1.23 To prevent over-pressure in the oil system, safety valves as necessary shall be provided.
- 4.1.24 Total oil piping offered for each 800 MW unit shall be of 200 metres length. If the sizes of pipes in hydraulic system are more than one, exact length of each size shall be decided during detail engineering. The oil system shall be designed to meet the above requirements.
- 4.1.25 For the purpose of calculating the approx. lengths of the hydraulic piping, the tentative location of HPSU shall be taken as at 8.5m elevation and the HP bypass valves will be at 15.0m elevation and the horizontal distance between HPSU and the location of HP bypass valves shall be taken as approx. 10m. Spray valves will be located near HP bypass valves.
- 4.1.26 Hydraulic actuators shall have the facility to keep the control valves "stay put" on oil supply failure or electric power failure.
- 4.1.27 HP Bypass steam control valves and spray water control valves should be equipped with position transmitters and 4 limit switches on each valve for measuring the position of the valve. Output of the position transmitter shall be 4mA (valve fully CLOSE) to 20 mA (valve fully OPEN).



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **5 of 22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- 4.1.28 Spray Isolation valve should be equipped with 4 Limit switches (i.e., 2 for open and 2 for close position).
- 4.1.29 Local position indicator scale shall be provided on actuator yokes to indicate position of valve locally.
- 4.1.30 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.
- 4.1.30.1 Manufacturer's Model Number
- 4.1.30.2 Manufacturer's Serial Number
- 4.1.30.3 Size and pressure rating for inlet & outlet
- 4.1.30.4 Manufacturer's name/trade mark
- 4.1.30.5 Month & year of manufacture
- 4.1.31 The following details of final control elements for proportional valves with blocking function, Fast opening solenoid valves, feedback transmitter / limit switch shall be provided along with the offer.
- 4.1.31.1 Supply Voltage and variation in voltage
- 4.1.31.2 Power rating
- 4.1.31.3 Operating pressure
- 4.1.31.4 Operating temperature
- 4.1.31.5 Electrical connection details, etc,
- 4.1.32 Write up on recommended control system logic and interface requirements with input signals shall be provided along with the offer.
- 4.1.33 Field mounted junction boxes shall be supplied as per the following specification:
- 4.1.33.1 No. of ways - 12/24/36/48/64/72/96/128(as applicable) with 20% spares terminals.
- 4.1.33.2 Material and Thickness - 4mm thick Fiberglass Reinforced Polyester (FRP) with protective coating.
- 4.1.33.3 Cable entry: Bottom or Side
- 4.1.33.4 Cable glands: Double compression type – Nickel plated Brass/SS316 with PVC hoods.
- 4.1.33.5 Mounting: Outdoor
- 4.1.33.6 No. of terminals: As required with standardization with 20% spare of each size & type.
- 4.1.33.7 Terminals: Phoenix/Wago (screw less rail mounted cage clamp type spring loaded suitable for conductor size up to 2.5 sq. mm)
- 4.1.33.8 Grounding: Two terminals for body and shield ground
- 4.1.33.9 Door: Hinged, lockable type.
- 4.1.33.10 Accessories: Suitable mounting clamps and other accessories shall be in scope of bidder. The brackets, bolts, nuts, screws, glands, lugs required for erection shall be of SS304, included in bidder scope of supply. High voltage & insulation resistance test shall also be conducted. M6 Ni plated Brass earthing stud shall be provided (external 2 nos. internal 1 no.) Gasket (Normal)- Neoprene/Polyurethane thickness 6.0 mm. Silicon for high Temp. area.
- 4.1.33.11 Colour: To be decided during detailed engineering & subject to owner's approval.



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **6 of 22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

4.1.33.12 Protection Class – Weather proof IP-65 minimum.

4.1.34 An isolating ball valve in the P-lines of each valve and near HPSU shall be included in the scope of supply.

4.2 STEAM AND WATER VALVES

4.2.1 HP Bypass steam control valves, spray water isolation and spray water control valves shall be selected for the steam parameters indicated in Data sheet of this specification (Clause 8).

4.2.2 Offered valves shall be suitable for matching with pipes as indicated below:

HP BYPASS STEAM CONTROL VALVE CONNECTIONS (for piping)

Inlet side

Size : Inside Diameter 200 x Thickness 63

Material : SA335 P92

Matching Inside diameter : 200

Outlet side

Size : Outside Diameter 558.8 x Thickness 28.58

Material : SA335 P22

Matching Inside diameter : 506.8

HP BYPASS SPRAY ISOLATION VALVE CONNECTIONS (for piping)

Inlet & Outlet sides

Size : Outside Diameter 219.1 x Thickness 36

Material : SA106 Gr.C

Matching Inside diameter : 151

HP BYPASS SPRAY CONTROL VALVES CONNECTIONS (for piping)

Inlet & Outlet sides

Size : Outside Diameter 168.3 x Thickness 36

Material : SA106 Gr.C

Matching Inside diameter : 114.8

4.2.3 Spray water connection to HP bypass valve pipe size & Material: OD168.3 x 30 & SA335 P22.

Matching Inside diameter : 114.8

4.2.4 NOISE LEVEL

The equivalent 'A' weighted sound pressure level measured at a height of 1.5 metre above floor level in elevation and a distance of 1 metre horizontally from the nearest surface of any equipment / machine, furnished and installed under this specification, expressed in decibels to a reference of 0.0002 microbar, shall not exceed 85 dBA. For HP bypass valves, noise level shall be within the limit of 90 dBA.

4.2.5 VALVE SUPPORT

Valve with actuators shall be installed vertically.

4.2.6 OPERATING TIME

HP Bypass valves

Fast opening time

: 2-3 sec for full stroke



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **7** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

Opening & Closing time (modulating control) : 10-12 sec for full stroke

HP Bypass spray isolation and control valves

Opening & Closing time : 5-8 sec for full stroke

4.2.7 DRIP TRAY FOR VALVE ACTUATOR

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

4.3 INSTRUMENTS IN OIL SYSTEM

- 4.3.1 Measuring instruments and subsystems offered shall be from reputed experienced manufacturers of specified type and range of equipment, whose guaranteed and trouble free operation has been proven. Further, all instruments shall be of proven reliability, accuracy, and repeatability requiring a minimum of maintenance and shall comply with the acceptable international standards.
- 4.3.2 Three nos. of pressure transmitters to be provided for header pressure measurement. All pressure transmitters shall be microprocessor based 2 wire type and HART protocol compatible.
- 4.3.3 Each of the cooling-cum-filtration circuits shall contain one flow switch at the inlet of the filter for flow indication to the DCS and one differential pressure indicator for alarm at DCS along with local indication for clogging.
- 4.3.4 All line filters (filter before the actuator) shall be equipped with differential pressure indicators for alarm at DCS along with local indication for clogging.
- 4.3.5 Suitable pressure gauges to be provided on the oil System.
- 4.3.6 Three nos. resistance temperature detectors along with temperature transmitters to be provided for measuring the temperature of the hydraulic fluid in the tank.
- 4.3.7 Suitable level gauges and 3 Nos. level transmitters to be provided on the Tank for level measurement.
- 4.3.8 Contact rating of all the transmitters to be furnished.
- 4.3.9 Number and type of instruments shall be subject to BHEL approval. Complete instrument list showing range, model no and set point of various instruments shall be furnished for BHEL approval.
- 4.3.10 All transmitters shall be selected such that all the measured values fall between 25% and 75% of the full scale range.
- 4.3.11 Output of all transmitters shall be 4-20mA. There should be a provision to adjust the set points.
- 4.3.12 Housings of all the transmitters shall be weather proof as per IP-65, metallic housing with durable corrosion resistant coating.

4.4 C&I REQUIREMENTS

General Requirements

- a) Instrumentation cable for signals from DCS to individual positioners will be provided by BHEL.
- b) For each 800MW unit, a redundant power supply feeder with 230VAC, 6A with cable size 2C x2.5 Sq Copper will be provided by BHEL.



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **8** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- c) Vendor shall supply a central power distribution cabinet and should take care of all the 24VDC power requirements such as power to individual positioner cabinets and equipment in the Hydraulic system internally.
- d) Vendor shall indicate the maximum distance at which the positioner cabinets can be placed away from the valve and necessary cables for such distance shall be included in their scope.
- e) All the power and instrumentation cables required for inter connecting the equipments supplied by the vendor shall be in the vendor's scope.
- f) If the distribution box is placed within 5metres from HPSU, the distance from the central power distribution box to the individual positioner box is approximately 20 metres.
- g) Technical specification of cables included in vendor scope shall be as per applicable clauses for cables in this specification.

4.4.1 Vendor shall confirm the following without fail during enquiry stage without which the offer is liable to be rejected.

S.No.	Requirement	Vendor Confirmation
1	Positioner cabinet which positions the valve based on DCS command shall be provided.	
1.1	a) Power Supply requirement AC/DC to be mentioned. b) Cable scope of the same will be in vendor scope.	
2	Hydraulic Power Unit Controls has to be in DCS and Complete Logic has to be provided for implementation in DCS. Separate PLC control for Hydraulic Power Unit is NOT accepted.	
3	Complete Interface details with Termination details for Valves and Hydraulic Power unit has to be provided.	
4	Local Operation Cum Indication shall be Provided.	

EQUIPMENT	SIGNAL TYPE FROM DCS	DCS SIGNAL	Requirement	Vendor's remarks
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365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **9** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

HP BYPASS STEAM VALVES	AO	4-20mA Demand (4mA at 0% opening 20mA at 100% opening)	The offered system shall accept the indicated DCS signal.	
	AI	4-20mA Position Feedback to be provided to DCS	The offered system shall provide the feedback to DCS.	
	DO	FAST OPENING	Whether Potential Free/24 VDC/48 VDC Command from DCS to be clarified? If any other voltage, voltage value shall be indicated. Solenoid Current requirement shall be indicated.	
SPRAY CONTROL VALVES	AO	4-20mA Demand (4mA at 0% opening 20mA at 100% opening)	The offered system shall accept the indicated DCS signal.	
	AI	4-20mA Position Feedback	The offered system shall provide the feedback to DCS.	
SPRAY ISOLATION VALVE	DO	BD Valve Open Command	Whether Potential Free/24 VDC/48 VDC Command from DCS to be clarified? If any other voltage, voltage value shall be indicated. Solenoid Current requirement shall be indicated.	
	DO	BD Valve Close Command	Whether Potential Free/24 VDC/48 VDC Command from DCS to be clarified? If any other voltage, voltage value shall be indicated. Solenoid Current requirement shall be indicated.	
	DI	Open Feedback	NO/NC contact shall be provided.	
	DI	Close Feedback	NO/NC contact shall be provided.	
Hydraulic Power Unit	AI	3 Nos. Pressure Transmitters	Each transmitter shall provide 4-20 mA output	
	AI	3 Nos. Temperature Transmitters	Each transmitter shall provide 4-20 mA output	
	AI	3 Nos. Level Transmitters	Each transmitter shall provide 4-20 mA output	
	DI	2 Nos. DP indicator switch(clogging)	NO/NC contacts for each switch shall be provided.	
Details of any other transmitters / measuring instruments forming part of the Hydraulic Power Unit shall be provided				



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **10** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

Hydraulic Power Unit	DO	Pumps 1&2 On Command	Whether Potential Free/24 VDC/48 VDC Command from DCS to be clarified? If any other voltage, voltage value shall be indicated. Power requirement shall be provided.	
	DO	Filter Pumps -1&2 On Command		
	DO	Cooling Fans-1&2 On Command		
	DO	Accumulator Charging Valves 1&2 On Command		
	DI	Pumps 1&2 On Feedback	NO/NC contact shall be provided for each component and each signal	
	DI	Pumps 1&2 Off Feedback		
	DI	Pumps 1&2 Fault Feedback		
	DI	Filter Pumps-1&2 On Feedback		
	DI	Filter Pumps-1&2 Off Feedback		
	DI	Filter Pumps-1&2 Fault Feedback		
	DI	Cooling Pumps-1&2 On Feedback		
	DI	Cooling Pumps-1&2 Off Feedback		
	DI	Cooling Pumps-1&2 Fault Feedback		
	DI	Accumulator Charging Valves 1&2 On Feedback		
	DI	Accumulator Charging Valves 1&2 Off Feedback		

Legend: AI – Analog Input; AO – Analog Output; DI – Digital Input; DO – Digital Output

4.4.2 INSTRUMENTATION CABLES, CONTROL & POWER SUPPLY CABLES

Heat resistant instrumentation cable shall be provided for all instruments / equipments / drives / devices located in hot areas such as Oil system, HPBP areas etc. This cable shall be laid from instruments / equipments / drives / devices from hot area application to a field JB / panel located in areas where ambient temperature is below 50 Deg. C. For analog signals, individual pair shielding & overall shielding (type-F cable) & for Binary signals, only overall shielding of instrumentation cables (type-G cables) shall be provided.

4.4.2.1 Specification of Instrumentation Cable

4.4.2.1.1 Common Requirements

S.No	Property	Requirement
1	Operating Voltage	225 V (peak value)



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **11** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

2	Codes and standard	All instrumentation cables shall comply with VDE 0815, VDE 0207, Part 4, Part 5, Part 6, VDE 0816, VDE 0472, SEN 4241475, ANSI MC 96.1, IS-8784, IS-10810 (latest editions) and their amendments read along with this specification.
3	Continuous operation suitability	At 205 Deg.C
4	Marking:-	<i>a. Progressive automatic on-line sequential marking of length in meters to be provided at every one meter on outer sheath. b. Marking to read 'FRLS' to be provided at every 5 meters on outer sheath c. Durable marking at intervals not exceeding 625 mm shall include manufacturer's name, insulation material, conductor's size, number of pairs, voltage rating, type of cable, year of manufacturer to be provided on outer sheath.</i>
5	Allowable Tolerance on overall diameter	+/- 2 mm (maximum) over the declared value in data sheet
6	Variation in diameter	Not more than 1.0 mm throughout the length of cable.
7	Ovality at any crosssection	Not more than 1.0 mm
8	CAGE-CLAMP suitability	To be provided
9	Color	The outer sheath shall be of blue color.
10	Others	Repaired cables shall not be acceptable

4.4.2.1.2 Specific Requirements

Specification requirements	Type F&G cable
A. Conductors	
Cross section area	0.5 sq. mm
Conductor material	Annealed bare copper
Colour code	As per VDE-815
Conductor Grade	Electrolytic
No & dia of strands	7x0.3 mm (nom)
No. of Pairs	2/4/8/12/16/24/ 48
Max. conductor loop resistance per Km (in ohm) at 20 deg. C	73.4
Reference Standard	VDE : 0815
B. Insulation	
Material	Teflon (i.e.extruded FEP)
Thickness in mm (Min/Max)	0.4 / 0.50 (nominal)
Volume Resistivity (Min) in ohm-cm	2.8x 10 ¹⁴ at 20 deg. C & 2x10 ¹¹ at 205 deg. C.
C. Pairing & Twisting	
Max. lay of pairs (mm)	50
Single layer of binder tape on each pair provided	Yes
Bunch (Unit Formation) for more than 4P	To be provided
Conductor /pair identification as per VDE0815	To be provided
D. Shielding	
Type of shielding	Al-Mylar tape
Individual pair shielding	To be provided for F-type cable



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **12** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

Minimum thickness of Individual pair shielding	0.028mm (28 micron)
Overall cable assembly shielding	To be provided
Minimum thickness of Overall cable assembly shielding	0.055 mm (55 micron)
Coverage / Overlapping	100% / 20%
Drain wire provided for individual shield	Yes (for F-type) Size – 0.5 sq.mm No. of strands – 7 Dia of strands- 0.3mm Annealed Tin coated copper
E. Fillers (if applicable)	
Non-hygroscopic, flame retardant	To be provided
F. Outer Sheath	
Material	Teflon (i.e.extruded FRP)
Minimum Thickness at any point	0.4 mm
Nominal Thickness at any point	0.5 mm
Resistant to water, fungus, termite & rodent attack	Required
G. Electrical Parameters	
Mutual Capacitance Between Conductors At 0.8 KHz (Max.)	120 nF/km for F type 100 nF/km for G type
Insulation Resistance (Min.)	100 M Ohm/Km
Cross Talk Figure (Min.) At 0.8 KHz	
Characteristic Impedance (Max) At 1 KHz	320 OHM FOR F-TYPE 340 OHM FOR GTYPE
Attenuation Figure At 1 KHz (Max)	1.2 db/km
H. Complete Cable	
Complete Cable assembly	Shall pass Swedish Chimney test as per SEN-SS 4241475 class F3.
Flammability	Shall pass flammability as per IEEE-383 read in conjunction to this specification

All instruments like transmitters, switches, etc., shall be provided with a plug-in connector on the instrument side and shall be terminated to Cage Clamp (Rail Mount) type terminal blocks of the local Junction Box(JB) and with suitable crimping lugs.

Interconnecting cables on the JB side shall be ferruled with instrument TAG Nos.

4.4.2.1.3 Terminal Blocks

- All terminal blocks shall be rail mounted/post mounted, cage clamp type with high quality non-flammable insulating material of melamine suitable for working temperature of 105 deg. C.
- The marking on terminal strips shall correspond to the terminal numbering on wiring diagrams. At least 20% spare unused terminals shall be provided. All terminal blocks shall be numbered for identification and grouped according to the function. Engraved labels shall be provided on the terminal blocks.



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **13** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- c. The terminal blocks shall be arranged with at least 100 mm clearance between two sets of terminal blocks and between terminal blocks and junction box walls.

4.4.2.2 Power and Control Cables

All standards, specifications and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions as on date of opening of bid. In case of conflict between this specification and those codes, standards, etc., referred to herein, the former shall prevail. All the cables shall conform to the requirements of the following standards and codes: IS 1554-1, 3961, 3975, 5831, 7098 (Part-1), 8130, 10418, 10810, ASTM-D 2843, IEC 754 (part-1) and IEC 332.

4.4.2.2.1 Technical Requirements

a. All cables including EPR cables shall be flame retardant, low smoke (FRLS) type designed to withstand all mechanical, electrical and thermal stresses developed under steady state and transient operating conditions as specified elsewhere in this specification.

b. Aluminium conductor used in power cables shall have tensile strength of more than 100 N/sq.mm. Conductors shall be stranded.

c. Conductor of control cables shall be made of stranded, plain annealed copper.

d. PVC insulation shall be suitable for continuous conductor temperature of 70 deg C and short circuit conductor temperature of 160 deg. C.

e. The cable cores shall be laid up with fillers between the cores wherever necessary. It shall not stick to insulation and inner sheath. All the cables shall have distinct extruded PVC inner sheath of black colour as per IS: 5831.

f. Outer sheath shall be of PVC as per IS: 5831 & black in colour. In addition to meeting all the requirements of Indian standards referred to, outer sheath of all the cables shall have the following FRLS properties.

i) Oxygen index of min. 29 (as per IS 10810 Part-58).

ii) Acid gas emission of max. 20% (as per IEC-754-I).

iii) Smoke density rating shall not be more than 60 % (as per ASTM-D-2843).

g. Cores of the cables upto 5 cores shall be identified by colouring of insulation. Following colour scheme shall be adopted:

1 core - Red, Black, Yellow or Blue

2 core - Red & Black

3 core - Red, Yellow & Blue

4 core - Red, Yellow, Blue and Black

5 core - Red, Yellow, Blue, Black and Grey

For cables having more than 5 cores, core identification shall be done by numbering the insulation of cores sequentially, starting by number 1 in the inner layer (e.g. say for 10 core cable, core numbering shall be from 1 to 10). The number shall be printed in Hindu-Arabic numerals on the outer surfaces of the cores. All the numbers shall be of the same colour, which shall contrast with the colour of insulation. The colour of insulation for all the cores shall be grey only. The numerals shall be legible and indelible. The numbers shall be repeated at regular intervals along the core, consecutive numbers being inverted in relation to each

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

other. When the number is a single numeral, a dash shall be placed underneath it. If the number consists of two numerals, these shall be disposed one below the other and a dash placed below the lower numeral. The spacing between consecutive numbers shall not exceed 50 mm.

h. In addition to manufacturer's identification on cables as per IS, following marking shall also be provided over outer sheath:

- i. Cable size and voltage grade - To be embossed
- ii. Word 'FRLS' at every 5 metre - To be embossed
- iii. Sequential marking of length of the cable in metres at every one metre - To be embossed / printed.

The embossing / printing shall be progressive, automatic, in line and marking shall be legible and indelible. For EPR cables identification shall be printed on outer sheath.

- i. All cables shall meet the fire resistance requirement as per Category-B of IEC-332 Part-3.
- j. Allowable tolerances on the overall diameter of the cables shall be ± 2 mm maximum over the declared value in the technical data sheets.
- k. In plant repairs to the cables shall not be accepted. Pimples, fish eye, blow holes etc. are not acceptable.

l. Cable selection & sizing for Power Cables:

Cables shall be sized based on the following considerations:

- (i) Rated current of the equipment
- (ii) The voltage drop in the cable, during motor starting condition, shall be limited to 10% and during full load running condition, shall be limited to 3% of the rated voltage
- (iii) Short circuit withstand capability

This will depend on the feeder type. For a fuse protected circuit, cable should be sized to withstand the letout energy of the fuse. For breaker controlled feeder, cable shall be capable of withstanding the system fault current level for total breaker tripping time inclusive of relay pickup time.

m. Cable selection & sizing for Control Cables:

Control cables shall be sized based on the following considerations:

- (i) The minimum conductor cross-section shall be 1.5 sq.mm.
- (ii) The minimum number of spare cores in control cables shall be as follows:

No. of cores in cable	Min. No. of spare cores
2C, 3C	NIL
5C	1
7C-12C	2



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **15** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

14C & above

3

- n. Cable lengths shall be considered in such a way that straight through cable joints are avoided.
- o. 1.1KV grade PVC power cables shall have aluminium conductor (compacted type for sizes above 10 sq.mm), PVC Insulated, PVC inner sheathed (as applicable) unarmoured, PVC outer-sheathed conforming to IS:1554 (Part-I).

4.5 MOTORS

- 4.5.1 For the purpose of design of equipment/systems, an ambient temperature of 50 deg. Centigrade and relative humidity of 95% (at 40 deg C) shall be considered. The equipment shall operate in a highly polluted environment.
- 4.5.2 All equipment shall be suitable for rated frequency of 50 Hz with a variation of +3% & - 5%, and 10% combined variation of voltage and frequency unless specifically brought out in the specification.
- 4.5.3 All the equipment, material and systems shall, in general, conform to the latest edition of relevant National and international Codes & Standards, especially the Indian Statutory Regulations.
- 4.5.4 Paint shade shall be as per RAL 5012 (Blue) for indoor and outdoor equipment.
- 4.5.5 Codes & Standards – IS/IEC:60034, IS 12615, IEC:60034-30
- 4.5.6 AC Motors - Squirrel cage induction motor suitable for direct-on-line starting.
- 4.5.7 AC Motors - Continuous duty LT motors shall be Premium Efficiency class-IE3, conforming to IS 12615, or IEC:60034-30.
- 4.5.8 Maximum continuous motor ratings shall be at least 10% above the maximum load demand of the driven equipment under entire operating range including voltage and frequency variations.
- 4.5.9 Starting time - For motors with starting time upto 20 secs. at minimum permissible voltage during starting, the locked rotor withstand time under hot condition at highest voltage limit shall be at least 2.5 secs. more than starting time.
- 4.5.10 Torque Requirements - Accelerating torque at any speed with the lowest permissible starting voltage shall be at least 10% motor full load torque. Pull out torque at rated voltage shall not be less than 205% of full load torque.
- 4.5.11 Starting Voltage Requirements – Upto 85% of the rated voltage.
- 4.5.12 All motors shall be designed to meet IP55 as per IEC60034-05.
- 4.5.13 All motors shall be either Totally enclosed fan cooled (TEFC) or totally enclosed tube ventilated (TETV) or Closed air circuit air cooled (CACA) type.
- 4.5.14 Voltage level of motors of rating 0.2kW and above shall be 3 phase, 415V.
- 4.5.15 Winding and Insulation of motors:
- 4.5.16 (a) Type: Non-hygroscopic, oil resistant, flame resistant
(b) Starting duty: Two hot starts in succession, with motor initially at normal running temperature.
(c) 415V AC motors: Thermal Class (B) or better
- 4.5.17 Motor body shall have two earthing points on opposite sides.
- 4.5.18 The spacing between gland plate & center of terminal stud shall be as below:



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **16** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

Motor MCR in KW

Upto 3 KW

Above 3 KW - upto 7 KW

Above 7 KW - upto 13 KW

Minimum distance between centre of stud and gland plate in mm

As per manufacturer's practice.

85

115

- 4.5.19 All motors shall be so designed that maximum inrush currents and locked rotor and pullout torque developed by them at extreme voltage and frequency variations do not endanger the motor and driven equipment.
- 4.5.20 The motors shall be suitable for bus transfer schemes provided on the 11kV, 3.3 kV /415V systems without any injurious effect on its life.
- 4.5.21 The ratio of locked rotor KVA at rated voltage to rated KW shall not exceed 11.0 (without any further tolerance).
- 4.5.22 Minimum inter-phase and phase-earth air clearances for LT motors with lugs installed shall be 10mm.

4.6 ADDITIONAL SCOPE (LOOSE SUPPLY)

4.6.1 SPECIAL TOOLS & TACKLES AND SPECIAL EQUIPMENT

Bidder shall submit with the equipment, complete set of all special tools, tackles required for site erection, assembly, disassembly and proper maintenance of HP Bypass system. List of all special tools, tackles and special equipment shall be furnished along with the offer. The following special equipment are included in the scope of supply. Any other equipment required for commissioning of the system shall also be supplied by the supplier.

- Oil flushing device – consisting of a filter with fittings suitable to be connected to the return line of the oil piping during flushing of the oil piping. Sufficient number of filter elements of all required micron ratings, as per the vendor's commissioning requirements shall be included in the supply. One oil flushing device shall be supplied for each 800 MW unit.
- Nitrogen filling device – for filling nitrogen in the accumulators used in HP Bypass system. One Nitrogen filling device shall be supplied for each 800 MW unit.
- Steam blowing blanking arrangement - For each 800MW unit, Vendor shall supply two nos. steam blowing blanking arrangements of HP bypass Valves and furnish the blanking arrangement drawing for review. The offered steam blowing arrangement shall allow the steam blowing to be carried out after the valve is installed in the pipeline. Steam blow through type arrangement shall be offered. The steam blowing parameters shall be 60 kg/sq.cm(g) and 330 to 350 deg.C.
- Hydro test device - Device to be used to keep the HP bypass valves closed when the upstream piping is being subjected to hydro test shall be supplied. For each 800MW unit, Vendor shall supply two nos. hydro test devices and furnish the arrangement drawing for review. The hydro test device shall be capable of withstanding the hydro test pressure of 446.5 kg/sq.cm(g).

4.6.2 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. Commissioning spares shall include minimum one set each of electrical connectors, gaskets, packing rings and seals for all valves, actuators, Hydraulic power unit, final control elements, fast opening devices and filters, one set of



365-147/B
31.08.16

**BHEL – Tiruchirappalli – 620014,
India**

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **17** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

filter elements etc., The vendor shall furnish a detailed list of commissioning spares along with the offer and such list shall be reviewed by BHEL and mutually agreed to.

4.6.3 SPARE PARTS FOR 2 YEARS' OF OPERATION

Recommended spare parts list for 2 years' of operation shall be furnished along with the offer for each valve, actuator and HPU. Detailed list of spare parts with position no. shall be furnished in the O&M manual.

4.6.4 VALVE SEAT CUTTING & GRINDING MACHINE

Offer shall include 1 No. On-site HP Bypass valves seat cutting machine and 1 No. On-site seat grinding machine (common for all Units).

5 INSPECTION & TESTING

- 5.1 All HP Bypass valves shall be inspected, tested and stamped as per applicable code.
- 5.2 Material, Mechanical and Chemical tests shall be performed in a manner as specified in the relevant codes.
- 5.3 All valve pressure retaining parts shall be subjected to hydrostatic test pressure as required by the IBR and 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.
- 5.4 Quality assurance plan for all components included in the scope shall be submitted along with the offer for BHEL's / owner's review & approval.
- 5.5 The material test certificates (correlated to melt number) shall be furnished by the bidder for identification and correlation.
- 5.6 For components like Body, Inlet & Outlet nozzles, Seat, Stem, plug, cage, Actuator cylinder, Yoke etc., material test certificates (typical) shall be furnished for identification & correlation.
- 5.7 100% Blue matching of seats shall be carried out and records shall be maintained for verification by BHEL.
- 5.8 Each HP Bypass valve and spray 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.
- 5.9 Seat Leakage test shall be conducted. There shall not be any visible leakage during this test. Form IIIC certificate to be furnished. Hydrostatic and seat leakage tests shall be witnessed by BHEL/end customer personnel.

6 ADDITIONAL REQUIREMENTS

- 6.1 Machined surfaces shall be suitably protected.
- 6.2 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.
- 6.3 All the valves shall be packed suitably in wooden cases in order to avoid damage during transit and also during storage at site.
- 6.4 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.
- 6.5 All threaded connections shall be plugged or capped with standard pipe plugs or caps.



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **18** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

7 DOCUMENT REQUIREMENTS

The following documents shall form part of the offer.

- 7.1 Clause wise confirmation to this technical specification shall be furnished.
- 7.2 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. Even if there is no deviation from the tender document, the Bidder shall indicate as “no deviations”.
- 7.3 Cv test shall be carried out for HP Bypass valves, spray isolation and spray control valves as per ISA 75.02 and test report shall be submitted along with the offer for BHEL approval. In case test report is already available on the same size/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 an external inspection agency, the same shall be submitted if Cv test has been carried out within 5 years from the date of technical bid opening.
- 7.4 Detailed CFD reports for the rated parameters (Refer Cl.8 of this specification), in lieu of Cv tests specified under Cl. 7.1 above, are also acceptable. CFD reports can be submitted after PO placement.
- 7.5 Cross sectional drawings and General arrangement drawing with mounting details and recommended orientation of actuators w.r.t valve, BOM, Face to Face & overall dimensions, marking for identification of recommended spare components.
- 7.6 Materials of all parts & trim details to be furnished by bidder along with quote. If non-ASTM materials are used, equivalent ASTM materials shall be indicated in the BOM.
- 7.7 Valve sizing calculations.
- 7.8 Sound Pressure Level calculations
- 7.9 Details for providing warming up arrangement of HP bypass valves shall be submitted along with the offer
- 7.10 Schematic drawing of the hydraulic circuit of the hydraulic power unit
- 7.11 Weight of each S.No. of Clause No. 10 of the specification
- 7.12 Datasheets of Valves, actuators
- 7.13 Data sheet of Hydraulic Power Unit indicating the supply pressure and all other pressure settings
- 7.14 Technical write-up on the function, operation and design features of valves and actuators
- 7.15 Technical write-up on the function, operation and design features of hydraulic power unit, hydraulic system and components
- 7.16 Oil piping connection diagram between the Hydraulic power unit and individual actuators
- 7.17 Oil piping sizes and grade of material
- 7.18 Catalogs and datasheets of all instruments, proportional valves, solenoids, etc., used in the HP Bypass system
- 7.19 Drawing / documents submission schedule.
- 7.20 Forces & Moments calculations for HP Bypass valves, weight of the valve when assembled with all the accessories.
- 7.21 Valve opening / closing time details.



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **19** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

7.22 Detailed Quality Plan for all valves, actuators, Hydraulic Oil System.

7.23 Recommended spare parts lists for 2 years' of operation

The following documents shall be submitted after order placement:

- 7.24 Sectional Drawing for HP Bypass valve
- 7.25 Bill of material for HP Bypass Valve
- 7.26 Sectional Drawing for Spray Isolation valve
- 7.27 Bill of Material for Spray Isolation valve
- 7.28 Sectional drawing for spray Control valve
- 7.29 Bill of Material for spray Control valve
- 7.30 Characteristic curves for HP Bypass Valve
- 7.31 Characteristic curves for Spray Control Valve
- 7.32 Dimensional drawing of HP bypass Valve
- 7.33 Dimensional drawing of Spray Isolation valve
- 7.34 Dimensional drawing of Spray Control valve
- 7.35 Oil Supply unit scheme
- 7.36 Legend of Oil Supply unit scheme & Functional Write-up
- 7.37 Dimensional drawing of Hydraulic Power Supply Unit along with foundation details
- 7.38 Valve Data Sheet
- 7.39 HPSU Data Sheet
- 7.40 Description of Hydraulic operation of valves
- 7.41 Preheating arrangement of HP Bypass valves
- 7.42 Filled-up datasheets enclosed as Annexure-A at the end of this specification
- 7.43 Logics of Hydraulic Power Unit operation in Function Block Diagram (FBD) format
- 7.44 Terminal Wiring Diagrams of all the junction boxes used in the HP Bypass system
- 7.45 Instrument Datasheets
- 7.46 MQP of all valves and Hydraulic Power Supply Unit
- 7.47 Installation Instructions
- 7.48 Drawings/documents for all the special equipment offered against Cl. 4.5.
- 7.49 Vendor shall submit the list of all the components which are bought from sub-vendors and furnish the make and model of each of the above components along with the offer.
- 7.48 Maximum allowable forces and moments on each weld end of the valve shall be indicated in the dimensional drawings of the valves.
- 7.49 Edge preparation details of all the valves shall be as per BHEL requirement. BHEL EP requirement will be provided after placement of P.O.
- 7.50 All Port Connection sizes, type of hose end connections and diameters for hoses near the actuators
- 7.51 Electrical and instrument Load List for the HP Bypass system.
- 7.52 Field Weld Schedule and erection instructions for Site engineers.
- 7.53 Shipment weight & volume details.
- 7.54 Equipment preservation procedure during shipment, pre-erection storage period & extended storage period.
- 7.55 Erection manual consisting of pre-checks, pre-requisites, recommendations, etc.,



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **20** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- 7.56 Commissioning manual consisting of pre-commissioning, commissioning, initial operation, etc.,
- 7.57 Operation and Maintenance manual consisting of details of all valves, hydraulic actuator, final control elements, feedback transmitters, solenoid valves and catalogues for bought out items, interlocks, physical checkups, startup, shut down and protections, instructions regarding predictive, preventive, breakdown maintenance and overhauling - 2 hard copies and 8 soft copies after placement of order. One copy of detailed O&M manual consisting of, but not limited to, vendor manuals, troubleshooting guide, list of spares packed separately must accompany the shipment.
- 7.58 O&M manual shall include copies of all software required for operating / tuning / maintenance of the components / equipment of HP bypass system. Detailed procedures for calibration / tuning of such components / equipment using the software shall form part of the O&M manual.
- 7.59 A literature on caution / safety while handling equipment / system shall be furnished.
- 7.60 All GA drawings, Test Certificates, Seat leakage test report, filled datasheets and Material test Certificates.
- 7.61 In case of loose supply of components/systems, necessary drawings & instructions for assembly/subassembly shall be provided.

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 SELECTION DATA FOR H.P. BYPASS VALVES

Parameter	Rated Capacity (65% BMCR)	House Load	Cold Start	Warm start	Hot Start	Mech. Design
Upstream Pr. (Kg/cm ² (a))	270	270	108	108	108	298.7
Upstream Temp. (°C)	600	600	390	450	530	603 (IBR) 608 (ASME)
Steam Flow (T/Hr)	1664	1664	700	700	700	---
Downstream Pr. (Kg/cm ² (a))	37.94	30.5	18	18	18	75.2
Downstream Temp. (°C)	360	360	310	360	360	512
Spray Water Pr. (Kg/cm ² (a))	309.46	309.46	117	117	117	382
Spray Water Temp. (°C)	142.5	142.5	111	139	139	200

NOTES:

- 1) Flow indicated is for **TWO** numbers of valves.
- 2) HP bypass to be designed to accept continuous spray at a temperature of 110°C (min).
- 3) All the valves shall be capable of functioning against full upstream pressure while downstream pressure is zero.



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:HP:0072** Rev: **02**

Effective Date: 19-11-2021

Page: **21** of **22**

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

- 4) Bidder shall attach the list of projects supplied with HP Bypass system for supercritical steam turbine generator units with a capacity of not less than 750 Ton/Hr for each valve for the above mentioned rated steam parameters (i.e., pressure and temperature), which are in successful operation for more than 1 year as on 03-March-2017. The performance certificate for HP Bypass system from atleast 1 plant for meeting the above criteria shall be submitted at the time of the offer.
- 5) Vendor shall offer only such equipment which will meet the provenness criteria as indicated against S.No. 4 above.

9 SUPERVISION DURING ERECTION-COMMISSIONING & TRAINING AT SITE

The vendor 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 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. Bidder shall consider 2 visits with a total duration of 7 days (excluding 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.

Product: HP TURBINE BYPASS SYSTEM – PVUNL PATRATU 3x800 MW

10 BREAK UP FOR SUPPLY OF HP BYPASS VALVES AND HYDRAULIC SYSTEM

Sl. No.	EQUIPMENT	PART NO.	Qty for one 800 MW unit	Qty for 3x800 MW
1	HP Bypass steam control valve with Electro-hydraulic actuator, feedback transmitter assembly, final control elements and electronic positioner	974510200000	2 Nos.	6 Nos.
2	HP Bypass Spray water Isolation valve with Electro-hydraulic actuator, limit switch assembly, final control elements and electronic positioner	974510200001	1 No.	3 Nos.
3	HP Bypass Spray water control valve with Electro-hydraulic actuator, feedback transmitter assembly final control elements and electronic positioner	974510200002	2 Nos.	6 Nos.
4	Hydraulic power unit with junction box assembly	974510200003	1 No.	3 Nos.
5	Hydraulic system components including stainless steel piping of material SA213 TP316Ti connecting the HPU and actuators, connecting fittings, filters, hoses, additional accumulators, fast opening device, Non return valves, ball valves, throttle valves etc..	974510200005	1 Set	3 Sets
6	Special tools - Complete set of all special tools & tackles and special equipment like oil filterability test device, oil flushing device, nitrogen filling device, spare filter element for flushing device, steam blanking device, hydro test device, etc., required for site erection, assembly, disassembly and proper maintenance of HP Bypass system (Refer Cl. 4.6 for clarity on quantity to be offered)	974510200006	1 Set	3 Sets
7	Commissioning spares - One set of seal kit (packing rings, O-rings and gaskets) for all HP Bypass valves and all spray valves, one set of all electrical connectors, one set of seal kit for each actuator, one set of seal kit for Hydraulic power unit, one set of seal kit for all final control elements, one set of seal kit for fast opening devices, one set of seal kit for all filters and one set of all filter elements	974510200007	1 Set	3 Sets
8	HP Bypass system valves seat cutting machine with tools and accessories***		1 No.	
9	HP Bypass system valves seat grinding machine with tools and accessories***		1 No.	
*** - These items are not considered for evaluation of offer.				

Signature			
Name	M Chaitanya Kumar	Mallemala Sujana Vinod	K Rajasekaran
Designation	Sr. Engineer	Manager	Dy. General Manager
Date	19 November 2021	19 November 2021	19 November 2021
Action	Prepared By	Reviewed By	Approved By

ANNEXURE 2A
GENERAL TERMS &
CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE
Trichy - 620 014, India
GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

ENQUIRY CONDITIONS FOR HP TURBINE BYPASS SYSTEM : PATRATU 3x800 MW

1. QUOTATIONS:

a. BID system

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.

b. Submission of offer:

Each part of offer should be sent in a double cover separately and the same should be sealed and super scribed with details such as enquiry reference, name of the vendor, 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. Offer should be sent 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

- c. Late offers:** Offer received after 2.00 pm on due date will be considered as Late offers. Late offers will not be considered under any circumstance.
- d. Regulations:** Offers 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. In case of a difference between the amount quoted in words and figures, the amount quoted in words shall prevail.
- e. PVC:** Price Variation clause not acceptable. Prices should be firm.
- f. Catalogue:** Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation.
- g. Samples:** Samples should be submitted separately, if specially requested in tender, before the due date of the enquiry. They should be clearly marked with the enquiry reference and date on the enclosing cover to facilitate identification.
- h. GST Number's** registration number, HSN number (Item wise) with applicable taxes should be mentioned in the offer. If the vendor is not GST registered the offer is liable for rejection.
- i. 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" in the offer.
- j. Confirmation:** Confirmation for compliance is to be given in the offer for all the techno commercial conditions specified in the tender.

2. COMMERCIAL TERMS & CONDITIONS:

- a. Validity of Offer:** Prices should be valid for 120 days from the date of part-1 bid opening of this tender. The delay in responding to BHEL technical clarification beyond four days will be subsequently added to the validity period, Revised Price Bids will not be encouraged.
- b. Delivery period:** Delivery schedule will be 34 **weeks** from the date of document approval for Unit 1 & Unit 2 and 58 **weeks** from the date of document approval for Unit 3. Vendor quoted delivery period shall include all the activities i.e. manufacturing / production, Inspection, Packing, Forwarding and dispatch
- c. Delivery Terms:**
For Indigenous Suppliers: **Main supply:** FOR Patratu Project Site .The quoted Rate shall be inclusive of Packing, Forwarding and Freight. (Ex-Works, Freight to pay basis is not acceptable to BHEL.) Insurance will be on BHEL scope.
For Foreign Suppliers: CFR Chennai seaport as per Incoterms 2010.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE
Trichy - 620 014, India
GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

d. Terms of Payment:

For Indigenous Suppliers: (Non-MSE)

Main Supply: "Payment term is 100% direct payment after 60 days from the date of dispatch against Pataratu site acknowledgement and submission of PBG valid for the warranty period".

Indigenous Supplier (MSE): Payment will be as per MSMED Act, 2006

Suppliers quoting for MSE payment must produce CA certificate (original), based on audited reports of FY 2019-2020, in the enclosed template in terms and conditions (signed and sealed in CA's letter pad) and copy of UAM. If submitted earlier, same shall be informed. **OR** Suppliers quoting for MSE payment must produce Udyam registration certificate in part 1 bid documents

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 Foreign Suppliers:

Main Supply: Payment term is 100% payment on CAD basis after 60 days from the date of receipt of documents, specified in PO, at BHEL bank and submission of PBG valid for the warranty period. 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.

e. Liquidated Damage:

- i. Time is the essence of the contract.
- ii. The ordered items shall be delivered as per the delivery period mentioned in the Purchase Order.
- iii. In case the supplier supplies the ordered items beyond the delivery period specified, Liquidated Damages -LD - as detailed below shall be levied from the supplier without prejudice to any other relief /compensation available to BHEL, Tiruchirapalli under any other condition of the contract/applicable legal provisions.
- iv.

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). LD shall be reckoned from contract delivery date to cargo readiness date.

- v. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers. Hence applicable GST shall also be recoverable from suppliers on LD amount. Debit note will be issued by BHEL for this amount, indicating the respective supply invoice number.
- vi. Cargo readiness date means the following:

EX-works/FOB terms: Final inspection Agency's signed date in the Test Certificate in the case of Third Party Inspection (TPI) is involved. When Third Party Inspection is not involved, date of intimation message regarding readiness of materials or date of Test Certificate whichever is later.

Other than EX-works/FOB terms including FOR/Destination: Invoice date/Bill of Lading date/Airway Bill date/Lorry way bill date/Railway Receipt date/E way bill date, whichever is later.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

- f. Guarantee period:** 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.
- g. 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.
- h. 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 3 months. PBG should be issued from list of consortium banks.

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

- a.** Response to Tenders for Indigenous supplier/Vendor will be entertained only if the vendor has a valid GST registration No (GSTIN) which should be clearly mentioned in the offer. If the Vendor is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Vendor under composition scheme should declare that he is a composition Vendor supported by the screen shot taken from GST portal. The dealer has to submit necessary documents if there is any change in status under GST.
- b.** Supplier shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) 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), Billed to party (with GSTIN) & Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc.
- c.** Invoices will be processed only upon completion of statutory requirement and further subject to following:
- Vendor declaring such invoice in Form GST ANX-1
 - Receipt of Goods or Services and Tax invoice by BHEL
- d.** All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- e.** As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoice raised on BHEL may be uploaded immediately in GST portal on despatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2).
- f.** 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.
- g.** All documents like Test Certificate, LR copy, 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.
- h.** In case of discrepancy in the data uploaded by the 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 or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL.
- i.** In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

- j. 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.
- k. In case any changes in taxes and duties as per Gov. Notification (including GST), the same shall be applicable from time to time.
- l. Duplicate copy of the Invoice meant for the transporter should accompany the material as stipulated under CE Rules 52A and 172C OR 57CE.
- m. TDS on GST shall be applicable as per the GST Act.
- n. In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor.
- o. Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor.
- p. GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.

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

- a. In case both MSE and Non-MSE Vendors have participated and non-MSE Vendor has become the lowest bidder and the quantum envisaged in the tender cannot be split, then the MSE vendor will be given preference for ordering the available quantum provided the MSE vendor quoted price is within L1 + 15%, and if the MSE vendor accepts the L1 rate.
- b. MSE suppliers can avail the intended benefits only if,
The vendor submits along with offer, Udyam registration certificate for the financial year of the date of part-1 bid opening,

(or)

The vendor has already submitted the above documents for the financial year of the date of part-1 bid opening and the MSE status has been updated in BHEL Trichy's records.

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.

- c. Payment for MSE vendors will be as per MSMED Act, 2006.

5. RISK PURCHASE PENALTIES

- a) In the event of any successful Tenderer's failure to fulfil any of the tender / Contract obligations including supply of whole or any part of the ordered items as per Contract / Agreement, BHEL has the right to terminate the contract and purchase from elsewhere ,at the risk and cost of the defaulted supplier, either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated in the contract or if the same were not available, the best and nearest available substitute thereof. The supplier shall be liable for the additional expenditure/difference in Cost , if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the Purchase order/contract. b) The decision of BHEL with regard to the additional expenditure / difference in cost and consequential losses incurred by BHEL shall be final and binding on the supplier.

- b) The amount recoverable under risk purchase shall be recovered from the defaulted supplier in all or any of the following manners:

- from dues available in the form of Bills payable to defaulted supplier, SD, BGs against the same contract.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

- from the dues payable to defaulted supplier against other contracts in the same Region/Unit /any other region/unit
- c) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier.

6. SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/CONTRACTORS

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com. If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post execution stage indulges in 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 acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on www.bhel.com and/or under applicable legal provisions.

Abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link:

http://www.bhel.com/vender_registration/vender.php (Guidelines for suspension of business dealings with suppliers/ contractors).

7. 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 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 reject the offer of a particular bidder due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units.
- g. The Drawings and Technical documents given in this enquiry are the sole property of BHEL. This should not be misused in any form.
- h. Purchase Order, PO Item serial number, Material code, Quantity should be clearly marked on the packing
- i. Confirmation for compliance is to be given in the offer for all the conditions specified above and to the respective Purchase Specification.
- j. The bidder along with its associate/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL fraud prevention policy (refer 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.
- k. For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017, 28.05.2018, 29.05.2019 and 04.06.2020, issued by DPIIT, Ministry of Commerce and Industry. Subsequent Orders issued by the respective Nodal Ministry, if any, 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 purchase and / or local content in respect of this procurement, same shall be applicable.
- l. Force Majeure clause**
 - a. Notwithstanding the provisions contained in other clauses, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure. For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non - performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees, lockouts excluding by its management, freight embargoes and Acts of GOD.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

b. If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty-one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

c. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

d. In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

m. Resolution of Disputes

The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the contract/tender which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.

2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

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 Annexure X to this Terms and conditions.

The Annexure X together with its appendices will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this terms and conditions.

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the parties, 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, then, either Party may, by a notice in writing to other Party refer such dispute or difference to sole arbitration of an arbitrator appointed as per the Arbitration and Conciliation Act, 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties. Subject as aforesaid, the provision of Arbitration & Conciliation Act 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

The seat of arbitration shall be Trichy, Tamil Nadu, India



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to arbitration in terms of clause above, the Courts at Trichy, Tamil Nadu, India shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or difference and/or reference for the arbitration, the vendor shall proceed with and continue without hindrance the performance of its obligation under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

In Case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts inter se and also between CPSEs and Government Departments/Organizations (Excluding disputes concerning Railways, Income Tax, Customs & Excise Departments, such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013 -DPE (GM)/FTS-1835 dated 22-05-2018.

8. 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.

9. TENDER EVALUATION:

- a. **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. **Price Bid.**
 - i. Bidders qualified for part I will be intimated for participating in priced bid opening.
 - ii. L1 bidder will be decided based on landed cost for the equipment to BHEL.

Indigenous Vendors

Total Landed cost/rate for each item = FOR Rate in INR (A) + Applicable Taxes (B) + Loading non-acceptance of commercial terms (C) – Applicable input tax credit (D)

A - Indigenous vendors submit offers on Free on Road (FOR), Stores, HPBP BHEL Trichy in INR for Spares and Free on Road (FOR), Patratu Site for Main Supply items.

B - Applicable GST and any other charges quoted by indigenous vendors will be added to the base price.

C - Loading for non-acceptance of payment terms & liquidated damages (LD) will be added to the F.O.R. value for arriving the landed rate.

D - However, input tax credit shall be availed for GST, hence the same is excluded for arriving at the landed cost.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

Foreign Vendors

Total Landed cost = CFR Rate in INR (A) + Applicable Duties (B) + Incidental Charges (C) + Loading for non-acceptance of commercial terms (D)

A - Foreign vendors to submit offers on CFR (Cost & Freight), Chennai port (LILO – Liner In; Liner Out) basis per item wise in foreign currency, which will be converted to INR by multiplying with the Exchange rate (SBI TT Selling rate) as on the technical bid opening date. If the date of opening happens to be a bank holiday, then the forex rate as on previous bank (SBI) working day shall be taken.

B - Customs duty, Safe guard duty (as per the notification No 02/2014-Customs (SG) dated 13th August 2014) and antidumping duty (as per the notification No 18/2016-Customs (ADD) dated 17.05.2016) as if applicable will be added to the INR price.

C - Incidental charges will be added to the CFR Value. The incidental charge is inclusive of port handling charges, & freight charges for movement from Chennai port to BHEL, Trichy for spares and Chennai port to Patratu Site for Main supply items.

D - Loading for non-acceptance of payment terms, delivery schedule & Liquidated Damages (LD) will be added to the CFR value for arriving at the landed cost.

iii. In case of tie for the L1 positions,

- a. In the course of evaluation, if more than one bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from respective L1 bidders.
- b. In case more than one bidder happens to occupy the L1 status even after soliciting discounts, the L1 bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 bidders(s) or their representative(s).
- c. Ranking will be done accordingly, BHEL's decision in such situation shall be final and binding.

10. IMPORTANT INFORMATION FOR FOREIGN SUPPLIERS:

- a. Port of loading should be indicated in the offer without fail.
- b. Port of discharge should be Chennai Sea/Air Port, India.
- c. The preferred shipment mode "Containerized Cargo or Break Bulk" shall be specified clearly in the offer.
- d. **In case of CFR INCO TERMS - CONTAINERIZED CARGO**
 - i. In case of CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. 14 FREE DAYS for Container detention shall be provided. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total Landed Cost.
 - ii. In case of shipment through Containers on CFR basis, the BL should bear the endorsement that "14 free days for Container Detention is applicable".
- e. **In case of CFR INCO TERMS - BREAKBULK CARGO:** In case of CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis. The materials will be Custom cleared from Port itself.
 - i. The Indian Customs imposed, a penalty on late filing of Bill of Entries (Air/Sea Shipments) by the importer. The maximum free time allowed is 24 hrs from the time of arrival of cargo at final port of discharge. Rs.5000/- per day (for Initial 03 days) & Rs.10000/- per day (thereafter)
 - ii. The vendor should furnish the Non-Negotiable Documents (Air Way Bill/Bill of Lading, Commercial Invoice, Packing List, and Certificate of Origin) either by email or post/courier to BHEL well before the landing of cargo at final port of discharge.
- iii. Vendor will be held responsible for the penalty arises against the late filing of Bill of entry due to:
 - a. Non availability of Non-Negotiable Documents (NNDs) before the cargo arrival
 - b. Discrepancy in documents
 - c. Short landing of Consignments (For shipments on CFR/CPT/CIF/CIP – Chennai Port)



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

- iv. All the shipments for the contracts (POs) finalized on CFR -Chennai Port basis
- Delivery Orders involving multiple agencies like liners/freight forwarders are not allowed. There must be a single agency office at the final discharge Port (Chennai) for issuing the Delivery Order to BHEL.
 - The detention/demurrage charges arise due to the delay in collection of Delivery Orders from multiple agencies of liner/freight forwarder also whose offices are not at available Chennai, the same amount will be deducted from Vendor's bills only.
 - Apart from the normal charges like Terminal Handling Charges, Container cleaning Charges, Delivery Order Charges at final port of discharge no other charges will be borne by BHEL.
 - The liner/freight forwarders should be properly communicated by the Vendor for not to claim such charges for issuing Delivery Order. If the liner/freight forwarder claims such charges in their invoices, the same amount will be deducted from the Vendor bills without any prior intimation in order to avoid the delay in Customs clearance. The likely additional/hidden costs or charges are:
 - CIC - Container Imbalance Charges/Surcharges
 - EIC - Equipment Imbalance Charge/Surcharges
 - CAF - Container/Currency Adjustment Factor
 - BAF - Bunker adjustment Factor
 - RDS - Rupee Depreciation Surcharge
 - CDS - Currency Depreciation Surcharge

f. Transport Conditions for Import:

The Original Documents (Bill of Lading, Invoice, Packing List, Certificate of Origin & Test Certificate) shall reach BHEL well in advance before the vessel arrival. The soft copies of the above shall be forwarded to BHEL immediately after shipment.

- In the event of delayed submission of documents by the supplier, an amount up to 5% of the invoice value will be retained towards demurrage & other charges and the difference if any between actual charges and recovery will be settled separately through supplementary invoice.
- In such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading".
- Otherwise, No-objection Certificate shall be issued to the Liner, authorizing BHEL to get the Delivery Order without producing the Original Bill of Lading.
- This is required to ensure avoidance of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.

Following details to be endorsed in OBL

- Import & Export Code (IEC) of importer: 0588138690
- GST Identification No (GSTIN) of importer: 33AAACB4146P2ZL
- Official email id of importer: vavinash@bhel.in ; ajaykumar.gupta@bhel.in

d. Indian Agent & Agency commission:

- An Indian Agent can represent / submit offer of only one original equipment manufacturer (OEM) against a particular Tender. If any Indian Agent represents two or more than one OEM against the same tender, then the Offer will be rejected.
- The CFR - Cost and Freight Chennai Sea Port, price quoted by the Foreign Bidder shall also include the Agency commission. The bidder shall furnish authenticated copy of the Agency Agreement detailing the precise relationship between them and their mutual interest in the business so as to consider the offer of the Indian Agent for the indigenous portion of the supply. For the main equipment, the offer should be from the Principal / OEM. The bidders have to furnish the original Authorization Letter for the Indian Agent along with the Techno-Commercial Offer.

11. INTEGRITY PACT (IP)

- IP is a tool to ensure that activities and transactions between Company and its Bidders/Contractors are handled in a fair, 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	Email
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BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

1	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2	Shri VirendraBahadur Singh,IPS (Retd.)	ybsinghips@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)

Avinash V
Sr. Engineer
Valves Purchase
24 Building, 3rd Floor,
BHEL, Trichy-620014
+91 431 2574797
vavinash@bhel.in

(2)

Ajay Kumar Gupta
AGM
Valves Purchase
24 Building, 3rd Floor,
BHEL, Trichy-620014
+91 9410395962
ajaykumar.gupta@bhel.in

ANNEXURE 2B
CONFIRMATION TO TERMS
& CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014. India

CONFIRMATION TO TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

<u>TERMS & CONDITION</u>	<u>VENDOR CONFIRMATION</u>
<p>a. Quotation No and date</p>	
<p>b. 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".</p>	
<p>c. The offer has to be submitted as a Two-part bid i.e. 1. Techno-commercial 2. Price bid</p>	
<p>d. Terms of Payment: <u>Indigenous Supplier (Non-MSE):</u> "Payment term is 100% direct payment after 60 days from the date of dispatch against Patratu site acknowledgement and submission of PBG valid for the warranty period". <u>Indigenous Supplier (MSE):</u> Payment will be as per MSMED Act, 2006 Suppliers quoting for MSE payment must produce CA certificate (original), based on audited reports of FY 2019-2020, in the enclosed template in terms and conditions (signed and sealed in CA's letter pad) and copy of UAM. If submitted earlier, same shall be informed. OR Suppliers quoting for MSE payment must produce Udyam registration certificate in part 1 bid documents. <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 and submission of PBG valid for the warranty period. 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.</p>	
<p>e. Liquidated Damage: 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).</p>	
<p>f. Delivery Terms: Prices shall be quoted on "FIRM PRICE" basis only. <u>For Indigenous Supplies:</u> FOR /Patratu Project Site Basis. The quoted Rate shall be inclusive of Packing, Forwarding and Freight. (Ex-Works, Freight to pay basis is not acceptable to BHEL.) <u>For Import Supplier:</u> CFR/Chennai Seaport. The quoted Rate shall be inclusive of Packing, Forwarding and Freight. (Ex-Works, Freight to pay basis is not acceptable to BHEL.)</p>	
<p>g. Validity of Offer: Prices should be valid for 120 days from the date of part-1 bid opening of this tender. The delay in responding to BHEL technical clarification beyond four days will be subsequently added to the validity period, Revised Price Bids will not be encouraged</p>	
<p>h. Delivery period: Delivery period should be 34 weeks from the date of document approval for Unit 1 & Unit 2 and 58 weeks from the date of document approval for unit 3. Vendor quoted delivery period shall include all the activities i.e. manufacturing / production, Inspection, Packing, Forwarding and dispatch</p>	



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014. India

CONFIRMATION TO TERMS AND CONDITIONS

Enquiry Reference: ENSFV00248

<u>TERMS & CONDITION</u>	<u>VENDOR CONFIRMATION</u>
i. Risk Purchase: Risk purchase penalties as per clause 5 of general terms and conditions is applicable for this enquiry. Non acceptance to risk purchase clause the offer is liable for rejection.	
j. Warranty Clause: The vendor shall give a warranty 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: Vendor should provide a performance bank guarantee (PBG) in BHEL format for 10% of the total Purchase order value for the performance of the equipment supplied as per the parameters mentioned in the specification valid for warranty/guarantee period with an additional claim period of 3 months. PBG should be issued from list of consortium banks	
l. Local content certificate: Supplier shall submit the local content certificate with self-declaration in part 1 bid documents.(Refer sample for local content certificate in attachment)	
m. Counter-offering Counter-offering is not applicable for this enquiry.	
n. Inspection: Inspection shall be done by BHEL/TPIA and NTPC at vendor works as per VQP approved by NTPC Customer. QP Clause wise Indexing, based on Quality Plan, shall be part of Test reports and Test certificates submitted. Material Despatch Certificate from our customer is applicable in this case. Despatch clearance can be provided only after receiving this certificate from our customer.	
o. Document submission: In case of PO, documents (drawings, data sheets and quality plan) shall be submitted within 28 days from the date of receipt of PO and the revised documents shall be submitted within 1 week from the date of receipt of engineering / quality comments. Any delay beyond the above specified period will be considered during LD calculation.	
p. 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	

Supplier Seal and Sign

ANNEXURE 2C
UNPRICED BID FORMAT

FORMAT FOR SUBMISSION OF UNPRICED BID
(Unpriced Bid should strictly as per below format ONLY)

BHEL's enquiry ref:	ENSFV00248
Enquiry date:	04-12-2021
Project:	Patratu 3x800 MW

Vendor name:	
Vendor's offer ref:	
Offer date:	

Section A: Prices of Full Valve Assembly

- Prices for valves should have to be valid for 120 days from the date of part-1 bid opening
- Purchase order for supply portion will be released immediately upon finalisation of tender
- Prices for commissioning assistance should be valid until the date of commissioning at site
- Purchase order for commissioning assistance portion will be released one week prior to actual requirement at site

Item wise rates

Sl. No.	Material Code	Material Description	Qty	UOM	Quoted/ Not Quoted
10	974510200000	HPBP VALVE ACTUATOR ASSY	2	No	Quoted/ Not Quoted
20	974510200000	HPBP VALVE ACTUATOR ASSY	2	No	Quoted/ Not Quoted
30	974510200000	HPBP VALVE ACTUATOR ASSY	2	No	Quoted/ Not Quoted
40	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No	Quoted/ Not Quoted
50	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No	Quoted/ Not Quoted
60	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No	Quoted/ Not Quoted
70	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No	Quoted/ Not Quoted
80	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No	Quoted/ Not Quoted
90	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No	Quoted/ Not Quoted
100	974510200003	HYDRAULIC POWER UNIT ASSY	1	No	Quoted/ Not Quoted
110	974510200003	HYDRAULIC POWER UNIT ASSY	1	No	Quoted/ Not Quoted
120	974510200003	HYDRAULIC POWER UNIT ASSY	1	No	Quoted/ Not Quoted
130	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set	Quoted/ Not Quoted
140	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set	Quoted/ Not Quoted
150	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set	Quoted/ Not Quoted
160	974510200006	SPECIAL TOOLS - HPBP	1	Set	Quoted/ Not Quoted
170	974510200006	SPECIAL TOOLS - HPBP	1	Set	Quoted/ Not Quoted
180	974510200006	SPECIAL TOOLS - HPBP	1	Set	Quoted/ Not Quoted
190	974510200007	COMMISSIONING SPARES-HPBP	1	Set	Quoted/ Not Quoted
200	974510200007	COMMISSIONING SPARES-HPBP	1	Set	Quoted/ Not Quoted
210	974510200007	COMMISSIONING SPARES-HPBP	1	Set	Quoted/ Not Quoted

Other charges (only if applicable)

Type of charge	Quoted/ Not Quoted
Packing Charges	Quoted/ Not Quoted
Inspection/Documentation Charges	Quoted/ Not Quoted
CFR Charges	Quoted/ Not Quoted
Any Other Charges (please specify)	Quoted/ Not Quoted

Commissioning assistance charges

Type of charge	Quoted/ Not Quoted
Lumpsum amount for commissioning assistance at site (for both units) <i>(should be inclusive of travelling, accommodation, service and all other charges for min. seven (07) days, per unit and 2 days training on site during commissioning of valve)</i>	Quoted/ Not Quoted
Per day charges for site assistance, in case the requirement at site exceed 07 days <i>(should be inclusive of travelling, accommodation, service and all other charges) (For information only. Will NOT be used for package rate calculation)</i>	Quoted/ Not Quoted

Consignment package details (approximate details will suffice)

Net weight of the final packed consignment		Kgs
Dimensions of the consignment		L(mm) x B(mm) x H(mm)

Note:

- The prices for items/components that are to be supplied by the vendor's Indian office or counter-part, shall be quoted separately. The prices for such items/components should be in INR only.
- The prices for services/support that are to be rendered by the vendor's Indian office or counter-part, shall be quoted separately. The prices for such services/support should be in INR only.
- Commissioning charges should be mandatorily quoted. If any deviation is taken, stating that the commissioning charges will be quoted separately, the offer will be rejected.

ANNEXURE 2D
PRICED BID FORMAT

FORMAT FOR SUBMISSION OF UNPRICED BID
(Unpriced Bid should strictly as per below format ONLY)

BHEL's enquiry ref:	ENSFV00248
Enquiry date:	04-12-2021
Project:	Patratu 3x8000 MW

Vendor name:	
Vendor's offer ref:	
Offer date:	

Section A: Prices of Full Valve Assembly

- Prices for valves should have to be valid for 120 days from the date of part-1 bid opening
- Purchase order for supply portion will be released immediately upon finalisation of tender
- Prices for commissioning assistance should be valid until the date of commissioning at site
- Purchase order for commissioning assistance portion will be released one week prior to actual requirement at site

Item wise rates

Sl. No.	Material Code	Material Description	Qty	UOM	Unit Price	Item Price	Currency	
10	974510200000	HPBP VALVE ACTUATOR ASSY	2	No				
20	974510200000	HPBP VALVE ACTUATOR ASSY	2	No				
30	974510200000	HPBP VALVE ACTUATOR ASSY	2	No				
40	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No				
50	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No				
60	974510200001	HPBP SPRAY ISOLATION VALVE ACT ASSY	1	No				
70	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No				
80	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No				
90	974510200002	HPBP SPRAY CONTROL VALVE ACT ASSY	2	No				
100	974510200003	HYDRAULIC POWER UNIT ASSY	1	No				
110	974510200003	HYDRAULIC POWER UNIT ASSY	1	No				
120	974510200003	HYDRAULIC POWER UNIT ASSY	1	No				
130	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set				
140	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set				
150	974510200005	HYDRAULIC SYSTEM COMPONENTS	1	Set				
160	974510200006	SPECIAL TOOLS - HPBP	1	Set				
170	974510200006	SPECIAL TOOLS - HPBP	1	Set				
180	974510200006	SPECIAL TOOLS - HPBP	1	Set				
190	974510200007	COMMISSIONING SPARES-HPBP	1	Set				
200	974510200007	COMMISSIONING SPARES-HPBP	1	Set				
210	974510200007	COMMISSIONING SPARES-HPBP	1	Set				
Sub total (i)								

Other charges (only if applicable)

Type of charge	Rate	Currency
Packing Charges		
Inspection/Documentation Charges		
CFR Charges		
Any Other Charges (please specify)		
Sub Total (ii)		

Commissioning assistance charges

Type of charge	Rate	Currency
Lumpsome amount for commissioning assistance at site (for both units) <i>(should be inclusive of travelling, accomodation, service and all other charges for min. seven (07) days, per unit and 2 days training on site during commissioning of valve)</i>		
Sub Total (iii)		

Per day charges for site assistance, in case the requirement at site exceed 07 days <i>(should be inclusive of travelling, accomodation, service and all other charges)</i> <i>(For information only. Will NOT be used for package rate calculation)</i>	
--	--

Total package cost subtotal (i)+(ii)+(iii)

Consignment package details (approximate details will suffice)

Net weight of the final packed consignment		Kgs
Dimensions of the consignment		L(mm) x B(mm) x H(mm)

Note:

- The prices for items/components that are to be supplied by the vendor's Indian office or counter-part, shall be quoted separately. The prices for such items/components should be in INR only.
- The prices for services/support that are to be rendered by the vendor's Indian office or counter-part, shall be quoted separately. The prices for such services/support should be in INR only.
- Commissioning charges should be mandatorily quoted. If any deviation is taken, stating that the commissioning charges will be quoted separately, the offer will be rejected.

ANNEXURE 2E
SCHEDULE OF DEVIATIONS
FORMAT

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

ANNEXURE 3A
PRICE BANK GUARANTEE
FORMAT

BANK GUARANTEE FOR PERFORMANCE SECURITY

(Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s))

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

IFSC AND MICR CODE

Dear Sirs,

1. In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) (VENDOR CODE) with its registered office at _____² hereinafter referred to as the 'Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

2. we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs -----⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

3. 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. _____.

4. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

5. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

6. We thebank 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 Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

7. We.....BANK further agree with the Employer that the Employer 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 Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

8. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier's liabilities.

9. This Guarantee shall remain in force upto and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.

10. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

11. Unless a demand or claim under this guarantee is made on us in writing on or before the⁸we shall be discharged from all liabilities under this guarantee thereafter.

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

13. We..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁶

- b) This Guarantee shall be valid up to⁷
- c) Unless the Bank is served a written claim or demand on or before (minimum 3 to 6 months from the expiry date ⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

14. We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

BANK EMAIL ID:

BANK PHONE NO:

AUTHORISED SIGNATORIES CELL PHONE NO:

BANK FAX NO:

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

ANNEXURE 3B
LIST OF CONSORTIUM
BANKS

List of BHEL's Consortium Bankers

1. State Bank of India
2. Canara Bank
3. Punjab National Bank
4. Bank of Baroda
5. Corporation Bank
6. Syndicate Bank
7. Oriental Bank of Commerce
8. Indian Bank
9. State Bank of Travancore
10. State Bank of Hyderabad
11. IDBI Limited
12. ICICI Bank Limited
13. HDFC Bank Ltd.
14. Kotak Mahindra Bank
15. The Hongkong and Shanghai Banking Corporation Ltd.
16. Standard Chartered Bank
17. Citi Bank N.A.
18. Deutsche Bank AG
19. Allahabad Bank
20. Andhra Bank
21. Central bank
22. Indian Overseas Bank
23. Punjab & Sindh bank
24. UCO Bank
25. Union Bank of India
26. United Bank of India
27. Vijaya bank
28. J P Morgan
29. Axis bank
30. The Federal Bank Limited
31. Indusind Bank
32. Yes Bank

**ANNEXURE TO MODEL CONCILIATION CLAUSE FOR CONDUCT OF
CONCILIATION UNDER THE BHEL CONCILIATION SCHEME, 2018**

BRIEF PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS

1. 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 herein:
2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counter-claims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings.
3. The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores Conciliation shall be carried out by 3 Conciliators nominated by BHEL.
5. The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
6. The first meeting of the IEC shall be convened by the IEC by sending appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.
7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within

15 days from the date of conclusion of the last hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case within 1 month from the date of conclusion of the last hearing.

8. Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC.
9. In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
10. Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft Settlement Agreement in terms of the recommendations.
11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract.
12. In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
13. Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.

14. In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.
15. The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.
16. Before submitting the draft settlement agreement to BHEL's Competent Authority viz. the Board Level Committee on Alternative Dispute Resolution (BLCADR) for approval, concurrence of the other party's Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
17. In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
18. A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the same out of complete freewill and consent, without any pressure, undue influence.
19. The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
20. Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall

however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.

21. Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.

22. The proceedings of Conciliation under this Scheme may be terminated as follows:

- a. On the date of signing of the Settlement agreement by the Parties; or,
- b. By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
- c. By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
- d. By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration.
- e. On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.

23. The Conciliator(s) shall be entitled to following fees and facilities:

Sl No	Particulars	Amount
1	Sitting fees	Each Member shall be paid a Lump Sum fee of Rs 75,000/- for the whole case payable in terms of paragraph No. 27 herein below.
2	Towards drafting of settlement agreement	In cases involving claim and/or counter-claim of up to Rs 5crores. Rs 50,000/- (Sole Conciliator)

Sl No	Particulars	Amount
		<p>In cases involving claim and/or counter-claim of exceeding Rs 5 crores but less than Rs 10 crores. Rs 75,000 (per Conciliator)</p> <p>In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator)</p> <p>Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.</p>
3	Secretarial expenses	<p>Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC.</p> <p>Where Conciliation is by multi member Conciliators –Rs 30,000/- (one time)- to be paid to the IEC</p>
4	<p>Travel and transportation and stay at outstation</p> <p>i) Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL)</p>	<p>As per entitlement of the equivalent officer (pay scale wise) in BHEL.</p>
	Others	<p>As per the extant entitlement of whole time Functional Directors in BHEL.</p>

Sl No	Particulars	Amount
		Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class.
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region / Business Group of BHEL. Without prejudice to the seat/venue of the Conciliation being at the location of concerned BHEL Unit / Division / Region / Business Group, the IEC after consulting the Parties may decide to hold the proceedings at any other place/venue to facilitate the proceedings. Unless, Parties agree to conduct Conciliation at BHEL premises, the venue is to be arranged by either Party alternately.

24. The parties will bear their own costs including cost of presenting their cases/evidence/witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
25. If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties.
26. The other expenditures/costs in connection with the Conciliation proceedings as well as the IEC's fees and expenses shall be shared by the Parties equally.
27. Out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove.

28. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 3 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
29. The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement, except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/regulatory body, as the case may be.
30. The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:
- a. Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - b. admissions made by the other party in the course of the Conciliator proceedings;
 - c. proposals made by the Conciliator;
 - d. The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
31. The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
32. None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
33. The Parties shall not initiate, during the Conciliation proceedings, any arbitral or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue

notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.

34. The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language.

INTEGRITY PACT**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to

demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors:
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.



For & On behalf of the Principal

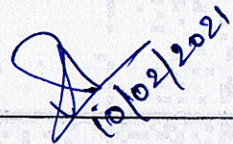
V. AVINASH
Sr. Engineer
 (Office Seal) **Purchase / Valves**
BHEL, TRICHY - 620 014

For & On behalf of the Bidder/

Contractor
 (Office Seal)

Place Trichy

Date 10/02/2021

Witness: 
 (Name & Address) _____

Witness: _____
 (Name & Address) _____

ARUN JOY
Sr. Engineer
Purchase / Valves
BHEL, TRICHY - 620 014

(Vendor's Letter Head)

DECLARATION

In line with the Government Public Procurement, Order No. P-45021/2/2017-PP (BE-II) dated 28.05.2018, we hereby certify that we,

Supplier Name:,

with Vendor Code, are local supplier meeting requirement of minimum local content (.....%) defined in as above orders for the following items in Enquiry Serial Nos of BHEL Enquiry No:

- Mention quoted items Enquiry Serial Nos -

Details of location at which local value addition will be made is as follows:

.....
.....

By issuing this declaration, we understand and are in acceptance to the following-

- False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- In case of debarment by any procuring entity for violation of the provisions of the Public Procurement (Preference to Make in India), Order 2017 we shall not be eligible for preference for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, the debarment takes effect prospectively from the date of uploading on the website(s) of The Department of Expenditure, GOI in such a manner that ongoing procurements are not disrupted.
- We undertake the onus of responsibility of submission of appropriately certified documents. We understand that BHEL is not at liability to verify the contents and will not be responsible for the declaration made by us. However, in case BHEL has any reason to doubt the authenticity of the local content, BHEL reserves the right to obtain the complete back up calculations before award of contract and we are liable to submit the same if requested by BHEL. We also understand that our bid is liable for rejection in case we fail to submit the details as requested by BHEL.

Date:

Seal and Signature of authorized signatory