

 434-003/A	ENQUIRY VALVES	Bharat Heavy Electricals Limited (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.	Phone: +91 (431) 257 7096/4047 Email: sivabala@bhel.in kathir@bhel.in	
		ENQUIRY NO.	DATE	DUE DATE FOR QUOTATION
		ENSFV00199	12.07.2018	09.08.2018
		Please quote Enquiry No., and due date in correspondences <i>This is only a request for quotation and not an order.</i>		
<u>Date, Time & Venue of tender opening:</u> 09.08.2018 at 14.30 Hrs. at The Tender Opening Cell/Valves Room No. -26, Building -24 Bharat Heavy Electricals Limited Tiruchirappalli - 620014, Tamilnadu, India Email: tender_cell@bheltry.co.in		<u>Scope of supply</u> Supply of Spring Loaded Bypass Valves as per the purchase specification enclosed. -List of Annexures 00. Annexure 0A - SCOPE OF SUPPLY 01. Annexure 1A - SPEC-SP-001-R01 02. Annexure 1B - QP FORMAT 03. Annexure 2A - GENERAL TERMS AND CONDITIONS 04. Annexure 2B - SPECIAL TENDER TERMS 05. Annexure 2C - CONFIRMATION TO THE TERMS AND CONDITIONS 06. Annexure 3A - PBG FORMAT 07. Annexure 3B - LIST OF CONSORTIUM BANKS 08. Annexure 4A - SCHEDULE OF DEVIATIONS 09. Annexure 4B - UNPRICED FORMAT 10. Annexure 4C - PRICED BID FORMAT		
The rate of Excise Duty and Sales Tax, Prevalent on the date of quotation, should be clearly indicated in the quotation itself. Please, submit your lowest quotation subject to our terms and conditions, for the above materials, so as to reach us on or before the due date by 14.00 Hrs. (IST) Quotations will be opened at 14.30 Hrs. (IST) on the due date in the presence of tenderers who may like to be present. Late tenders will not be considered.			Yours faithfully, For Bharat Heavy Electricals Ltd Sivabala Shanmugam Sr. Engineer/Purchase/Valves	

ANNEXURE 0A

SCOPE OF SUPPLY

ENSFV00199 - SCOPE OF SUPPLY

Item	Material Code	Material Description	Qty	Sale Order	Item	Project Name
10	974510170000	SPRING LOADED BYPASS VALVE - FDV-42	1	3200794	000614	MAITREE STPP 2 x 660 MW UNIT-1
20	974510170001	SPRING LOADED BYPASS VALVE - FDV-43	1	3200794	000615	MAITREE STPP 2 x 660 MW UNIT-1
30	974510170002	SPECIAL TOOLS AND TACKLES - SLBV	1	3200794	000616	MAITREE STPP 2 x 660 MW UNIT-1
40	974510170003	COMMISSIONING SPARES - SLBV	1	3200794	000617	MAITREE STPP 2 x 660 MW UNIT-1
50	974510170000	SPRING LOADED BYPASS VALVE - FDV-42	1	3200795	000503	MAITREE STPP 2 x 660 MW UNIT-2
60	974510170001	SPRING LOADED BYPASS VALVE - FDV-43	1	3200795	000504	MAITREE STPP 2 x 660 MW UNIT-2
70	974510170002	SPECIAL TOOLS AND TACKLES - SLBV	1	3200795	000505	MAITREE STPP 2 x 660 MW UNIT-2
80	974510170003	COMMISSIONING SPARES - SLBV	1	3200795	000506	MAITREE STPP 2 x 660 MW UNIT-2
90	974510170004	MAND.SPARE.SPRING LOADED BYPASS VALVE	1	3209106	000001	MAITREE STPP 2 x 660 MW MAND SPARES
			9			

ANNEXURE 1A

VALVE SPECIFICATION



365-147/B
31.08.16

BHEL – Tiruchirappalli – 620014,
India

Valves Engineering and R&D

PURCHASE SPECIFICATION

DOC No: **SPEC:SP:001** Rev: 01

Effective Date: **14/06/2018**

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Product: Spring Loaded Bypass Valves for BIFPCL MAITREE STPP – 2X660MW

Revision Record:

Rev. No	Date	Details of Revision
00	08 June 2018	First Release
01	14 June 2018	Clause 12. Painting Requirements Modified

1. Scope:

This specification covers the Design, Manufacture, Inspection & Testing at vendor's works, proper packing and delivery of Spring Loaded Bypass valves complete with all accessories as per the requirements mentioned in different sections of this specification.

2. Pre-Qualification Requirement:

- 2.1. Bidder shall have valid ISO 9001 certificate for their Quality Management System.
- 2.2. Bidder should have previously designed (either by self or under collaboration/licensing agreement), manufactured / got manufactured and supplied these valves for 500MW or higher size pulverized coal fired power generating units such that these valves are in successful operation in at least five (5) such units for a period of not less than two (2) years prior to 22-09-2015. The reference units should be at minimum two different sites.

(or)

Bidder should have previously designed (either by self or under collaboration/licensing agreement), manufactured / got manufactured and supplied these valves for 660MW or higher size pulverized coal fired power generating units such that these valves are in successful operation in at least three (3) such units for a period of not less than one (1) years prior to 22-09-2015. The reference units should be at minimum two different sites.

- 2.3. Certificate from end customer of reference units as per clause 2.2 regarding satisfactory performance of the valves shall be submitted by the bidder for considering their offer.

3. General Instructions:

- 3.1. It is not the intent to specify herein all the details of design and manufacture, however the equipment shall conform in all respects to latest applicable codes and standards, engineering and workmanship, and shall be capable of performing the required duties in a manner acceptable to engineer/ owner, who will interpret the meaning of drawing and specifications, and shall be entitled to reject any component or material, which in his judgment is not in full accordance herewith.
- 3.2. The omission of specific reference to any component/accessories necessary for the proper performance of Spring Loaded Bypass Valves shall not relieve the bidder of the responsibility of providing such facilities to complete the supply of Spring Loaded Bypass Valves at quoted prices.
- 3.3. 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
API-American Petroleum Institute



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ASME-American Society of Mechanical Engineers

ASTM -American Society for Testing and Materials.

AWS-American Welding Society

BS-British Standards Institute

Bangladesh Boiler Act, 1923 with amendments

ISA-Instrument Society of America

OSHA-Occupational Safety and Health Administration

DIN-Deutsche Industrie Norm

- 3.4. All materials, construction and design of the pressure parts shall conform in all respects to the applicable standards.
- 3.5. 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.
- 3.6. Nothing in this Specification shall be construed as relieving the Bidder of his responsibility for compliance with all applicable codes and regulations.
- 3.7. In case of any conflict between the above codes/Standards and this specification, the latter shall prevail and in case any further conflict in this matter, the interpretation of the specification by the BHEL engineer shall be final & binding.

4. Application:

Two banks of HP Heaters of 50% capacity on feed water side are installed in the regenerative feed cycle i.e. HPH-7A / 8A/ 9A & HPH 7B / 8B/ 9B. Each heater bank is provided with motor operated gate valves at the inlet & outlet. The two (2) feed water bypass lines, of 50% capacity each, are provided across HP Heater banks with spring loaded bypass valve (SLBV) FDV-42 & FDV-43 for facilitating individual as well as both heater banks isolation due to any operational problem.

5. Scope of Supply:

- 5.1. The valves complete with all accessories to be supplied shall be as per selection data in clause 9.
- 5.2. Loose items such as tools & tackles, spare parts for erection & commissioning and mandatory spares, etc.. indicated in clause 8 also form part of the scope of supply.
- 5.3. Applicable expanders/reducers to match the pipe shall be welded to valve and supplied.

6. Design and Construction:

- 6.1. All pressure parts shall be designed in accordance with applicable ASME BPVS 2015 Edition.
- 6.2. All valves shall be suitable for the service conditions i.e. flow, temperature and pressure under which they are required to operate and those performing similar duties shall be interchangeable with each other unless otherwise specified.
- 6.3. All valves shall be globe type construction.
- 6.4. The seat and disc shall be easily removable and shall be suitable for easy relapping.
- 6.5. Valves shall have pressure seal bonnet / bolted bonnet construction and the adjusting screw shall be covered under a cap.
- 6.6. An arrow indicating the direction of flow shall be embossed on the body of the valves.
- 6.7. Suitable lifting lugs and eyebolts shall be provided for valves of weight 500kg and above.



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Product: Spring Loaded Bypass Valves for BIFPCL MAITREE STPP – 2X660MW

- 6.8. All valves shall be of tight shut off design (zero leak) at room temperature before reaching the required differential set pressure across the valve.
- 6.9. Valve parts shall not vibrate or chatter and shall not be unduly noisy.
- 6.10. The valve seat areas shall be Hard faced (Stellite or Equivalent). Sealing arrangement shall be provided so that no leakage takes place through valve glands. Further, graphite packing rings or equivalent arrangement shall be provided for valve glands if required.
- 6.11. All Spring Loaded Bypass valves shall be butt weld type, edge preparation details of which shall be as per clause 11.
- 6.12. 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.
- 6.12.1. Manufacturer's Model Number
 - 6.12.2. Manufacturer's Serial Number
 - 6.12.3. Size and pressure rating of the valve
 - 6.12.4. Manufacturer's name/trade mark
 - 6.12.5. Month & year of manufacture
 - 6.12.6. Valve Set Pressure in kg/cm² (g)
 - 6.12.7. Valve Lift in mm
 - 6.12.8. Valve Tag No as applicable
 - 6.12.9. "X" value (Height from the valve bonnet top face to Spring adjusting screw's top face required to obtain set pressure)

7. Material of Construction:

- 7.1. The material of construction of the Body shall be as specified in the clause 9.
- 7.2. The materials of construction of the remaining parts shall be as per relevant code/standard governing the valves to suit the service conditions. These materials shall be subject to approval of the purchaser.
- 7.3. Materials used in manufacture of valves shall be of tested quality.

8. Loose Items:

- 8.1. Tools and Tackles - Bidder shall submit a list of complete set of all tools, tackles required for site erection, assembly, disassembly and proper maintenance of Spring Loaded Bypass Valves.
- 8.2. 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 gaskets, packing rings and seals for all valves etc., The vendor shall furnish a list of all spares along with the offer and such list shall be reviewed by BHEL and mutually agreed to.
- 8.3. Mandatory Spare – Bidder shall offer one (1) Spring Loaded Bypass valve as a mandatory spare with set pressure lower of the two valves but should be adjustable to required set pressure range.
- 8.4. Spare Parts for 3 Years of Operation - Recommended spare parts list for 3 years of operation shall be furnished for each valve. Detailed list of spare parts with position no. shall be furnished in the O&M manual.
- 8.5. Hydro Test Device (If applicable) – Hydraulic testing of the piping will be carried out at site after installation of the valves in pipeline. It should be possible to carry out the hydraulic test of the line with



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Spring Loaded Bypass Valve in position. Device to be used for this purpose shall be supplied. Vendor shall supply one no. hydro test device per Spring Loaded Bypass Valve per unit along with the main equipment and furnish the arrangement drawing for review.

8.6. Valve Seat Cutting & Grinding Machine - Offer shall include 1 No. On-site Spring Loaded Bypass valve seat cutting machine and 1 No. On-site seat grinding machine (common for all two Units).

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

9. Selection Data:

9.1.	Quantity per Unit	:	2 nos. Tagged FDV-42 & FDV- 43
9.2.	Type	:	Globe Type Spring Loaded Bypass Valve
9.3.	Size of Valve	:	To be decided by bidder based on sizing data.
9.4.	9.4.1. End Connection	:	Butt Welded
	9.4.2. Connecting Pipe Size	:	ID 290 mm x 53 mm Thk.
	9.4.3. Connecting Pipe Material	:	SA 106 GrC
9.5.	Number of Heater banks	:	2 Nos.
9.6.	Pressure drop across each heater bank	:	6.5 kg/cm ² at 1021.3 T/Hr
9.7.	Operating conditions	:	FDV-42: Valve shall pass 1021.3 T/Hr of feed water at 193.1 °C & 334.35 kg/cm ² (a). Set pressure – 7.5 kg/cm ² (g). FDV-43: Valve shall pass 1021.3 T/Hr of feed water at 193.1 °C & 334.35 kg/cm ² (a). Set Pressure – 8.0 kg/cm ² (g).
9.8.	Set Pressure range	:	Each valve shall be adjustable for opening when differential pressure settings are 6.0 kg/cm ² (g) to 9.0 kg/cm ² (g)
9.9.	Design Pressure and Temperature	:	390 kg/cm ² (g) and 200 °C
9.10	Valve Body Material	:	ASTM A216 WCC
9.11	Regulatory requirement	:	ASME BPVC 2015 Edition

10. Inspection and testing:

10.1. All Spring Loaded Bypass valves shall be inspected, tested and stamped as per ASME BPVC 2015 Edition.

10.2. All raw materials for pressure parts shall be certified as per ASME BPVC 2015 Edition.

10.3. Inspection of raw materials for pressure parts and of valves shall be done at supplier works and certified as per BS EN 10204 Type 3.2 by any ASME Authorized Inspection Agency or their subsidiaries.

10.4. Welding (Welding procedure & welder qualifications), NDT, Heat treatment, Testing, etc., shall be as per applicable sections of ASME BPVC 2015 Edition.

10.5. Material, Mechanical and Chemical tests shall be performed in a manner as specified in the relevant codes.



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- 10.6. All valve pressure retaining parts shall be subjected to hydrostatic test pressure as required by the 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.
- 10.7. Quality assurance plan for all components included in the scope shall be submitted along with the offer for BHEL's / owner's review & approval.
- 10.8. The material test certificates (correlated to melt number) shall be furnished by the bidder for identification and correlation.
- 10.9. For components like Body, Bonnet, Cap, Seat, Stem, Disc, Disc Guide, Spring, Spring Adjusting screw etc., material test certificates (typical) shall be furnished for identification & correlation.
- 10.10. 100% Blue matching of seats shall be carried out and records shall be maintained for verification by BHEL.
- 10.11. Each Spring Loaded Bypass valve shall undergo Hydrostatic Shell test, Seat test and Set Pressure test as per applicable codes and standards. Test procedure and acceptance criteria shall be submitted for BHEL's / owner's review & approval.
- 10.12. Hydrostatic Shell, set pressure and seat leakage tests shall be witnessed by BHEL/end customer personnel.
- 10.13. "X" value (Height from the valve bonnet top face to Spring adjusting screw's top face required to obtain set pressure) shall be punched on the name plate after the set pressure test is successfully conducted.

11. Edge Preparation:

The required d1 (Matching diameter) for the connecting pipe is 290mm.

Vendor shall use applicable style from the drawings shown below and should match the pipe matching diameter.



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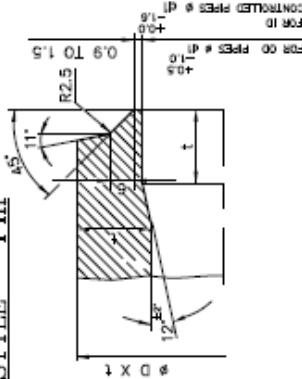
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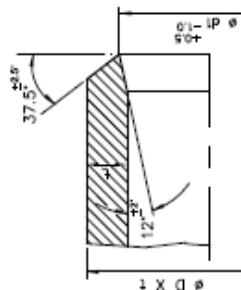
FIRST ANGLE PROJECTORIAL DIMENSIONS IN MILLIMETRES

92861-003-08-E

STYLE - Pm



STYLE - D_L



STYLE - P_L

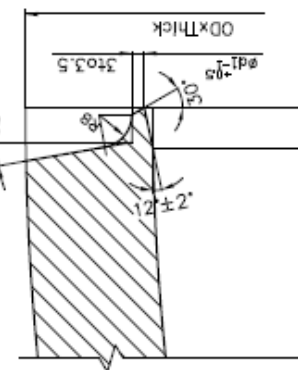
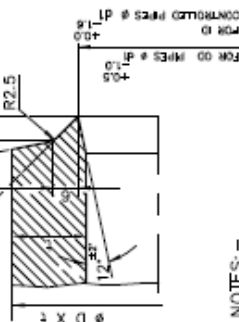


FIGURE-Xf

NOTE:
01. FOR GENERAL NOTES AND NOTES FOR WELDING REFER SHEET 1 OF 2.

STANDARD

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME		SIZE	DATE	NO OF
BHEL		BEARAT HEAVY ELECTRICALS LTD.			07.12.16	THICK
		PUMPING CENTRE, MADRAS			07.12.16	
BUTT		GRADE OF	WEIGHT (kg)	NAME OF ORIGINAL		
CODE		THE VOL. / E		MANUFACTURER		
TITLE		EDGE PREPARATION		DRAWING No.		
		DETAILS		3-80-300-19825		
		U 01		04		
				SHEET 2 OF 2		



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12. Painting Requirements:

12.1. Surface preparation: SSPC-SP-10/ Blast Cleaning.

12.2. **Primer:** Inorganic Ethyl Zinc Silicate Primer, 1x65 microns. (% Zn content in non-volatile portion of paint = 75 minimum; Volume solids is 60% minimum; Grey shade).

12.3. **Finish:** Heat Resistance Silicone Aluminium paint, 2x20 microns. (Heat resistance of this paint shall be upto 400 °C and Salt spray (**5% NaCl**) resistance shall be upto 96 hours)

13. Packing Requirements:

13.1. Each valve shall be drained, cleaned, prepared and suitably protected in such a way so as to minimize the possibility of damage and deterioration during transit and storage.

13.2. Valve has to be dispatched in total assembled form and in upright position.

13.3. Proper care shall be taken to avoid damage to the painted surface during transit.

13.4. Valve Tag Nos. shall be incorporated in all the dispatch documents.

13.5. Machined surfaces shall be suitably protected.

13.6. 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.

13.7. All the valves shall be packed suitably in wooden/steel cases in order to avoid damage during transit and also during storage at site.

13.8. 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.

13.9. All threaded connections shall be plugged or capped with standard pipe plugs or caps.

13.10. Spare parts shall be packed separately and clearly marked. Spares shall also be suitably packed for transit and long storage period at site.

14. Document Requirements:

All drawings, documents & literatures shall be in English language and in the Metric measurement system.

The following documents shall form part of offer:

14.1. Compliance to the specification.

14.2. Documents related to clause 2 of this specification.

14.3. 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.

14.4. Even if there is no deviation from the tender document, the Bidder shall indicate as "no deviations".

14.5. Cross section drawing of the valve for which documents required in clause 2.0 are provided shall be submitted.

14.6. Manufacturer's descriptive and illustrative literature on the type of valve offered.

14.7. A breakup of the offered equipment shall be submitted for review.

14.8. Technical datasheet of the valve shall be submitted.



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- 14.9. 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.
- 14.10. Cross sectional drawing and General arrangement drawing with mounting details and recommended orientation, BOM, Face to Face & overall dimensions, marking for identification of recommended spare components. Maximum allowable forces and moments on each weld end of the valve shall be indicated in the dimensional drawings of the valves.

Note: Since the parameters included in the specification are FINAL, the dimensional drawings & cross sectional drawings of the valves submitted along with the offer shall be final and the same shall not be subject to revision in the event of order.

The following documents shall be provided after placement of order:

- 14.11. Valve sizing calculations and Spring design calculations shall be submitted.

Note: The calculations submitted as per 14.11 should show (i) the discharge capacity of the valve at various set pressures and (ii) Differential pressure for valves when starting to open and when fully open.

- 14.12. Testing procedure of the valve for hydraulic shell test, seat test and set pressure test which should also indicate the standards to which the testing will be performed for review.
- 14.13. Quality plan for approval.
- 14.14. Shipment weight and volume details.
The mere approval of documents like drawings, data sheets, Spring 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 valves have to perform satisfactorily at the service conditions and at the end user place.
- 14.15. Equipment preservation procedure during shipment, pre-erection storage period & extended storage period.
- 14.16. Operation, Maintenance and erection manual in consisting of details of valve and catalogues for bought out items - 1 hard copy and 2 soft copies (PDF format only) 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.
- 14.17. All GA drawings, Test Certificates (as per BS EN 10204 Type 3.2) and cross sectional drawings.
- 14.18. Bidder shall submit the list of items procured from sub vendors along with their model number and manufacturer details.
- 14.19. In case of loose supply of components/systems, necessary drawings & instructions for assembly/subassembly shall be provided.



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15. Break up for supply:

Sl.No	Item Description	Set Pressure	Tag Number	Material Code	Quantity /660MW	Unit Weight
15.1.	Spring Loaded Bypass valve	7.5 kgf/cm ² (g)	FDV-42	974510170000	1 No	Vendor to indicate along with offer
15.2.	Spring Loaded Bypass valve	8.0 kgf/cm ² (g)	FDV-43	974510170001	1 No	-do-
15.3.	Special Tools and Tackles - Complete set of all special tools, tackles required for site erection, assembly, disassembly and proper maintenance of Spring Loaded Bypass Valves.	-	-	974510170002	1 set*	-do-
15.4.	Commissioning spares - consisting of all gaskets, packings and any other components which needs to be replaced when a valve needs to be disassembled and assembled	-	-	974510170003	1 set**	-do-
15.5.	Mandatory Spare – Spring Loaded Bypass valve with set pressure 7.5 kgf/cm ² (g)	7.5 kgf/cm ² (g)	-	974510170004	1 No	-do-
15.6.	Valve Hydro test device	-	-		1 No***	-do-
15.7.	Valve Seat cutting machine	-	-		1 No***	-do-
15.8.	Valve Seat grinding machine	-	-		1 No***	-do-

* For Clause 15.3. – 1 (One) set shall consist of complete set of special tools & tackles required for 1 (one) spring loaded bypass valve.

** For Clause 15.4. - 1 (One) Set shall consist of complete set of commissioning spares required for 2 (two) spring loaded bypass valves.

*** Bidder to quote for one number each only (common for two 660 MW units) and these items will not be considered for evaluation of offer.

Signature		
Name	M. Chaitanya Kumar	Mallemala Sujana Vinod
Designation	Senior Engineer	Deputy Manager
Date	14 June 2018	14 June 2018
Action	Prepared By	Reviewed & Approved By

ANNEXURE 1B

QUALITY PLAN FORMAT

MFGR.'s LOGO		MANUFACTURER'S NAME AND ADDRESS		MANUFACTURING QUALITY PLAN				PROJECT : PACKAGE : CONTRACT NO. : MAIN-SUPPLIER:						
				ITEM :		QP NO.:							REV.NO.:	
				SUB-SYSTEM:		DATE:		PAGE: OF....						
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C / N					M	C	N	
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.

		LEGEND: * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER C: MAIN SUPPLIER, N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE, CHP: NTPC SHALL IDENTIFIED IN COLUM "N" AS ' W"	DOC. NO.:		REV..... CAT.....				
MANUFACTURER/ SUB-SUPPLIER			MAIN-SUPPLIER						
SIGNATURE					FOR NTPC USE				
				REVIEWED BY		APPROVED BY		APPROVAL SEAL	

ANNEXURE 2A
GENERAL TERMS &
CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS (ENSV00199)

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 tender:**

i. ~~Tender called through E-Procurement mode: The bidder shall submit the bid online in BHEL e-Procurement portal at~~
<https://bheleps.buyjunction.in>

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

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

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

- c. **Late tenders:** Tender received after 2.00 pm on due date will be considered as Late tender. Late tenders will not be considered under any circumstance.
- d. **Regulations:** Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested. All amounts shall be indicated both in words as well as figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- e. **PVC:** Price Variation clause not acceptable. Prices should be firm.
- f. **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 due date of the enquiry. They should be clearly marked with the enquiry No and date on the outside cover to facilitate identification.
- h. **GST Number:** GST registration number, HSN number (Item wise) with applicable taxes should be mentioned in quotation. If the vendor is not GST registered the offer is liable for rejection.
- 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".
- j. **Confirmation:** Confirmation for compliance is to be given in the offer for all the techno commercial conditions specified in the specification.

2. COMMERCIAL TERMS & CONDITIONS:

a. **Terms of Payment:**

For Indigenous Suppliers: 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores/ Site acknowledgement.

Any deviation in the above payment terms except payment through LC/Advance will attract loading as "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidder. Offers of indigenous Suppliers with payment terms as CAD at site, Confirmed LCs, Advance payment or any other payment terms are liable for rejection.

For Import Supplies: Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account.

Any deviation in the above payment term will attract loading as "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS (ENSV00199)

In case of Usance LCs the loading will be considered @ 1.5% on the offered Value. For unconfirmed LC at sight the loading will be considered @ 3.5% on the offered Value. CAD at site, Confirmed LCs, Advance payment or any other payment terms are liable for rejection.

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

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

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

c. Delivery Terms:

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

For import Supplies: CFR/CIF **Bangladesh Sea Port** as per incoterm 2010

- d. Validity of Offer:** Prices should be fixed and valid for 120 days from the date of tender opening
- e. Delivery period:** Delivery schedule will be **24 Weeks** from the date of PO. If supplier offers more than the required delivery period BHEL will operate 0.5% loading factor for evaluation of their offer for every week delay.
- f. Risk Purchase:** The purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of seller either the whole of goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. Supplier shall be liable for any loss which the purchaser may sustain by reason for such risk purchases in addition to penalty at the rate mentioned in clause 2 b above. Non acceptance to risk purchase clause the offer is liable for rejection.
- g. Guarantee Clause:** The vendor shall give a guarantee for the performance of his supplies for a period of eighteen months from the date of dispatch or twelve months from the date of commissioning whichever is earlier.
- h. Miscellaneous:** Any conditions which might have been quoted by the seller and are in contravention to the terms of PO and which have not been specifically accepted by Purchaser will not be applicable to the contract/PO.
- i. Performance Bank Guarantee:** If tender Calls for Performance Bank Guarantee, Vendor should provide a performance bank guarantee (PBG) in BHEL format for 10% of the total Purchase order value valid for warranty/guarantee period with an additional claim period of 2 months. PBG should be issued from list of consortium banks.

3. Compliance / Acceptance required for following points to ensure Input Tax Credit

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



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GENERAL TERMS AND CONDITIONS (ENSV00199)

- f. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty (if any) will be deducted/recovered for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.

4. Special Provisions for Micro and Small Enterprises (MSE):

- a. 20% of the tendered quantity is earmarked for MSE suppliers in this tender.
- b. Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC/ST entrepreneurs.
- c. In case MSE vendor participating in the tender quotes within the price band of LI +15%, they will be allowed to supply the portion of the requirement subject to acceptance of LI price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.
- d. MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

3. GENERAL CONDITIONS

- a. BHEL reserves the right to finalize the tender as per item serial number wise or as a total package or project wise. Separate orders will be released for each project and documents should be supplied for each order separately.
- b. BHEL reserves the right to increase or reduce or split the Tender Quantity and to NOT to order for some or all material based on the changes in project.
- c. BHEL shall have the right to visit vendor works during the execution of contract along with end customer for verifying status, inspection and testing of the material.
- d. BHEL reserves the right to negotiate or re-float the tender in case the quoted prices are not acceptable.
- e. Supplier shall arrange packing to avoid lose or damages during Road Transport, Site handling & Storage.
- f. BHEL reserves the right to finalize the tender either through price bid opening or through Reverse Auction route.
- g. BHEL reserves the right to reject the offer of a particular bidder due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units.
- h. The Drawings and Technical documents given in this enquiry are the sole property of BHEL. This should not be misused in any form.
- i. Purchase Order, PO Item serial number, Material code, Quantity should be clearly marked on the packing
- j. Confirmation for compliance is to be given in the offer for all the conditions specified above and to the respective Purchase Specification.
- k. If any supplier is not honouring their own quotation or any of its conditions within the validity period, the action will be taken against those suppliers in line with "Guidelines for suspension of business dealings with suppliers/contractors" (refer www.bhel.com)

4. 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. **Online Submission:** Supplier should upload the soft copy of all Test Certificates in BHEL website <http://vis.bheltry.co.in/vis/index.jsp> at Vendor information system tab.
- c. **To Purchase:**
 - i. **FOR BHEL TRICHY case-** Original Invoice, duplicate for transporter copy, Packing list, LWB and Delivery challan.
 - 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.
- d. **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.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS (ENSFV00199)

5. TENDER EVALUATION:

a. PART I Techno-commercial Bid.

- i. All vendors should submit General arrangement drawing, datasheet and C&I diagram (If any) of the offered product
- ii. Point by point technical confirmation of all pages of our technical specifications and commercial conditions are required with your sign and seal along with techno commercial Offer.
- iii. Offers from supplier not having technical capability or not agreed for commercial terms, will be rejected.

b. PART II Price Bid.

- i. Bidders qualified for both part I will be intimated for participating in priced bid opening/Reverse Auction.
- ii. L1 bidder will be decided based on landed cost for the equipment to BHEL.
- iii. For evaluation, the exchange rate shall be taken as TT selling rate of SBI on date of Part-1 bid opening.

ANNEXURE 2B
SPECIAL TERMS AND
CONDITONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

SPECIAL TERMS AND CONDITIONS (ENSFV00199)

1. All material should be inspected by **ASME** approved inspection agency, Customer and BHEL.
2. **Performance Bank Guarantee is Applicable:** Vendor should provide a performance bank guarantee (PBG) for 10% of the total Purchase order value valid for a guarantee period with an additional claim period of 2 months. Bank guarantee should be as per BHEL format from list of consortium Banks (Annexure 3B).
3. Evaluation will be as **total package** with cost to BHEL which will include Commissioning spares and commissioning assistance.
4. Delivery should be **24 weeks** from date of purchase order and if supplier offers more than this delivery period BHEL will operate 0.5% loading factor for evaluation of their offer for every week delay.
5. **Guarantee Period:** The complete system shall be guaranteed for 24 months of trouble free performance from the date of shipment or 18 months from commissioning date whichever is earlier. In case of any failure or trouble reported from site, the supplier shall depute their representative immediately to attend the problem and replace the defective components/parts, free of cost.

Loading Criteria

1. Any deviation in the payment term will attract loading as mentioned. "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.
2. In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value.
3. For LC at sight the loading will be considered @ 3.5% on the offered Value.
4. Normally CAD at sight, Confirmed LCs and Advance payment are liable for rejection.
5. Any deviation from the LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).

ANNEXURE 2C
CONFIRMATION TO TERMS
& CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014. India

GENERAL TERMS AND CONDITIONS(ENSFV00199)

<u>TERMS & CONDITION</u>	<u>VENDOR CONFIRMATION</u>
a. Terms of Payment: Indigenous Supply: 100% after 45 days on satisfactory receipts and acceptance of material at BHEL stores/ Site acknowledgement. Import Supply: Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents, specified in PO, at BHEL bank. Respective bank charges to respective account. Offers with payment term as Confirmed LC and advance payment will be rejected.	
b. Liquidated Damage: Liquidated damages shall be 0.5% of the total order value or part thereof subject to a maximum of 10% of the total order value.	
c. Delivery Terms: <u>For Indigenous Supplies:</u> FOR BHEL Trichy <u>For import Supplies:</u> CFR/CIF Bangladesh seaport as per incoterm 2010	
d. Validity of Offer: Prices should be valid for 120 days from the date of opening of this tender.	
e. Risk Purchase: Alternatively, the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of seller either the whole of goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. Supplier shall be liable for any loss which the purchaser may sustain by reason for such risk purchases in addition to penalty.	
f. Guarantee Period: The complete system shall be guaranteed for 24 months of trouble free performance from the date of shipment or 18 months from commissioning date whichever is earlier. In case of any failure or trouble reported from site, the supplier shall depute their representative immediately to attend the problem and replace the defective components/parts, free of cost.	
g. Delivery period: Delivery period should be within 24 weeks from date of PO	

ANNEXURE 3A
PRICE BANK GUARANTEE
FORMAT

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

PERFORMANCE BANK GUARANTEE

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

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

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

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

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

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

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

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

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

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

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

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

In witness whereof we....., (indicate the name of Bank) have hereunto setout Bank Seal the _____ day _____ month 200

BANK E-MAIL ID:

BANK PHONE NO.

BANK FAX NO:

ANNEXURE 3B
LIST OF CONSORTIUM
BANKS

List of Consortium Bank			
	Nationalised Bank		Nationalised Bank
1	Allahabad bank	19	Vijaya Bank
2	Andhra bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign bank
5	Corporation bank	21	CITI Bank N.A
6	Central bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24	Standard Chartered Bank
9	Oriental bank of Commerce	25	The Royal Bank of Scotland N.V.
10	Punjab National Bank	26	J P Morgan
11	Punjab & Sindh Bank		Private bank
12	State Bank of India	27	Axis Bank
13	State Bank of Hyderabad	28	The Federal Bank Limited
14	Syndicate Bank	29	HDFC
15	State Bank of Travancore	30	Kotak Mahindra Bank
16	UCO Bank	31	ICICI
17	Union Bank of India	32	Indusind Bank
18	United Bank of India	33	Yes Bank

ANNEXURE 4A

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 4B
UNPRICED BID FORMAT

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MODEL UNPRICE BID FORMAT

Currency	
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Enq SI No.	Description	Unit	Qty	Unit Price in Currency
1				Quoted/Not Quoted
2				Quoted/Not Quoted
3				Quoted/Not Quoted
4				Quoted/Not Quoted
5				Quoted/Not Quoted
.				Quoted/Not Quoted
.				

	Total CIF Value in Currency			Quoted/Not Quoted
	Validity of Price			
	Consignment Package Details			
	Approximate Net / Cross Weight in Kgs			
	Dimension of Consignment			

Signature & Seal of Vendor

NOTE:

The Unpriced Bid should be submitted strictly in line with the above **FORMAT**

ANNEXURE 4C
PRICED BID FORMAT

BHEL Enquiry No. & Date

--

Vendor's Offer Ref No. & Date

--	--

MODEL PRICE BID FORMAT**Currency**

--

Enq SI No.	Description	Unit	Qty	Unit Price in Currency	Value in Currency
1					
2					
3					
4					
5					
.					
.					

	Total CIF Value in Currency				
	Validity of Price				
	Consignment Package Details				
	Approximate Net / Cross Weight in Kgs				
	Dimension of Consignment				

Signature & Seal of Vendor**NOTE:**The Price Bid should be submitted strictly in line with the above **FORMAT**