

 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
		ENSFV00194	07.06.2018	02.07.2018
		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> 02.07.2018 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 Inconel Valves as per the purchase specification enclosed. -List of Annexures 01. Annexure 0A - SCOPE OF SUPPLY 02. Annexure 1A - <NOT APPLICABLE> 03. Annexure 1B - CV SPEC001-Rev3 04. Annexure 1C - <NOT APPLICABLE> 05. Annexure 1D - <NOT APPLICABLE> 06. Annexure 1E - QP FORMAT 07. Annexure 2A - GENERAL TERMS AND CONDITIONS 08. Annexure 2B - SPECIAL TENDER TERMS 09. Annexure 2C - IBR APPROVED INSPECTION AGENCIES 10. Annexure 2D - CONFIRMATION TO THE TERMS AND CONDITIONS 11. Annexure 3A - PBG FORMAT 12. Annexure 3B - LIST OF CONSORTIUM BANKS 13. Annexure 4A - <NOT APPLICABLE> 14. Annexure 4B - SCHEDULE OF DEVIATIONS 15. Annexure 4C - UNPRICED FORMAT IMPORT 16. Annexure 4D - PRICED BID FORMAT IMPORT		
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 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) 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

ENSFV00194 - SCOPE OF SUPPLY

Sl.No.	Material	Description	Qty
10	979990260000	1"-PR165KG/SC-T735D.C-GLV-INCONEL-SW-HO	2
20	979990630000	1-1/2"-P165KG/SC-T735D-GLV-INCONEL-SW-MO	2
30	979990640000	1-1/2-P165KG/SC-T735D-RGLV-INCONEL-SW-MO	2
TOTAL			6

ANNEXURE 1A

DATA SHEET

<not applicable>

ANNEXURE 1B

VALVE SPECIFICATION



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Product: TECHNICAL SPECIFICATION FOR GLOBE VALVES OF SIZE UP TO AND INCLUDING 2"

Revision Record:

Rev. No	Date	Details of Revision
01	20 November 2014	Break up for supply of Globe valves included.
02	20 July 2017	1) Inconel material removed from title 2) ½" valve included.
03	16 October 2017	1) 1½" valve included. 2) Electrical actuator specification is included for Motorised valves.

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Product: TECHNICAL SPECIFICATION FOR GLOBE VALVES OF SIZE UP TO AND INCLUDING 2"

1. GENERAL:

This specification covers design, material, construction features, manufacture, inspection, testing, painting and packing requirements of globe valves of size up to & including 2" at vendor's or/ and his sub vendor's works and delivery to project site. The offer shall be submitted along with all the documents required in this specification. Offer without all supporting documents requested in this specification will not be considered.

2) CODES AND STANDARDS:

2.1) The design, material, construction, manufacture, inspection and testing of valves shall conform to the latest applicable codes and standards.

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

2.2) The material specification shall be as per DIN material no. 2.4663/ ASTM B564 UNS N06617

2.3) Nothing in this Specification shall be construed as relieving the Bidder of his responsibility for compliance with all applicable codes and regulations.

2.4) The valves covered under this specification shall be tailor made for the design temperatures and pressures as mentioned in Annexure I.

3) DESIGN REQUIREMENTS:

3.1) These valves shall be used for services like water, steam, superheated steam and gas unless otherwise specified in specific requirements.

3.2) The valves of similar size/rating shall be interchangeable with one another unless otherwise approved.

3.3) Seat on body shall integral as per the standard requirement.

3.4) These are valves coming under the purview of Indian Boiler Regulation and shall satisfy all the requirements of IBR-1950.

3.5) Materials:

3.5.1) Material requirement is indicated in Annexure I enclosed with the specification. Materials shall be as per ASTM or IS or other National/ International Standards. For materials other than ASTM, corresponding equivalent ASTM standard and nominal composition shall be indicated.



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4) CONSTRUCTION FEATURES:

4.1) End Connections:

4.1.1) Socket details of valves with socket welding ends shall be as per ASME B16.11 of corresponding pound-rating and shall suit pipe size as indicated in specific requirements.

4.2) Globe valves shall be of outside screw and yoke type with rising spindle and shall be capable of being closed against the rated pressure.

4.3) Gland & gland flange shall be separate pieces for uniform tightening of gland packing.

4.4) All globe valves shall have an arrow indicating the direction of flow embossed on the valve body. The direction of flow for globe valves shall be from under to over the disc.

4.5) Globe and Regulating Globe valves shall have back seating arrangement for replacement of packing while working under full working pressure.

4.6) All Globe valves shall have conical or spherical or flat seating.

4.7) For Globe valves, the disc shall be free to revolve on the spindle.

4.8) Suitable hard facing of minimum thickness 1.6 mm shall be made on valve seatings.

4.9) Stem shall have hardness 200 BHN (Min.)

4.10) All hand operated valves shall be closed by rotating the hand wheel in the clockwise direction when looking at the face of the hand wheel. The face of each hand wheel shall be clearly marked "Open" and "Shut" with arrows indicating the direction of rotation to which they refer. Each valve shall be fitted with a tag plate of stainless steel indicating the valve Tag No., duty or service condition intended and the function of the valve. This is in addition to nameplates and labels being provided by the manufacturer as per MSS SP 25.

4.11) All Globe valves shall be designed for reconditioning of seating surfaces and replacement of stem and disc without removing the valve body from pipeline.

4.12) All valves shall have a construction of pressure seal type. Valves shall preferably have construction of pressure seal type. For pressure seal bonnet type valves, suitable inlay in the gasket area and gaskets with standing the pressure and temp as mentioned in Annexure-I or other acceptable proven features shall be provided.

4.13) All valves shall be suitable for the service (i.e.) flow, temperature and pressure under which they are required to operate & those performing similar duties shall be interchangeable with one another unless otherwise approved.

4.14) Manufacture of Valves:

4.14.1) Particular care shall be taken to ensure that all flash and unwanted material is properly removed from Forging before the valves manufacture is started.

4.14.2) Valves shall be manufactured strictly in line with the purchase order specifications.

4.14.3) Provision shall be made for suitable lubrication wherever necessary to ensure a smooth easy operation and freedom from undue wear.



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5) SHOP INSPECTION AND TESTS:

All quality and stage/ final inspection requirement (minimum) shall be carried out as per the relevant Purchaser approved Quality Plan. However if customer would like to associate for witnessing or verification, the same would be indicated in the QP before manufacturing of valves.

5.1) For body, bonnet and cover, the material test certificates (correlated to **heat** number) shall be furnished by the vendor for identification and correlation.

5.2) For components like spindle, body seat, disc/ wedge seat **hardfacing**, back seat bushing, bonnet/ cover bolts and nuts etc. material test certificates (typical) shall be furnished for identification & correlation.

5.3) The valve shall be capable of seat tightness as spelt in the testing standard on closing by hand without lever.

5.4) Minimum NDT requirements extent of check for Pressure retaining parts/components shall be as follows.

5.4.1) Steel Forgings:

i) 100% MPI and 100% UT on all areas shall be carried out on all forgings for valves with rating 1500 and above. Also UT shall be carried where the thickness/ diameter is greater than 40mm.

ii) Dye penetrate test as per ASTM E165 shall be performed on all machined surfaces of trims.

iii) Hardness testing shall be done on body seat, disc/wedge facing, spindle, backseat bushing, thrust plate etc. The Purchaser's representative shall also check hardness of random samples.

iv) 100% Blue matching of seats shall be carried out and records shall be maintained for verification by the purchaser.

5.5) Hydrostatic/ Air tests:

5.5.1) All valves shall be tested hydraulically for strength, tightness of seats and tightness of back seating at the pressures as mentioned in API 598/ BS 6755 Part-1.

5.5.2) Globe valve seats shall also be tested on air at a pressure of 6 kg/cm².

5.6) Duration of the tests:

5.6.1) The duration of test, leakage rate/ acceptance criteria are as per relevant testing standard.

5.7) Dimensional and functional checks shall be carried out.

5.8) Valves coming under the purview of IBR shall be inspected by Independent Inspecting Authority approved by Indian Boiler Board and the test certificate in IBR form III-C duly countersigned by IBR approved authority shall be submitted. All the valves shall also be inspected by the Purchaser's representative.

5.9) The cleaning and painting procedure shall be drawn by the supplier and submitted for Purchaser's approval.

5.10) Cleaning and protection for dispatch:

5.10.1) Machined surfaces shall be suitably protected.



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5.10.2) Valves shall be protected by means of polythene caps / rubber and protectors to prevent damage to ends & also to avoid foreign material entering the valve while shipment and storage.

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

5.10.4) Valve tag nos. shall also be incorporated in all the dispatch documents.

6) DATA/ DOCUMENTS/ DRAWINGS TO BE FURNISHED:

6.1) Relevant drawings / leaflets for the offered valves showing following information:

6.1.1) Complete cross sectional arrangement of the valve. Vendor shall specify the valve overall length, height (both open & closed condition) in addition to other general dimension and weight of valves in their GA drawings.

6.1.2) Binding dimensions, dismantling clearances & weights.

6.1.3) The vendor shall specify the Cv values for the valves offered after award of contract.

6.1.4) Bill of material incorporating all the materials of construction of various parts along with IS/ ASTM/ ASME standards to which the materials confirm.

6.1.5) Special features, if any, as called in the specific requirements.

6.2) Relevant catalogue/ leaflet of the actuators.

6.3) Storage, operation and maintenance manual for valves and actuators (one copy of this shall be enclosed with the packing slip / wooden cases so that at receiving end care can be taken for proper storage & commissioning) after award of contract.

6.4) Quality Plan

6.5) Special Tools & Tackles And Special Equipment

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

6.6) Spare Parts For Erection & Commissioning

It will be the responsibility of the bidder to provide all commissioning spares required for initial operation till satisfactory completion of the trial operation. One set of seal kit (packing rings and gaskets) to be supplied along with Valves.

6.7) Spare parts for 3 years of operation

Recommended spare parts list for 3 years of operation shall be furnished for each valve and actuator. Detailed list of spare parts with item no. shall be furnished in the O&M manual. Bidder shall indicate price of each spare part separately. BHEL reserves the right to order any or all of the components/items/quantity offered as recommended spares.



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6.8) Drawings / documents submission schedule:

The mere approval of documents like drawings, data sheets, wiring diagrams, actuator sizing calculations, flow calculations, etc., will not however relieve the suppliers from meeting our specification requirements, relevant product and testing standard requirements and general accepted engineering principles. Ultimately the valves have to perform satisfactorily at the service conditions and at the end user place.

7) DEVIATIONS:

7.1) If the bid submitted has got any deviation from the technical stipulation in the tender document, the Tenderer shall tabulate in the appropriate "schedule of deviation" furnishing 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.

7.2) Even if there is no deviation from the tender document, the Tenderer shall submit the deviation form and indicate as "no deviations".

8) GURANTEE:

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

9) BREAK UP FOR SUPPLY OF GLOBE VALVES:

S. No.	EQUIPMENT	PART NO.	QTY/ UNIT
1	1"-PR164.4KG/SC-T735D.C-GLV-INCONEL-SW-H	979990260000	2 No.
	1/2"-PR164.4KG/SC-T735D.C-GLV-INCONEL-SW-H	979990380000	6 No.
	1-1/2"-P165KG/SC-T735D-GLV-INCONEL-SW-MO	979990630000	1 No.
	1-1/2"-P165KG/SC-T735D-RGLV-INCONEL-SW-MO	979990640000	1 No.
2	Special Tools & tackles required for 1 No. of equipment offered against S.No. 1 above	---	1 SET
3	Spares parts for erection and commissioning	---	1 SET
4	Spare parts for 3 years of operation	---	1 SET

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



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Annexure – I

S. NO.	VALVE TYPE	PIPE MATERIAL / SIZE	SIZE (NPS)	VALVE MATERIAL	PRESSURE	TEMP	QTY	Mode of operation
					[kg/cm ² (g)]	(°C)		
1	GLOBE VALVE	UNS N06617 Dia 33.4	1"	UNS N06617	164.4	735	2	Hand
2	GLOBE VALVE	UNS N06617 Dia 21.3	1/2"	UNS N06617	164.4	735	6	Hand
3	GLOBE VALVE	UNS N06617 Dia 48.3	1 1/2"	UNS N06617	164.4	735	1	Motor
4	REGULATING GLOBE VALVE	UNS N06617 Dia 48.3	1 1/2"	UNS N06617	164.4	735	1	Motor



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Annexure – II

Technical specification for electrical valve actuator with Integral starter

- 1.1 Actuator shall be of totally enclosed weather proof and dust proof construction with NEMA6 enclosure and shall be suitable for outdoor applications.
- 1.2 Actuator shall be suitable for 415V, 3 Phase, 3 wire, 50 Hz power supply. Control voltage for starter shall be derived from the 415 V input supply.
- 1.3 Opto isolation shall be provided for the remote open / close / stop command inputs of 24 V DC
- 1.4 Actuator shall be sized such that it can open/close the valve at rated speed against designed differential pressure at 90% of the rated voltage
- 1.5 Interface with the control system shall be with 24 V DC interposing relays (coil burden of 2.5VA) in the actuator. The interposing relays shall be energized by 24 V DC signal from external control system.
- 1.6 A common potential free contact (disturbance monitoring signal relay) shall be available to annunciate overload, thermostat, control supply failure Local/remote selector switch at local & other protection operated.
- 1.7 The actuators shall be designed to take the full thrust. All Gears used shall be metallic. Fiber gears are not acceptable. Metallic gear trains used shall be self-locking to prevent drift under torque switch (wherever applicable) spring pressure when motor is de energised.
- 1.8 Each actuator shall have a hand wheel fitted on it for manual operation in case of power failure. It shall be possible to fully open /close the valve with the hand wheel. The hand wheel shall be designed such that its engaging lever declutches automatically when the power supply to the motor is restored.
- 1.9 Motor shall be conforming to IS 325 / IEC 60034 or any other equivalent international standard for all requirements unless otherwise specified herein. Motor shall have class F non-hygroscopic insulation with tropicalisation suitable for polluted dusty and



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corrosion atmospheres of relative humidity 100%. Motor shall be designed for an ambient temp of 50 degree C. However, the temperature rise of the motor winding shall be limited to the maximum temperature allowed for class 'B' insulation.

- 1.10** Thermal overload relay shall be provided in addition to thermostats embedded in motor winding. Overload relay and thermostats shall be connected in control circuit to trip actuator in case of overload.
- 1.11** Automatic phase correction facility and single phasing prevention shall be available.
- 1.12** Open/Close actuator shall have two Nos. of resistance type position transmitter for remote indication. Rating of position transmitter 100ohms, 50 Volts, AC/DC. A suitable fixed dropping resistor must be put in series for limiting the power consumption. For regulating and inching duty applications, actuators shall have one LVDT type electronic position transmitter (EPT), suitable for 24V DC with an output of 4-20mA and 2 wire.
- 1.13** Two numbers adjustable torque limit switches (one for open and one for close) shall be provided. Each shall be with 2 NO and 2 NC potential free contacts.
- 1.14** Two numbers of end position limit switches (one for open and one for close) each with 2 NO and 2 NC potential free contacts shall be provided. Apart from this two additional Auxiliary limit switches (one for open and one for close) each with 2 NO and 2 NC potential free contacts shall also be provided.
- 1.15** All the limit switches shall be with silver plated with high conductivity and non-corrosive type contact rating sufficient to meet 240 volts, AC, 5 amps and 220 volts DC, 0.5 amps rating
- 1.16** Each actuator shall have a local position indicator to indicate 0 to 100% of valve travel.
- 1.17** Open/Close command termination logic with position and torque limit switches shall be suitably built in the PCB inside the actuator. Provision shall be there for bypassing the torque switch during initial 5% opening and closing of valves. Details for this must



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be indicated in the wiring diagram. This shall be done through electronic circuit or through one 'NC' contact of 'limit switch'.

1.18 It shall be possible to operate the actuator locally also with a lockable local/ remote selector switch

1.19 Each actuator shall have a anti-condensation heater in the limit switch compartment. Supply shall be derived from main power supply available in the actuator

1.20 The data sheet enclosed is to be filled for each type of actuator and submitted for approval

1.21 A typical wiring diagram is enclosed, the actuator shall meet all the requirement indicated in the wiring diagram

1.22 9 pin plug & socket (internally looped for limit & torque switches – 2 nos. per actuator is required

1.23 Routine Tests/ Acceptance tests:

All routine tests on actuators as per IS 9334, shall be carried out by the manufacturer at his works in presence of Purchaser's representative and six (6) copies of the test certificates shall be furnished to the Purchaser for approval.

1.24 Type tests:

Type tests as required by IS 9334 shall be carried out at the manufacturer's works in the presence of Purchaser's representatives. Also, six (6) copies of the certificates of the type test, carried out by the manufacturer on actuators identical in essential details shall be furnished to the Purchaser for approval.

1.25 Tests for motor:

The motor of actuators shall be tested for relevant requirements as per IS 325.

1.26 Tests in output shaft:

The test on output shaft of the actuator shall be carried out as per IS 9334.



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ACTUATOR DATA SHEET

S.No	DESCRIPTION	UNIT	DATA
1	ACTUATOR MANUFACTURER		<i>To be filled by valve vendor</i>
2	TORQUE RANGE & RPM	Kg-M	<i>To be filled by valve vendor</i>
3	DUTY CYCLE		<i>S2-15 minutes</i>
4	ENCLOSURE (TENV)		<i>NEMA6 / IP68</i>
5	AVERAGE / NOMINAL OUTPUT	KW	<i>To be filled by valve vendor</i>
6	RATED VOLTAGE	V	<i>415</i>
7	RATED FREQUENCY	Hz	<i>50</i>
8	No .OF PHASES	ϕ	<i>3</i>
9	ADMISSIBLE VOLTAGE FLUCTUATION	%	<i>± 10</i>
10	ADMISSIBLE FREQUENCY FLUCTUATION	%	<i>± 5</i>
11	ADMISSIBLE VOLT.& FREQ. VARIATION	%	<i>10</i>
12	NOMINAL CURRENT (AVERAGE)	A	<i>To be filled by valve vendor</i>
13	STARTING CURRENT	A	<i>To be filled by valve vendor</i>
14	FULL LOAD SPEED	RPM	<i>To be filled by valve vendor</i>
15	INSULATION CLASS		<i>F</i>
16	POWER FACTOR (AVERAGE LOAD)		<i>To be filled by valve vendor</i>
17	AVERAGE LOAD EFFICIENCY	%	<i>To be filled by valve vendor</i>
18	ADMISSIBLE AMBIENT TEMPERATURE	$^{\circ}\text{C}$	<i>-30 TO +70</i>
19	TEMP.RAISE OVER AMBIENT TEMP 50 $^{\circ}\text{C}$	$^{\circ}\text{C}$	<i>70</i>
20	TYPE OF STARTER RECOMMENDED		<i>DOL / 3 PHASE / 3 WIRE</i>
21.A	CABLE GLAND SIZE: POWER - 1 No. Double Compression Cable gland		<i>To be filled by valve vendor</i>
21.B	CABLE GLAND SIZE: CONTROL - (1No.) Double Compression Cable gland		<i>To be filled by valve vendor - to suit Copper unarmored PVC insulated OD 14 +2mm</i>
22	GEAR BOX LUBRICATION		<i>To be filled by valve vendor</i>
23	POSITION LIMIT SWITCHES	Nos	<i>2NO 2NC - 4 Nos.</i>
24	TORQUE SWITCHES	Nos	<i>2NO 2NC - 2 Nos.</i>
25	RATING OF SWITCHES	A	<i>5A 240V AC, 0.5A 220V DC</i>
26.A	POSITION TRANSMITTER - ON / OFF DUTY		<i>Potentiometric type</i>
26.B	POSITION TRANSMITTER - INCHING DUTY (IF PROVIDED)		<i>4-20mA , 2 wire 24 V DC LVDT TYPE</i>
27	SPACE HEATER		<i>1 No internally powered</i>
28	THERMOSTAT / THERMISTER	No	<i>3NOS. - ONE IN EACH WINDING</i>
29	INTERNAL WIRING		<i>PVC 1.5 mm²</i>
30	CONTROL CIRCUIT DIAGRAM (WITH INTEGRAL STARTER)		<i>To be filled by valve vendor - but to in- line with our wiring diagram 3-V-MISC- 24283 enclosed</i>
31	WEIGHT	Kg	<i>To be filled by valve vendor</i>
32	MOTOR DUTY RATING - FOR ON-OFF / INCHING		<i>For On-Off duty= 60 Starts/ hour For Inching Duty= 150 starts/hr</i>
33	MOTOR TYPE & REF. STANDARD		<i>SQUIRREL CAGE INDUCTION , IS 325/ IEC60034</i>
34	OLR SET VALUE (RECOMMENDED)	A	<i>To be filled by valve vendor</i>



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Product: TECHNICAL SPECIFICATION FOR GLOBE VALVES OF SIZE UP TO AND INCLUDING 2"

35	PLUG & SOCKET (Integral mounted on the Actuator)		<i>1 No 9 pin plug and socket to suit 4 Pair X 0.5 Sqmm Type-G Instrumentation Cable, OD Maximum 18.5 mm . For ON-OFF duty One additional 9 pin plug & socket same as above as spare For Inching duty : One additional 9 pin plug & socket suitable for 4 pair X 0.5 sqmm -F type instrumentation cable , OD maximum 18.5 mm</i>																					
36	THE COLOUR CODING OF CABLES FOR 9 PIN PLUG & SOCKET SUITABLE FOR 4 PAIR G TYPE/F TYPE CABLE		<table><tr><th><u>PIN. No.</u></th><th><u>Cable Colour</u></th></tr><tr><td>A (1)</td><td>Blue</td></tr><tr><td>B (2)</td><td>Red</td></tr><tr><td>C (3)</td><td>Grey</td></tr><tr><td>D (4)</td><td>Yellow</td></tr><tr><td>E (5)</td><td>Green</td></tr><tr><td>F (6)</td><td>Brown</td></tr><tr><td>G (7)</td><td>White</td></tr><tr><td>H (8)</td><td>Black</td></tr><tr><td>J (9)</td><td>Shield</td></tr></table>	<u>PIN. No.</u>	<u>Cable Colour</u>	A (1)	Blue	B (2)	Red	C (3)	Grey	D (4)	Yellow	E (5)	Green	F (6)	Brown	G (7)	White	H (8)	Black	J (9)	Shield	
<u>PIN. No.</u>	<u>Cable Colour</u>																							
A (1)	Blue																							
B (2)	Red																							
C (3)	Grey																							
D (4)	Yellow																							
E (5)	Green																							
F (6)	Brown																							
G (7)	White																							
H (8)	Black																							
J (9)	Shield																							
37	MATERIAL OF HAND WHEEL HUB		SG Iron.																					
38	PAINTING SHADE		RAL 5012 (Blue) both for Indoor and Outdoor																					
39	Single-phase protection & Wrong phase sequence protection features available.	Y / N	Yes																					



365-147/B
31.08.16

BHEL - Tiruchirappalli - 620014, India

Valves Engineering and R&D

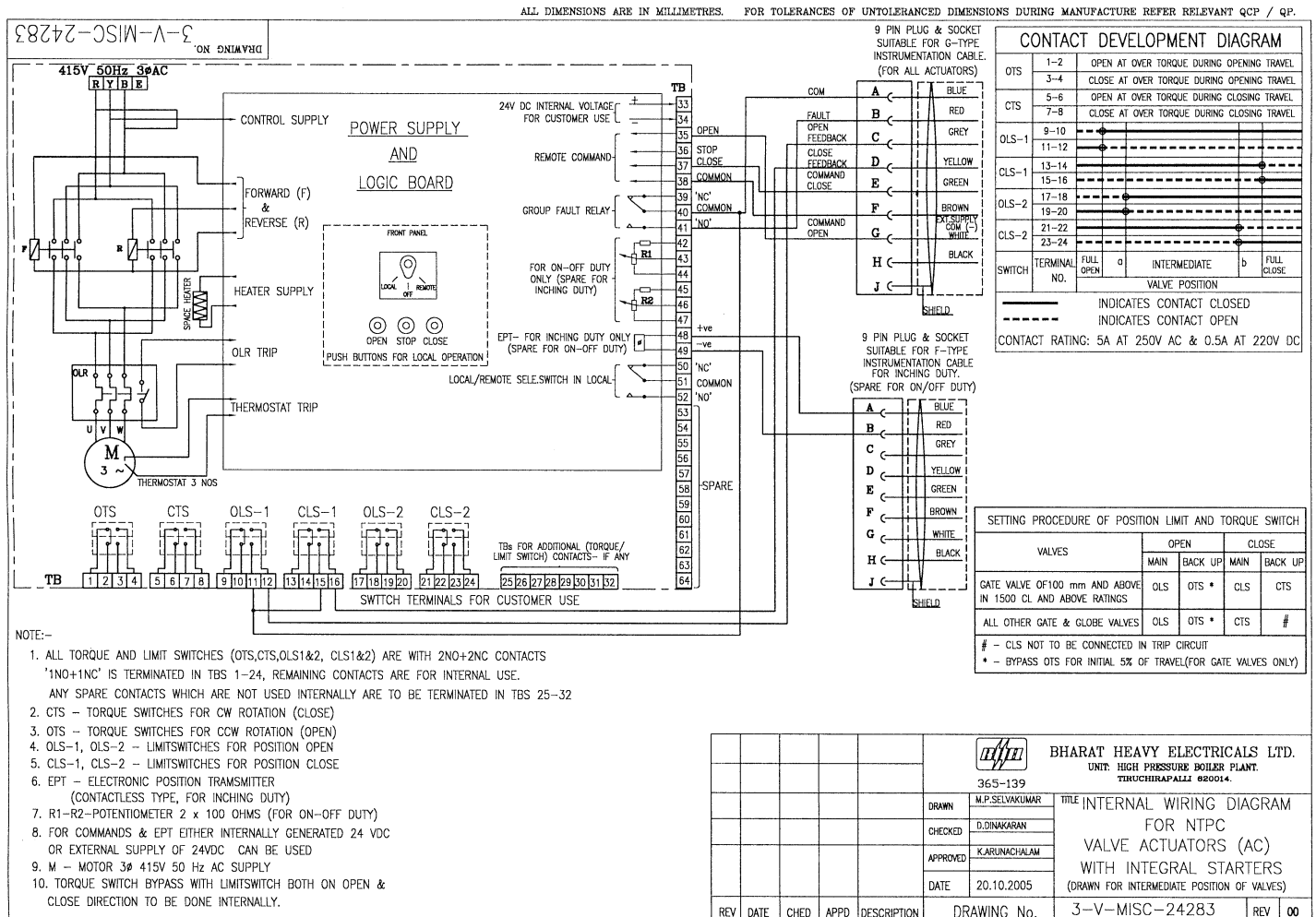
PURCHASE SPECIFICATION

DOC No: SPEC:CV:001 Rev: 03

Effective Date: 16/10/2017

Page: 13 of 13

Product: TECHNICAL SPECIFICATION FOR GLOBE VALVES OF SIZE UP TO AND INCLUDING 2"



Signature

Name

S.SATHEES KUMAR

K.RAJASEKARAN

C.KATHIRVELU

Designation

DY.MANAGER

SR.MANAGER

AGM

Date

16 October 2017

16 October 2017

16 October 2017

Action

Prepared By

Checked & Reviewed By

Approved By

ANNEXURE 1C

C&I SPECIFICATION

<not applicable>

ANNEXURE 1D

QUALITY REQUIREMENTS

<not applicable>

ANNEXURE 1E

QUALITY PLAN FORMAT

MFGR.'s LOGO	MANUFACTURER'S NAME AND ADDRESS		MANUFACTURING QUALITY PLAN					PROJECT : PACKAGE : CONTRACT NO. : MAIN-SUPPLIER:						
			ITEM :		QP NO.:									
			SUB-SYSTEM:		REV.NO.: 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				D*	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”	 FOR NTPC USE	DOC. NO.:		REV..... CAT.....	
MANUFACTURER/ SUB-SUPPLIER	MAIN-SUPPLIER						
SIGNATURE				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 (ENSV00194)

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 (ENSV00194)

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 **CHENNAI 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 **12 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.



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014, India

GENERAL TERMS AND CONDITIONS (ENSV00194)

- 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 (ENSFV00194)

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 (ENSFV00194)

1. All material should be inspected by IBR approved inspection agency 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.
4. Delivery should be **12 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
IBR APPROVED
INSPECTION AGENCIES

All communication should be addressed to the Secretary to the Government of India, Ministry of Industry, by title, NOT by name

Fax : 011-2306 2626

संख्या /No. 20/29/2009 -Boilers

भारत सरकार

वाणिज्य और उद्योग मंत्रालय
(औद्योगिक नीति एवं संवर्धन विभाग)
उद्योग भवन, नई दिल्ली - 110107

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY
(DEPTT. OF INDUSTRIAL POLICY & PROMOTION)

UDYOG BHAWAN, NEW DELHI-110107,
दिनांक/ Dated, the 2nd April, 2012

To

1. All the members of the Central Boilers Board
2. All the Inspecting Authorities

Subject: List of recognised Inspecting/Competent Authorities, Well Known Steel Makers, Foundries/Forgings units, Tube/Pipe Makers, Material Testing Laboratories and Remnant Life Assessment Organizations under Indian Boiler Regulations as on 31st March, 2012.

Sir,

I am to forward herewith a copy each of the list of recognised Inspecting/Competent Authorities, Well Known Steel Makers, Foundries/Forgings units, Tube/Pipe Makers, Material Testing Laboratories and Remnant Life Assessment Organizations under Indian Boiler Regulations, 1950, as on 31st March, 2012 for your reference and record.

Thanking you,

Yours faithfully,

(S. K. Jain)

Development Officer &
Assistant Secretary, Central Boilers Board
Tel.No.011-23063321/3318

Encl: "As above"

Mr. SRH
↓
Mr. VRK
↓
2
25/4

V. K. Jaiswal

(As on 31/03/2012)

INSPECTING AUTHORITIES

<u>NAME OF THE AUTHORITY</u>	<u>AREA OF OPERATION</u>
1. Director of Boilers, Andhra Pradesh	Andhra Pradesh
2. Chief Inspector of Boilers, Arunachal Pradesh	Arunachal Pradesh
3. Chief Inspector of Boilers Assam	Assam
4. Chief Inspector of Boilers Bihar	Bihar
5. Chief Inspector of Boilers Chhattisgarh	Chhattisgarh
6. Chief Inspector of Boilers, Delhi	N.C.T.D.
7. Chief Inspector of Boilers, Goa.	Goa
8. Director of Boilers, Gujarat.	Gujarat, Daman & Diu and Dadra & Nagar Haveli
9. Chief Inspector of Boilers, Haryana.	Haryana & Chandigarh
10. Chief Inspector of Boilers, Himachal Pradesh.	Himachal Pradesh
11. Chief Inspector of Boilers,, Jharkhand.	Jharkhand
12. Director of Boilers, Karnataka.	Karnataka
13. Director of Boilers, Kerala.	Kerala
14. Director of Boilers, Madhya Pradesh.	Madhya Pradesh
15. Director of Boilers, Maharashtra.	Maharashtra
16. Chief Inspector of Boilers, Meghalaya	Meghalaya
17. Chief Inspector of Boilers, Manipur	Manipur

- | | |
|---|---|
| 18. Chief Inspector of Boilers,
Mizoram | Mizoram |
| 19. Chief Inspector of Boilers,
Nagaland | Nagaland |
| 20. Director of Boilers,
Orissa | Orissa |
| 21. Director of Boilers,
Punjab | Punjab |
| 22. Chief Inspector of Boilers,
Labour Department,
Government of Puducherry,
Puducherry | Puducherry |
| 23. Chief Inspector of Boilers,
Rajasthan. | Rajasthan |
| 24. Director of Boilers
Tamil Nadu | Tamil Nadu |
| 25. Chief Inspector of Boilers,
Tripura | Tripura |
| 26. Director of Boilers,
Uttar Pradesh | Uttar Pradesh |
| 27. Deputy Director of Factories & Boilers
Uttarakhand | Uttarakhand |
| 28. Chief Inspector of Boilers,
West Bengal | West Bengal |
| 29. M/s. Lloyd's Register Asia
63-64, Kalpataru Square, 6 th Floor,
Kondivita Lane, Off. Andheri-Kurla Road,
Mumbai-400 059 | Tamilnadu, Maharashtra
Gujarat, Haryana & Punjab |
| 30. M/s. TUV Nord Systems GmbH Co.KG.
Langemarckstr 20
451141 Essen
GERMANY. | Europe, Brazil, China, Korea
and Thailand |
| 31. M/s RSA
(Formerly Royal & Sun Alliance plc)
17 York Street,
Manchester, M2 3RS,
United Kingdom | Europe |

- | | | |
|-----|--|--|
| 32. | M/s. Japan Inspection Company Limited,
No.10-7, 1-Chome, hatchobori, Chou-ku,
Tokyo, 104-0032, Japan | All countries except India |
| 33. | M/s. S.G.S. Korea Company Limited,
Industrial Division,
647-2, Sinpyeong-dong,
Saha-gu, Busan,
KOREA (604-030). | Korea & Japan |
| 34. | M/s Bureau Veritas,
67-71, Boulevard du Chateau,
92200 Neuilly-sur-Seine,
FRANCE | All countries except India. |
| 35. | M/s. Lloyds Register Verification Ltd.,
71, Fenchurch Street,
London EC 3M, U.K. | All countries except India. |
| 36. | M/s. Velosi Certification Bureau Ltd.,
Unit 1 Woodside Business Park,
Whitley Wood Lane,
Reading, Berkshire, RG2 8LW
United Kingdom | Europe, Middle East
Countries, China, Malaysia
Singapore & USA |
| 37. | M/s TUV Rheinland Brandenburg P falz e.V.,
Am Grauen stein, D-51105 Klon,
Germany | Europe , Japan, China &
Korea |
| 38. | Technischer Uberwachungs-Verein Saarland e.V.,
Am Tuev 1,
66280 Sulzbach,
Germany | Europe |
| 39. | M/s OOO "TekhnoLogicheskieEnergositime"
1. Kalinia St. Belgorod, 308001
Russia | Russia, China, Ukraine, USA
& Germany |
| 40. | M/s Engineering Bureau Franke
International,
55, Amurskaya St.,
Dnepropetrovsk
49108, Ukraine | Ukraine, Russia, Belarus, China ,
Uzbekistan, Poland, Belgium, Romania,
& Czech Republic |
| 41. | M/s. ARISE Boiler Inspection &
Insurance Company Risk Retention Group,
Grand Bay 1, 7000 South Edgerton Road,
Suite 100, Brecksville,
OH 44141 USA | USA & Canada |
| 42. | Tata Projects Limited,
"Mithona Towers-I", 1-7-80 to 87,
Opp. Wesley Co-Ed. Jr. College,
Prenderghast Road,
Secunderabad- 500 003, (India) | All countries except India |

- | | | |
|-----|--|----------------------------|
| 43. | M/s TUV SUD Industrie Service GmbH,
Wstendstr. 199,
80686 Munich,
Germany | All countries except India |
| 44. | M/s Germanischer Lloyd Industrial Services GmbH,
Steinhoeft 9,
20459 Hamburg,
Germany | All countries except India |
| 45 | M/s. TUV Thuringen e.V.,
Business Division Steam and Pressure Technology,
Melchendorfer Str. 64,
99096 Erfurt,
Germany | Europe |
| 46. | M/s. SGS-CSTC Standards Technical Services Co. Ltd.
9 th Building, No. 69,
KangQiao Industrial Park, Block 1159,
KangQiao East Road, Pudong District,
Shanghai-201 319
China | China |
| 47 | M/s Moody International Limited,
Hayworthe House, Market Place,
Haywards Heath, West Sussex,
United Kingdom | All countries except India |

COMPETENT AUTHORITIES

NAME OF THE AUTHORITY

1. Director of Boilers,
Andhra Pradesh
2. Chief Inspector of Boilers,
Arunachal Pradesh
3. Chief Inspector of Boilers
Assam
4. Chief Inspector of Boilers
Bihar.
5. Chief Inspector of Boilers
Chhattisgarh
6. Chief Inspector of Boilers,
Delhi.
7. Chief Inspector of Boilers,
Goa.
8. Director of Boilers,
Gujarat.
9. Chief Inspector of Boilers,
Haryana.
10. Chief Inspector of Boilers,
Himachal Pradesh.
11. Chief Inspector of Boilers,,
Jharkhand.
12. Director of Boilers,
Karnataka.
13. Director of Boilers,
Kerala.
14. Director of Boilers,
Madhya Pradesh.
15. Director of Boilers,
Maharashtra.
16. Chief Inspector of Boilers,
Meghalaya
17. Chief Inspector of Boilers,
Manipur

18. Chief Inspector of Boilers,
Mizoram
19. Chief Inspector of Boilers,
Nagaland
20. Director of Boilers,
Orissa
21. Director of Boilers,
Punjab
22. Chief Inspector of Boilers,
Labour Department,
Government of Puducherry,
Puducherry
23. Chief Inspector of Boilers,
Rajasthan.
24. Director of Boilers
Tamil Nadu
25. Chief Inspector of Boilers,
Tripura
26. Director of Boilers,
Uttar Pradesh
27. Deputy Director of Factories & Boilers
Uttarakhand
28. Chief Inspector of Boilers,
West Bengal
29. M/s. National Test House,
Plot No.F-10, M.I.D.C.,
Marol, Andheri (E),
MUMBAI - 400 093.
30. Welding Research Institute,
Bharat Heavy Electricals limited,
Tiruchirapalli – 620014.
31. M/s RSA
(Formerly Royal & Sun Alliance plc)
17 York Street,
Manchester, M2 3RS,
United Kingdom
Europe
32. M/s. TUV Nord Systems GmbH Co.KG.
Langemarckstr 20
451141 Essen
GERMANY.
Europe, Brazil, China, Korea
and Thailand

33. M/s. Hartford Steam Boiler Inspection and Insurance Company of Connecticut,
Code Services, One State Street,
P.P.Box 299, Hartford, CT 06141-0299
U.S.A.

34. M/s. Japan Inspection Company Limited,
No.10-7, 1-Chome, hatchobori, Chou-ku,
Tokyo, 104-0032, Japan

35. M/s. S.G.S. Korea Company Limited, Korea and Japan
Industrial Division,
647-2, Sinpyeong-dong,
Saha-gu, Busan,
KOREA (604-030).

36. M/s Bureau Veritas,
67-71, Boulevard du Chateau,
92200 Neuilly-sur-Seine,
FRANCE

37. M/s. Lloyds Register Verification Limited, All countries except India
71, Fenchurch Street,
London EC3M 4BS,
UNITED KINGDOM

38. M/s. Velosi Certification Bureau Ltd., Europe, Middle East
Countries, China, Malaysia
& USA
Unit 1 Woodside Business Park,
Whitley Wood Lane,
Reading, Berkshire, RG2 8LW
United Kingdom

39. Technischer Uberwachungs-Verein Saarland e.V., Europe
Am Tuev 1,
66280 Sulzbach,
Germany

40. M/s. OOO "TekhnoLogicheskieEnergosistime", Russia, China, Ukraine, USA
& Germany
1, Kalinia St. Belgorod, 308001,
Russia.

41. M/s. National Test House,
11/1, Judges Court Road
Alipore, Calcutta - 700027

42. M/s. ARISE Boiler Inspection & Insurance Company USA & Canada
Risk Retention Group,
Grand Bay 1, 7000 South Edgerton Road,
Suite 100, Brecksville,
OH 44141 USA

43. M/s TUV Rheinland Brandenburg Pfalz e.V.,
Am Grauen Stein, D-51105 Klon,
Germany

44. M/s National Test House,
Kamla Nehru Nagar,
Ghaziabad- 201 002
Uttar Pradesh
45. M/s TUV SUD Industrie Service GmbH, All countries except India
Wstendstr. 199,
80686 Munich,
Germany
46. M/s Germanischer Lloyd Industrial Services GmbH, All countries except India
Steinhoeft 9,
20459 Hamburg,
Germany
47. M/s. TUV Thuringen e.V., Europe
Business Division Steam and Pressure Technology,
Melchendorfer Str. 64,
99096 Erfurt,
Germany
48. M/s. SGS-CSTC Standards Technical Services Co. Ltd. China
9th Building, No. 69,
KangQiao Industrial Park, Block 1159,
KangQiao East Road, Pudong District,
Shanghai-201 319
China
49. M/s Moody International Limited, All countries except India
Hayworthe House, Market Place,
Haywards Heath, West Sussex,
United Kingdom

ANNEXURE 2D
CONFIRMATION TO TERMS
& CONDITIONS



BHARAT HEAVY ELECTRICALS LTD

VALVES PURCHASE

Trichy - 620 014. India

CONFIRMATION TO TERMS AND CONDITIONS(ENSFV00194)

<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 Chennai Sea Port 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 12 weeks from date of PO	
<u>DOCUMENTATION:</u> Following documents should be part of tender for evaluation, failure to submit this details for evaluation, you offer will be technically rejected	
1. GA drawing with EP and mounting detail	
2. IBR certification for factory	
3. Filled in datasheet	
4. Hook up drawing	
5. Bill of material for accessories	
6. Schedule of deviation	

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
INTEGRITY PACT FORMAT

<not applicable>

ANNEXURE 4B

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 4C
UNPRICED BID FORMAT

	BHEL Enquiry No. & Date	Vendor's Offer Ref No. & Date		
	MODEL UNPRICE BID FORMAT FOR IMPORT VENDORS			
	Currency			
Enq SI No.	Description	Unit	Qty	Unit Price in Currency
1				Quoted/Not Quoted
2				Quoted/Not Quoted
3				Quoted/Not Quoted
4				Quoted/Not Quoted
5				Quoted/Not Quoted
.				Quoted/Not Quoted
.				
	Total CIF Value in Currency			Quoted/Not Quoted
	Commissioning charges			
	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 4D
PRICED BID FORMAT

	BHEL Enquiry No. & Date		Vendor's Offer Ref No. & Date		
	MODEL PRICE BID FORMAT FOR IMPORT VENDORS				
	Currency				
Enq SI No.	Description	Unit	Qty	Unit Price in Currency	Value in Currency
1					
2					
3					
4					
5					
.					
.					
	Total CIF Value in Currency				
	Commissioning charges				
	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				