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NOTICE INVITING TENDER(NIT)

**Category of Tender: TWO BID
(PRICED + UN - PRICED)**

SUB: TRAVELLING COLUMN DRILLING MACHINE

Our Ref: **MM/2/10/3885/CAP/W-140/5140**

DATE: 22.11.2014

Sealed quotations in duplicate are invited from suppliers on or before **22.12.2014** **SUPERSCRIBING OUR REFERENCE AND CATEGORY OF TENDER** on the cover, for supply of the under mentioned stores within the above due date, otherwise send **REGRET LETTER**, strictly subject to the Terms & Conditions attached herewith.
LATE TENDERS ARE NOT ACCEPTABLE.

ITEM No.	DESCRIPTION / SPECN. / SIZE	QTY												
1.	TRAVELLING COLUMN DRILLING MACHINE	1 Nos.												
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2. Technical Specifications PART B	15 Pages												
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For BHARAT HEAVY ELECTRICALS LIMITED,

MANAGER (MP-Misc. & CPS)

TRAVELLING COLUMN RADIAL DRILLING STATION WITH
TWO DRILLING HEADS ON COMMON BED

PART-A

Sl. No.	PARTICULARS	VENDOR'S RESPONSE
1.0	QUALIFYING CRITERIA	
1.1	The BIDDER / VENDOR (OEM) BIDDER shall have a minimum of TEN Years of Continuous Experience in the Field of Design, Manufacture & Supply of travelling column radial drilling station with two drilling heads on a common bed.	
1.2	<p>Only those vendors (OEMs), who have manufactured, supplied and commissioned at least one TRAVELLING COLUMN RADIAL DRILLING MACHINE in the last ten years having all the following features:</p> <p>a. Spindle power not less than 15.0 kW Continuous duty 11.0 kW. b. Drilling capacity of minimum 80mm on steel. c. Drilling spindle axis of 3500mm or more from column face</p> <p>Such supplied machine should presently be working satisfactorily for at least one year after its commissioning (as on the date of opening of this Tender). The name and contact addresses of the customers to whom the machine has been supplied has to be furnished with details.</p>	
1.3	Vendor has to submit at least ONE Performance Certificate from their customers, for satisfactory performance of Travelling Column Radial Drilling Machine as given under clause 1.2 above, for a minimum period of one year (as on date of opening tender). For obtaining the Performance certificate, a suggestive format is provided.	
1.4	BHEL reserves the right to verify the information provided by vendor. In case, it is found to be false/ incorrect, the offer shall get rejected.	
2.0	INFORMATION TO BE PROVIDED BY VENDOR	
2.1	The BIDDER / VENDOR to furnish Reference List of Customers, with complete address, details of contact person, where Travelling Column Radial Drilling Machines were supplied in the past.	
2.2	Specify details of Travelling Column Radial Drilling Machines supplied to other units of BHEL, if any (Year of commissioning, Drilling Capacity, Arm Travel & Column travel etc.)	
2.3	Details on SERVICE-AFTER-SALES Set-up in India including the Address of Agents / Service Centres in India.	
2.4	Any Additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

PERFORMANCE CERTIFICATE – [SAMPLE FORMAT]
(On Customer's Letter Head with Additional Sheet – if necessary)

1. Supplier of the Equipment/Machine :
2. Make & Model of the Equipment :
3. Month & Year of Commissioning :
4. Application for which Machine is used :
5. Equipment details
 - a) Equipment Serial Number :
 - b) Spindle Motor Power in Horse Power/kW :
 - c) Drilling Capacity in Steel in millimeters :
 - d) Drilling Head Traverse in millimeters :
 - e) Vertical Stroke of Radial Arm in millimeters :
 - f) Machine Column Traverse in X-axis in meters :
6. Performance of the Machine : Satisfactory /
Good /
Average /
Not Satisfactory
7. Feedback on "After Sales Service" by the Supplier :
8. Remarks / Reasons for Recommendations to BHEL :

Date:

Signature & Seal of the Authority
Issuing the Performance Certificate

Travelling Column Radial Drilling Station Technical Specification (Part B)

Technical Specification For Travelling Column Radial Drilling Station With Two Drilling Heads On A Common Bed

Note:-

1. The Column "**Vendor's offer with Technical details & Remarks**" of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous or unsustainable information against any of the clauses of the specifications / requirements shall be treated as non-compliance.
2. The offer and all documents enclosed with offer should be in **English language** only.

Name & Address of the Supplier:

Telephone no.:

Fax no.:

e-mail:

Name & Address of the Indian agent:

Telephone no.:

Fax no.:

e-mail:

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.0	PURPOSE: These heavy-duty radial drilling machines are meant for drilling and boring of holes in pipes and cylindrical shells (viz., Boiler Drum, Header Pipes) used in Utility and Industrial Boilers. And also drilling of holes on hemi-spherical dished end covers. These machines shall be capable of drilling in curved shells of solid steel with thickness up to 150 mm. The drilling machines will also be used for machining of free ends (oxy-acetylene flame cut ends) of nozzles/stubs welded to shells or pipes to form weld edge after the hydro testing. In this machine job will be placed on Fitter's Bar (with slots for clamping) running throughout the length of the work-center. These machines will be operated on three-shift basis.		
2.0	QUANTITY & MACHINE CONFIGURATION: The tender is for TWO radial arm drilling machines (one set) in one Work Station. Two machines will have to be mounted on the same slide-way built-up by adding suitable number of machine beds, to form an effective machine traverse of 18000 mm.		

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
3.0	Job Description : 1) Job Description: Drums / Header Pipes 2) Length of Job: 1m to 24m 3) Job Diameter: 219mm to 1676mm 4) Pipe Wall thickness: 20mm to 150mm 5) Weight of Job: 1 Ton to 60 Tons	Vendor to Confirm	
4.0	JOB MATERIAL: a) Steel with tensile strength of 60 kg / mm ² (SA106Gr.B/C, SA299, SA515/516Gr.60/70asper ASTM Standards) b) Cast- Iron with tensile strength of 25 kg / mm ² . c) Alloy Steel and Stainless Steel (martensitic) for Header pipes only (SA 335 Gr.P11/P12/P22/P91/P92 & Super 304 H as per ASTM Standards)	Vendor to Confirm	
5.0	TYPE OF DRILLS USED: Standard 118° lip angle HSS drills without web thinning. Drills with replaceable/HSS inserts.	Vendor to Confirm	
6.0	EDGE PREPARATION: Edge Preparation of drilled holes (asymmetrical cutting by two cutting tool bits mounted in the same tool holder, taking cut simultaneously.	Vendor to Confirm	
7.0	DESCRIPTION OF JOBS [FOR TYPICAL JOB CONFIGURATION]: Annexure – 1, 2, 3, 4 & 5 enclosed with this specification, give the cross-sectional view of typical Boiler Drum / Header shell with stub holes.	Vendor to Confirm	
8.0	MACHINE CONFIGURATION: The machine shall consist of a vertical column mounted on the base plate. The horizontal arm moves up and down the column and can be locked at any position. Also the arm shall be manually swiveled about the column center and lock at any position. The drilling Head moves horizontally on the horizontal arm and can be locked at any position. The spindle is housed in the drilling head and can be moved up and down. In a work center two machines will be mounted on the same slide-way built-up by adding suitable number of machine beds to form a machine traverse of 18000 mm for drilling as per requirement of the job.	Vendor to confirm	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
9.0	DRILLING HEAD		
9.1	Drilling capacity in steel (TS 60 kg/sq.mm) – Direct drilling diameter – minimum 100 mm	Vendor to specify	
9.2	Threading capacity in steel(TS 60 kg/sq.mm) : M 76 x 6	Vendor to specify	
9.3	Boring capacity in solid steel (in steps) : 170 mm	Vendor to specify	
9.4	Taping capacity in solid cast iron : M 64 x 6	Vendor to specify	
9.5	Power of spindle motor : Not less than 15.0 kW Continuous duty 11.0 kW	Vendor to specify	
9.6	Taper in spindle : MT 6	Vendor to specify	
9.7	Spindle stroke : Minimum 475 mm	Vendor to specify	
9.8	Spindle diameter in front bearing min 120 mm is preferable	Vendor to specify	
9.9	Number of spindle speeds - 30 steps. / Step less speed by VFD with servo spindle motor is preferable	Vendor to specify	
9.10	Spindle speed range - 10-1000 rpm / Step less speed by VFD with servo spindle motor is preferable	Vendor to specify	
9.11	No of feeds - Not less than 16	Vendor to specify	
9.12	Spindle feed range minimum - 0.035-2.8 mm/rev	Vendor to specify	
9.13	Auto depth control mechanism for spindle stroke.	Vendor to specify	
9.14	Quill diameter	Vendor to specify	
9.15	Maximum drilling thrust	Vendor to specify	
9.16	Maximum torque on spindle	Vendor to specify	
9.17	Mode of pre selection of feed and speed	Vendor to specify	
9.18	Drill head traverse speed for a motorized drill head traversing system	Vendor to specify	
9.19	Drill head locking mechanism	Vendor to specify & give technical details	
9.20	Plunger tools for step drilling for the sizes enclosed at annexure 6 to 8 are required and the same are to be provided with the machine.	Vendor to specify & give technical details	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
10.0	RADIAL ARM		
10.1	Maximum vertical distance between spindle nose to base of the machine shall be around 3000mm.	Vendor to specify	
10.2	Minimum vertical distance between Spindle nose to base of the machine, when the Radial Arm is at the lowest level on the Machine Column. Shall be less than 1000 mm.	Vendor to specify	
10.3	Maximum distance from the axis of the spindle to the guide ways on the Machine Column to suit the drilling application mentioned above. Shall be around 4000 mm	Vendor to specify	
10.4	Minimum distance from the axis of the spindle to the guide ways of column. Shall be around 500mm	Vendor to specify	
10.5	Drilling Head Traverse Stroke available along the Radial Arm to suit the drilling application mentioned above Shall be around 3500mm	Vendor to specify	
10.6	Vertical Travel Stroke of the Radial Arm on the Machine Column Shall be around 2000 mm	Vendor to specify	
10.7	Arm up / down speed	Vendor to specify	
10.8	Swing of the arm around the column 0 to 180 deg	Vendor to specify	
10.9	Arm dimensions	Vendor to specify	
10.10	Hydraulic / Electrical powered clamping mechanism of arm on the machine column. (With indicator)	Vendor to submit details	
11.0	MACHINE COLUMN & BASE		
11.1	Distance between the centerline of two machine columns when the two machines are taken to the extreme end of the slide ways. Shall not be less than 18000 mm.	Vendor to specify.	
11.2	Overall length of machine base for the above traverse in Clause Sl.No 11.1	Vendor to specify	
11.3	Minimum distance between the centerline of two columns of two machines, when they are brought together (With telescopic cover).	Vendor to specify	
11.4	Column traverses speed. (The speed shall be continuously variable and shall be controllable through a potentiometer & Minimum motor capacity should be around 10 kW). [BHEL prefers to have the range of 0.0 to 6000 mm/min.]	Vendor to specify	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
11.5	Column dimensions	Vendor to specify	
11.6	Max distance traverse of single machine on the bed.	Vendor to specify	
12.0	MACHINE GUIDE WAYS		
12.1	Width of Arm guide ways	Vendor to specify	
12.2	Width of column guide ways	Vendor to specify	
12.3	Hardness of guide ways [preferred values are 200-220 BHN for soft guide-ways and around 400 BHN for hardened cast iron slides]	Vendor to specify	
12.4	Sliding Surfaces on guide ways [BHEL preferred combinations] a. Head-Stock / Radial Arm - Cast Iron/Cast Iron. b. Radial Arm / Column – Cast Iron / Hardened Cast Iron, c. Saddle / Bed - Turcite / Hardened Cast Iron	Vendor to submit details	
13.0	CONSTRUCTION:		
13.1	Vendor to furnish details of material, hardness & constructional details, including explanatory drawings of various components / assemblies like Column, Bed, Arm, Drilling Head, Spindle, etc. of the machine.	Vendor to furnish	
13.2	Machine configuration shall be such that drilling head; arm, column and base shall be sturdy enough to withstand all types of reactionary forces developed during drilling with drilling head at farther most point on the radial arm.	Vendor to specify	
13.3	Both longitudinal and cross alignments of machine bed guide ways shall be accurate enough to ensure smooth travel of machine on either side from the mid point of the bases.	Vendor to specify	
13.4	Selecting guide way profile and spacing of guide ways shall ensure jerk free travel and provide sufficient seating area for column base for vibration-free drilling.	Vendor to specify	
13.5	Column travel – if it is of rack and pinion type should be Helical.	Vendor to specify	
13.6	Column drive gear shall be sturdy with proper mounting with the base without over-hanging. Standard gearboxes of make like Radicon / Elecon / Allryod / SEW / Bonfiglioli preferred.	Vendor to specify	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
13.7	For arm up and down travel, metal spiral cover and bottom support to be provided if it is screw rod / nut arrangement.	Vendor to specify	
13.8	The bed guide ways shall be covered by walk on type telescopic cover and the min. and max. distance between the two machine columns mentioned in clause sl nos 11.1 & 11.3 are to be considered in selecting the telescopic cover.	Vendor to specify	
13.9	The cables, hoses (hydraulic, coolant) going to each machine column shall be routed through separate metallic, closed type cable drag chain. The covers of the drag chain shall be of aluminium material and of removable type. The make of the drag chain shall be of KABELSCHLEPP/IGUS.	Vendor to specify	
13.10	Locking mechanism for provisions referred in Clause Sl. Nos. 9.19 and 10.10 are to be spelt out with details.	Vendor to give Technical Details	
13.11	Graduated Dials on headstock shall be of Stainless Steel / Chromium plated.	Vendor to confirm	
13.12	For each machine, it's Column Up / down & longitudinal movements shall be controllable either from their headstock or from their control panel located at machine bed level.	Vendor to confirm	
13.13	Vendor to provide Power & Speed rating for the following Motors: a) Spindle, b) Arm Up / down, c) Drill Head Traverse on Arm, d) Column Longitudinal Travel and e) Coolant Pumps. BHEL prefers to have a speed of 1500 rpm for these Electric Motors. Spindle motor must be Energy efficient EFF1.	Vendor to furnish	
14.0	Lubrication and coolant system		
14.1	Flexible metal hose for coolant is preferable at headstock.	Vendor to specify	
14.2	Centralised Lubrication System and all lubrication lines to be protected with metallic covers to protect from drilling chips.	Vendor to provide details	
14.3	Details of flood coolant system [Each Machine shall have a coolant discharge arrangement of 30 LPM – liters/minute, at 3 bar pressure at discharge end of the Coolant Pump. The Coolant Pump Motor speed shall be 1500 rpm. The work center (Motor pump assemblies) should have a common frame & to be placed over the sump for collection & re-circulation, with two independent coolant supply system with suitable valve arrangements]	Vendor to provide details	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
15.0	MACHINE LIGHTS:		
15.1	A machine lamp is to be provided at Headstock to give sufficient illumination over the complete working area. The lamp orientation shall be adjustable and the lamp shall be of LED type with operating voltage of 24V AC. The lamp shall conform to Indian standards and shall be easily available in India.	Vendor to confirm	
15.2	A magnetic base 24-volt portable spotlight with sufficiently long cable should also be provided.	Vendor to confirm	
15.3	All light fittings, consumables, adapters/receptacles should have compatibility with Indian equivalents	Vendor to confirm	
16.0	ELECTRICAL SYSTEM:		
16.1	415V + 10% / -10%, 50HZ +/-1.5 HZ, 3 Phase AC (3 wire system with out neutral) Power Supply Source will be provided by BHEL at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets, shall be the responsibility of vendor.	Vendor to confirm	
16.2	All electrical equipment shall be Tropicalized	Vendor to confirm	
16.3	All electrical control cabinets & panels should be dust and vermin proof	Vendor to confirm	
16.4	All electrical components in the cabinets should be mounted on DIN Rail	Vendor to confirm	
16.5	All electrical panels should be provided with CFL lamps for sufficient illumination and power receptacles of 220Volts, 5/15 Amp AC. All adapters/receptacles should have compatibility with Indian equivalents.	Vendor to confirm	
16.6	Motors shall be from M/s Siemens / ABB / Crompton Greaves or other reputed make conforming to IEC and acceptable to BHEL	Vendor to confirm	
16.7	For the traversing groups the cables/hoses shall be routed through metallic cable drag chain. Except for the column longitudinal travel, it shall be of open type. BHEL prefers to have Cable drag chain of KABELSCHLEPP/IGUS make.	Vendor to provide details.	
16.8	Vendor should ensure the proper earthing for the machine and its accessories.	Vendor to confirm	

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
17.0	OPERATION AND CONTROL SYSTEM:		
17.1	<p>OPERATOR'S PANEL</p> <p>The control of radial arm & drilling head shall be grouped together and it shall be provided on the drilling head. All switches, indications, controls in it shall be within the reach of the operator for convenient, efficient & safe operation. Accordingly each drilling head will have its own operator panel. The control panel for the machine shall be preferably on the right side of the hand wheel on the drilling head.</p> <p>The design of the electrical system shall be such that the operation of one radial arm & drilling head is independent of the operation of the other radial arm & drilling head and breakdown of one radial arm & drilling head should not affect the operation of the other.</p>	Vendor to provide details.	
17.2	All machine movements shall be operable through inching mode also.	Vendor to confirm	
18.0	SAFETY ARRANGEMENTS:		
18.1	Machine should have adequate and reliable safety interlocks / devices to avoid damage to the machine, work piece and the operator due to the malfunctioning or mistakes.	Vendor to specify the interlocks provided.	
18.2	A detailed list of all alarms / indications provided on machine shall be submitted by the Vendor.	Vendor to confirm	
18.3	All the pipes, cables etc. on the machine should be well supported and protected.	Vendor to confirm	
18.4	All the rotating parts used on machine should be statically & dynamically balanced to avoid undue vibrations and suitable covers to be provided.	Vendor to confirm	
18.5	Limits shall be provided at extreme end of the base and in between two machines to prevent over travel of the machine and collision of the machine respectively.	Vendor to provide details	
18.6	Emergency Switches at suitable locations as per International norms are to be provided.	Vendor to confirm	
18.7	Oil & water pipe lines should not run with electrical cable in the same tray / trench.	Vendor to confirm	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
18.8	Projection of operating levers / Hand wheel on the drill head if any shall not be hindrance to operator safety. Hand wheels used if any for any adjustments, shall have necessary provisions (in the form of knurling) for easy gripping by the operator. All the controls, adjustments provided on the drilling head shall be suitable for Right hand operation of the operator.	Vendor to confirm	
19.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE: [The Machine shall conform to following factors related to environment]		
19.1	Maximum noise level shall be 85 dB (A) at normal load condition, 1 m away from the machine with correction factor for back ground noise, if necessary. Vendor to demonstrate compliance to noise level, if so required.	Vendor to confirm	
19.2	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to confirm	
19.3	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.	Vendor to confirm	
19.4	Vibration level of Machine Head Stock during drilling operations	Vendor to furnish details	
20.0	TOOLINGS		
20.1	Reduction sleeves MT6-5, 6-4, 4-3 & 4-2 , both long & short series for each drilling station.	Vendor to confirm	
20.2	Extension sleeves MT6/6, MT5/5, MT4/4, and MT3/3 for each drilling station.	Vendor to confirm	
20.3	Tapping Tools with suitable Attachments for carrying out Tapping for the range of M 48 x 5 to M 64 x 6 , in steps with full set of collets. Weight of tapping attachment should not be more than 10kgs.	Vendor shall furnish list and details	
21.0	LEVELING & ANCHORING SYSTEM		
21.1	Complete anchoring system including foundation bolts, anchoring materials, fixtures, leveling shoes, etc. shall be supplied for the Machine.	Vendor to confirm	

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
22.0	TOOLS FOR ERECTION, OPERATION & MAINTENANCE		
22.1	The vendor shall bring special tools and equipment required for erection of the machine. Necessary tools like Torque Wrench, Spanners, Keys, grease guns etc. for operation & maintenance of the machine should be supplied. List of such tools shall be submitted with offer	Vendor to confirm	
22.2	Test Mandrel for checking spindle run-out & alignment shall form the part of the scope of supply	Vendor to confirm	
23.0	SPARES:		
23.1	Item wise breakup of mechanical, hydraulic, electrical spares used on the machine in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis should be offered by vendor. The list to include following, in addition to other recommended spares: (Unit Price of each item of spare should be offered)	Vendor to furnish	
23.2	Mechanical & Hydraulic Spares: One spindle, Bearings, clutches, gears and all types of pumps, Valves, pressure switches / transducers, filters, seals, 'O' rings, Hydraulic Hoses, etc.	Vendor to furnish	
23.3	Electrical: All types of Relays, Contactors, Proximity Switches, Push Buttons, Indicating Lamps, Semiconductor Fuses, Special Fuses, Circuit Breakers, Main Power Switch, Limit switches, Electro-mechanical clutches, Variable frequency drives.	Vendor to furnish	
23.4	All types of spares for total machine and accessories should be available for at least ten years after supply of the machine. If machine or control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & Vendors to enable BHEL to procure these in advance, if required.	Vendor to furnish	
23.5	Vendor to confirm that complete list of spares for machine and accessories, along with specification / type / model, and name & address of the spare Vendor shall be furnished along with documentation to be supplied with the machine.	Vendor to furnish	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
24.0	GENERAL POINTS		
24.1	The offer shall clearly indicate the list of standard accessories that will be supplied along with the machine	Vendor to confirm and enlist	
24.2	All hydraulic elements shall be of Vickers/Rexroth make	Vendor to confirm and enlist	
24.3	All electrical devices like contactors, relays and limit switches, push buttons etc. shall be from Siemens / Cuttler Hammer / Telemecanique. All wires shall be of PVC insulated, flexible, multi strand copper cable and of make LAPP/IGUS or equivalent.	Vendor to confirm and enlist	
24.4	All components/devices/terminals are to be incorporated with ferrules. (Numbered)	Vendor to confirm	
25.0	DOCUMENTATION		
25.1	THREE sets of following documents (Hard copies) in English language should be supplied along with the machine	Vendor to confirm	
25.2	Detailed Operation and Maintenance manual of machine with all drawings of machine assemblies/sub-assemblies/parts including Electrical / Pneumatic/ Coolant / Hydraulic circuit diagrams. All Assembly/ Sub Assembly Drawings shall be supplied with the part list / Bill Of Materials also	Vendor to confirm	
25.3	Catalogues, O&M Manuals and drawings of all bought out items, bearings wherever applicable. And VFD's Programming & Parameter manual.	Vendor to confirm	
25.4	Electronic and electrical interconnecting drawings (i.e. between machine, control panel and drives). Hard Copy in Original: 3 Nos.	Vendor to confirm	
25.5	Specification with drawings of clutch plates & brake plates.	Vendor to confirm	
25.6	Hydraulic, coolant, lubrication and Electrical circuits with BOM	Vendor to confirm	
25.7	Detailed specification of all rubber items and hydraulic/lube fittings	Vendor to confirm	
25.8	The vendor shall submit complete Master List of parts used in the machine.	Vendor to confirm	
25.9	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to confirm	
25.10	Component Manufacturing Drawing shall be provided for all the wearing-out parts with material specifications.		

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
26.0	FOUNDATION:		
26.1	BHEL shall construct complete foundation for the machine. Vendor shall furnish the foundation details.	Vendor to confirm	
27.0	ERECTION & COMMISSIONING		
27.1	Vendor to provide supervision for carrying out the erection, start up, testing of machine, it's control system & all types of other supplied equipment, drilling / tapping of test pieces etc. Service requirement like power, air & water shall be provided by BHEL at only one point to be indicated by Vendor in their foundation/layout drawings.	Vendor to confirm	
27.2	Successful proving of BHEL components by the Vendor shall be considered as part of commissioning. All tests, as mentioned at Clause Nos. 31.0 shall form part of the commissioning activity.	Vendor to confirm	
27.3	Portion, if any, of the machine, accessories and other supplied items where paint has rubbed off or peeled during transit or erection should be repainted and merged with the original surrounding paint by the vendor. For this purpose, the vendor should supply sufficient quantity of touch-up paint of various colors of paint used.	Vendor to confirm	
28.0	ACCURACY TESTS		
28.1	GEOMETRICAL ACCURACIES		
28.2	Geometrical Accuracy Tests shall be as per international standards [as per ISO 2423/1974]. Detailed Test Charts for the same, clearly showing the accuracies to be achieved on the machine, shall also be submitted with the offer.	Vendor to confirm	
28.3	All the above accuracies to be demonstrated to BHEL engineers during pre-acceptance tests at Vendors works and during Erection & Commissioning at BHEL Works.	Vendor to confirm	
29.0	FINISH REQUIREMENTS		
29.1	Reamed holes with H7 tolerance and 1.6 microns surface finish with reaming shall be demonstrated at the maximum drilling diameter.	Vendor to confirm dia 50H7, Ra 1.6, in GG25 material	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
30.0	AMBIENT CONDITIONS & THERMAL STABILITY		
30.1	Total machine and all supplied items should work trouble free and efficiently under following operating conditions and should give specified accuracies. Ambient Conditions: Temp: 25 to 50 Degree Celsius Relative Humidity: 95% maximum.	Vendor to confirm	
30.2	Weather conditions are tropical, Atmosphere may be dust laden during some part of the year. Machine shall be kept in the normal shop floor condition. Max. Temperature variation is up to 25 deg Celsius in 24 hours.	Vendor to confirm	
30.3	The machine, including attachments and accessories, should be suitable for 24 hrs. Continuous operation to its full capacity for 24 hour a day and 7 days a week throughout. Vendor to ensure and confirm the same.	Vendor to confirm	
31.0	MACHINE INSPECTION and ACCEPTANCE:	Should be accepted & confirmed by Vendor	
	Tests/Activities to be carried out at Vendor's Works	Vendor to confirm	
31.1	Geometrical Accuracy Tests as per test chart.	Vendor to confirm	
31.2	Full load test to demonstrate the maximum power & drilling capacity of the machine.	Vendor to confirm	
	PROVE-OUT OF MACHINE CAPACITY Tests to be carried out at BHEL Works	Vendor to confirm	
31.3	Geometrical Accuracy Tests as per test chart.	Vendor to confirm	
31.4	Full load test to demonstrate the maximum power & drilling capacity of the machine. Drilling / Boring / Tapping Tools will be provided by BHEL.	Vendor to confirm	
31.5	Training of BHEL machine operators in operation and maintenance of complete machine & accessories etc. by the Vendor's experts/engineers during their stay at BHEL works	Vendor to confirm	
32.0	PACKING		
32.1	Sea worthy & rigid packing for all items of complete machine, all Accessories & other supplied items to avoid any damage in transit. When machine is dispatched in containers, all small loose items shall be suitably packed in boxes	Vendor to Confirm	

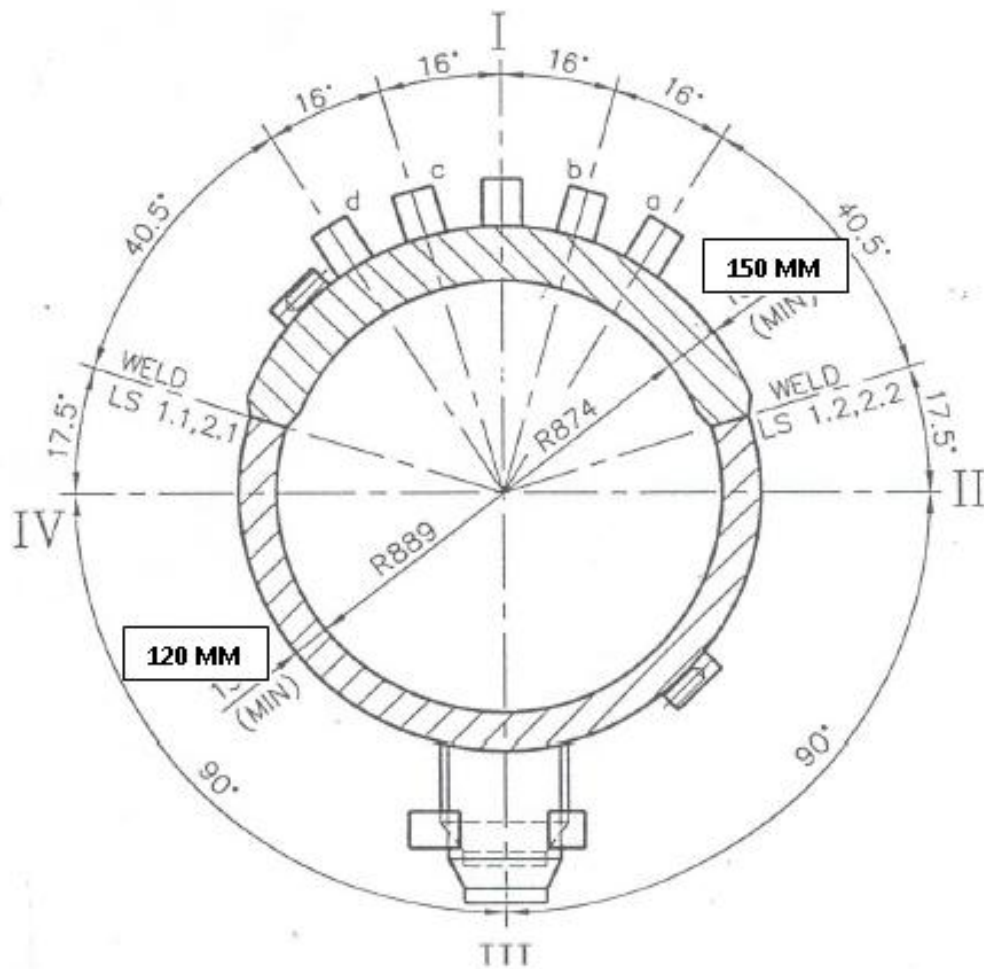
Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
33.0	GUARANTEE		
33.1	12 months from the date of commissioning and acceptance of the machine at BHEL Works	Vendor to Confirm	
34.0	SPECIAL NOTES : The vendor should submit the following information:		
34.1	Machine Model	Vendor to specify	
34.2	Total connected load in kVA	Vendor to specify	
34.3	Floor area required (Length, Width, Height) for complete machine & accessories	Vendor to specify	
34.4	Painting of Machine/ Electrical Panels: RAL 6019 Pastel Green (Polyurethane Paint)	Vendor to specify	
35.0.0	Following Tools are to be supplied along with the M/c. (2 Nos. each size)		
35.1.0	Drill Bits: a) 17.5 Ø x 150 Long b) 27 Ø x 100 Long c) 30 Ø x 100 Long d) 32 Ø x 100 Long e) 35 Ø x 100 Long f) 38 Ø x 150 Long g) 42 Ø x 100 Long h) 50 Ø x 150 Long i) 51.8 Ø x 150 Long (Core Drill) j) 52 Ø x 100 Long k) 62 Ø x 100 Long l) 74 Ø x 150 Long m) 76 Ø x 150 Long n) 76.9 Ø x 150 Long (Core Drill) o) 90 Ø x 100 long p) 100 Ø x 150 Long q) 101 Ø x 150Long (Core Drill)	Vendor to confirm	

Travelling Column Radial Drilling Station Technical Specification (Part B)

Sl. No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
35.2.0	Boring attachment upto 170 mm to be provided.	Vendor to confirm	
35.3.0	Boring tool details like single / multiple & its ranges, types.	Vendor to specify	
35.4.0	Vendor to quote separately for above items (items indicated in Sl. No. 35.0.0) in Price Bid and confirm supply of same in Technical offer.		

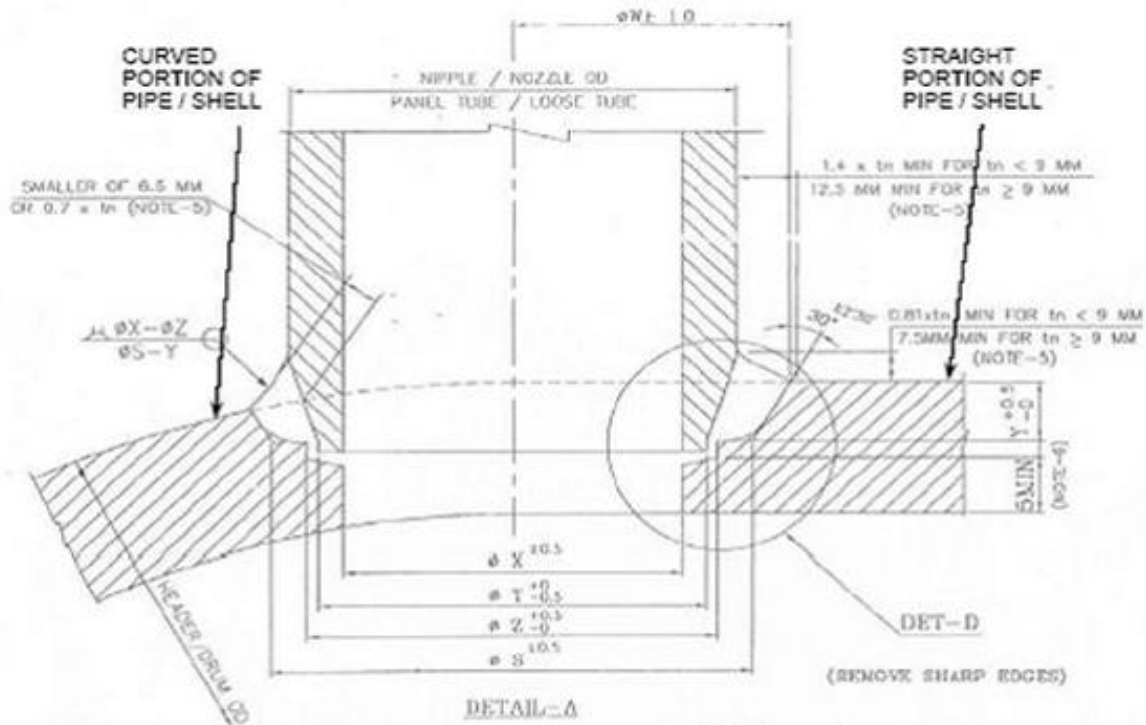
ANNEXURE - I

CROSS SECTIONAL OF DRUM SHELL



All dimensions are in 'mm'
BHEL - HPVP, Visakhapatnam

TYPICAL DRILLING & EDGE PREPARATION STYLE



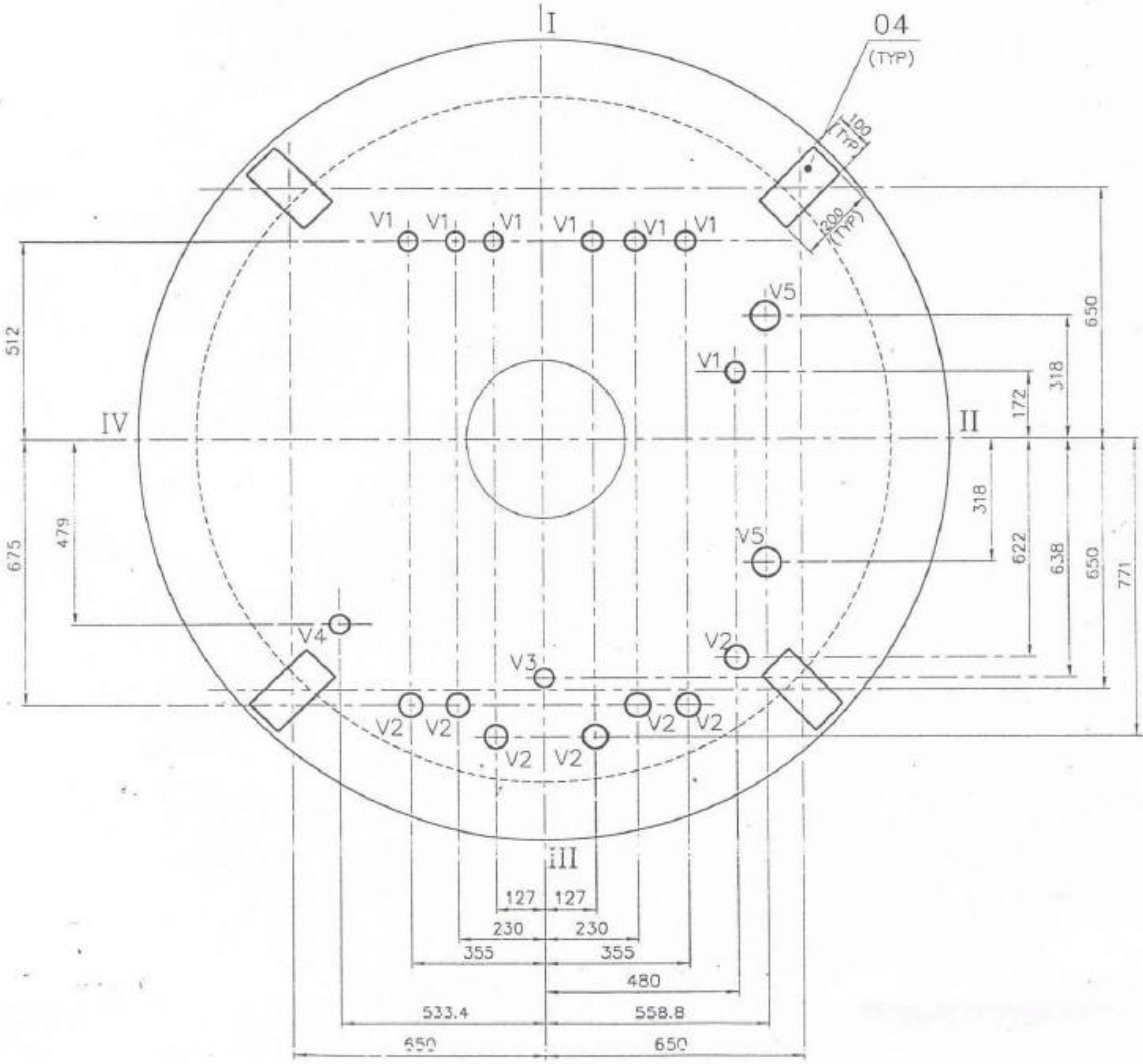
Variable	Min ϕ in mm	Max ϕ in mm
X	21	100
T	34	142.5
Z	35	143.5
S	55	162.5
W	68.5	182.5

Y varies from 9 to 21 mm

All dimensions are in 'mm'

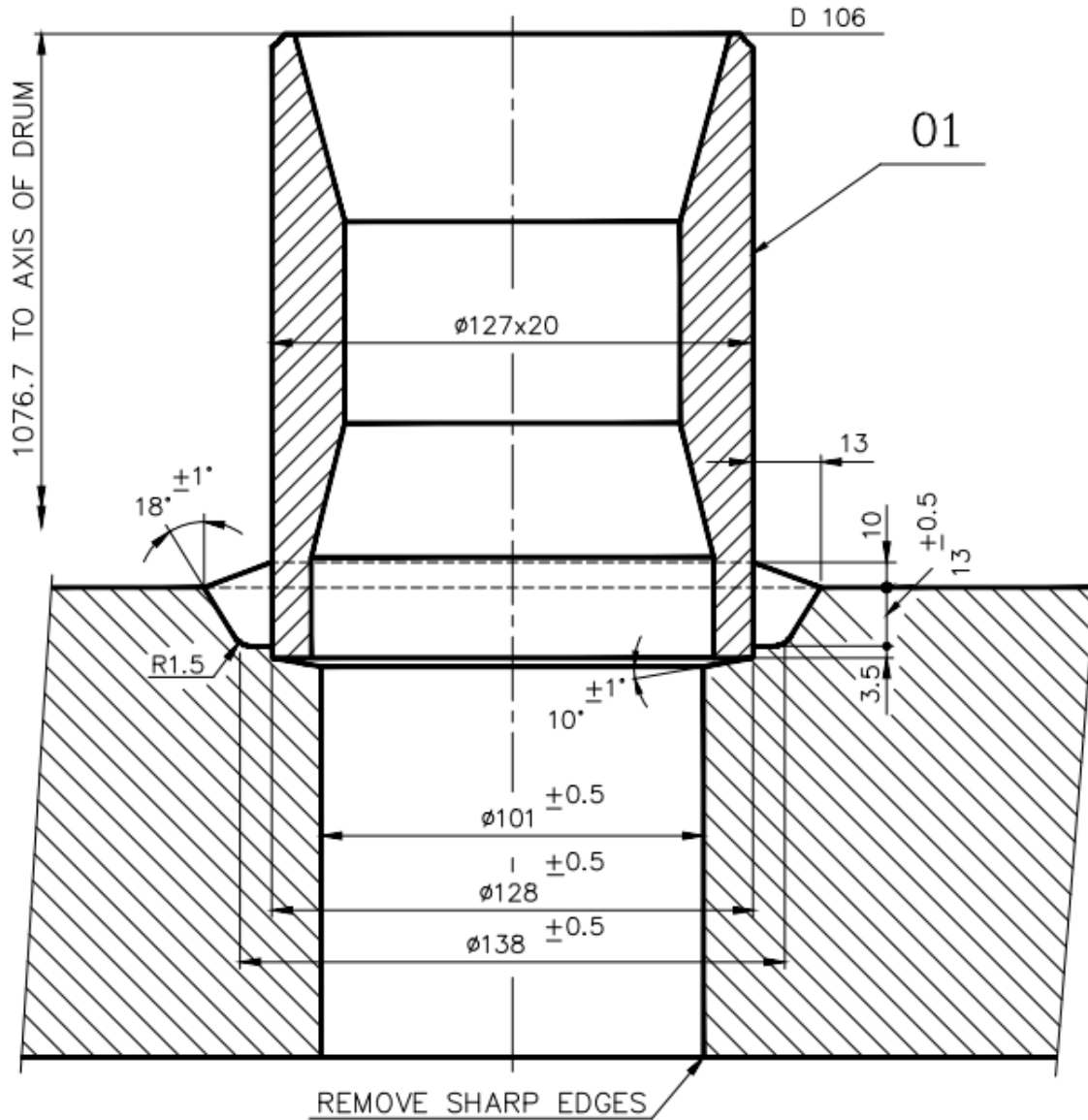
BHEL - HPVP, Visakhapatnam

POSITION OF DRILL HOLES ON HEMISPHERICAL DISHED-END
(PLAN VIEW)



All dimensions are in 'mm'
BHEL - HPVP, Visakhapatnam

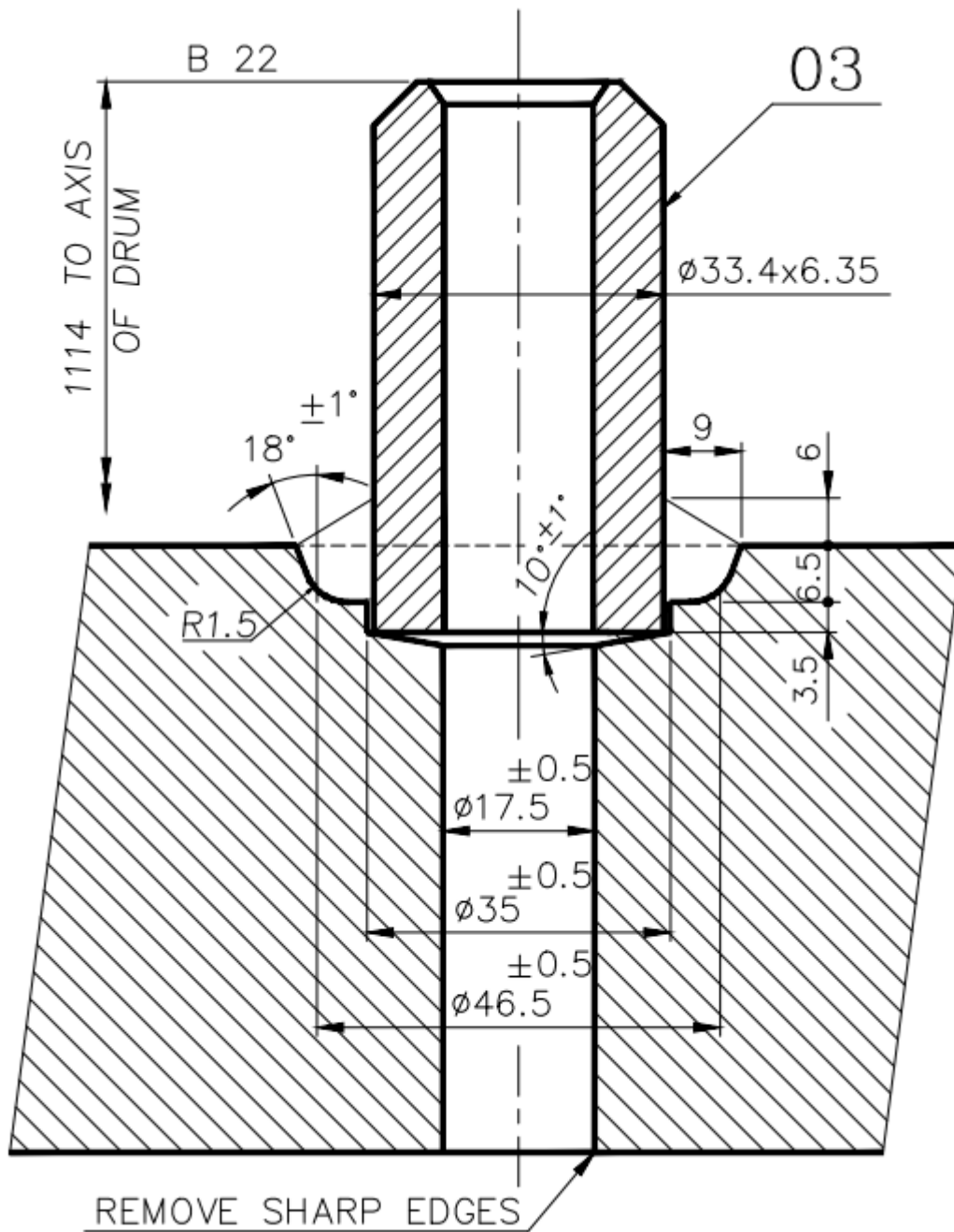
TYPICAL DRILLING & EDGE PREPARATION STYLE



All Dimensions are in mm

BHEL – HPVP, Visakhapatnam

TYPICAL DRILLING & EDGE PREPARATION STYLE



All Dimensions are in mm

BHEL – HPVP, Visakhapatnam

COMMERCIAL TERMS AND CONDITIONS FOR SUBMISSION OF OFFER**1.0 QUOTATIONS**

Bidders shall submit the offer in TWO INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.

Envelope I: This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked “**Part I – Technical and Un-priced commercial bid**” Indicating Tender No., Due Date and Address & Reference of the Bidder.

Envelope II: This sealed envelope should contain price details this envelope should be clearly marked “**Part II - Price bid**” indicating Tender No., Due Date and Address & Reference of the Bidder.

Both the envelopes (Part I & II) shall be put in one cover, duly sealed, super scribing as Part I and Part II of Tender No., due date of opening and the address and reference of the Bidder

The above offer should reach this office on or before the due date by 14.00 Hrs (IST)
Tender should not be addressed to any Individuals name but only designation to

Sr. Manager (MM)
BHARAT HEAVY ELECTRICALS LIMITED
HEAVY PLATES & VESSELS PLANT
VISAKHAPATNAM - 530 012 (A P), INDIA.

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 in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

Offers should be in ENGLISH and accompanied by technical literature catalogue and detailed dimensional drawings in ENGLISH or otherwise the offers will not be considered.

2.0 PART I (TECHNICAL & UN-PRICED COMMERCIAL BID)**2.1 Technical**

This part shall include / indicate the following:

- 2.1.1. Offer should contain complete scope of supply with all technical details, specifications, delivery and other commercial terms and conditions.
- 2.1.2. Point by point confirmation for the Technical Specification enclosed is to be provided. If there are any deviations the same should be clearly specified. Offers received without conformation to our specification will be rejected.
- 2.1.3. List of customers to whom same or similar equipment have been supplied along with performance certificates to be enclosed.
- 2.1.4. Relevant catalogue to be attached.
- 2.1.5. List of spares parts (with part numbers) for two years operation and maintenance should be attached.

2.1.6. Information on shipping weight and cubage (length, width & height) to be provided

2.1.7. In case of foreign bidder offer, the Principal's technical offer only should be enclosed.

2.2 Un-Priced Commercial

This part shall include / indicate the following

2.2.1. Port of shipment / Station of dispatch

2.2.2. Terms of payment

2.2.3. FOB/FCA price along with freight charges up to Chennai port (for foreign bidders) Ex-works/FOR Dispatch Station price along with freight charges up to BHEL Visakhapatnam (for Indian bidders)

2.2.4. Taxes, Service tax & duties including Cess applicable.

2.2.5 Delivery Schedule

2.2.6. Filled-in check list to be enclosed

2.2.7. Offer validity

2.2.8. Country of origin

2.2.9. Percentage of agency commission if any along with a copy of Agency agreement The FOB/FCA/CFR Prices quoted shall include the agency commission.

2.2.10. A copy of "Un-Priced Part II 'i.e., a copy of the Price Bid without the price details to be enclosed.

2.2.11 BHEL Visakhapatnam is eligible for availing CENVAT / VAT credit on both inputs and capital inputs. The suppliers invoice should separately indicate the amount of duty / taxes and should invariably mention the following details:

1. The Central excise registration number, range division and commission rate of the supplier's jurisdiction.
2. The rate of duty and 8 digit central excise tariff heading of the item supplied.
3. The TIN, VAT, CST registration number of the supplier.

The duplicate copy of the invoice is required for availing CENVAT credit and original copy for availing VAT credit, if purchased within the state.

In case of foreign bidders the duplicate copy of the electronic Bill of Entry along with TR6 challan should be made available for availing CENVAT credit on CVD, Cess (S) and SAD.

3.0 **PART II (PRICE – BID)**

This part should contain the schedule of price particulars and to be co-related to the technical details provided in Part-I

4.0 **OPENING OF TENDERS**

The Part I – Technical & un-priced commercial bid alone would be opened on the Tender opening date.

The Part II – Price bid of technically suitable Bidders alone would be opened. The Technically suitable Bidders would be informed about the Price Bid opening date. Clarifications if any required by BHEL Visakhapatnam FOR Technical evaluation / commercial evaluation would be sought from Bidders before opening of Part II – price bid.

GENERAL

5.1 Incomplete offers will not be considered.

5.2 **Fixed priced:** Prices quoted by the bidder shall be fixed and not subject to any escalation whatsoever during the period of bid validity and execution of the Purchase Order A bid submitted with an adjustable price will be treated as non- responsive and rejected Prices shall be written in words and figures. In the event of difference, the price in words shall be valid and binding. Unit prices shall be considered correct in the event of any discrepancy with regards to total price.

5.3 **Bid currency:** Indian bidders should submit the prices only in Indian Rupees. Foreign bidders may submit their bid in their home currency, which should be clearly indicated in the un-priced commercial bid as well as in the price bid. Price bid opening date/ RA date will be considered as effective date for considering exchange rate to evaluate the offers.

- 5.4 **Terms of Delivery:** Bidders are required to quote their best delivery period. Foreign Bidders should submit their offer for net FOB/ FCA – Nearest Sea Port / Air Port as well as CFR / Chennai Seaport/ Airport. Freight charges up to Chennai port to be indicated separately. Indian Bidders should submit their offer for Dispatching station as well as FOR BHEL Visakhapatnam basis. Freight charges from works to BHEL Visakhapatnam to be indicated separately. Delivery from the date of Letter of Intent to be mentioned in the offer.
- 5.5 **Taxes and Duties:** All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST & TIN No/ Tariff No. etc, failing which the purchaser will not be liable for payment of such Taxes and Duties (Our TIN No.28280189432, APGST No. VSP/04/1/1023 dated 24.08.1968. CST No.VSP/04/1/1012 dated 24.08.1968 & BHEL Visakhapatnam ECC No AAA CB 7076 N-XM001. Assessment circle Visakhapatnam.)
- 5.6 **Validity:** The offers for main equipment and spares shall be kept open for acceptance for a period of 120 days (one hundred and twenty days) from the dates of opening of the tender (part I)
- 5.7 **Terms of Payment:**
- 5.7.1 **Indian Bidders:**
80% payment (80% of basic price + 100% Taxes) will be made within 45 days of receipt of material and balance 20% will be made after acceptance of material/commissioning of the equipment at BHEL, Visakhapatnam and on submission of Performance Bank Guarantee for 10%.
- 5.7.2 **Foreign Bidders**
An Irrevocable letter of Credit shall be established for 80% of FOB/FCA/CFR/ (excluding Indian Agent's commission) 2 months prior to shipment and valid for 3 months for negotiation against shipment Letter of Credit shall be opened through a branch of State Bank of India in the country where order shall be placed. In case, in the country where order is placed, State Bank of India is not there, Letter of Credit will be confirmed by foreign banker. Balance 20% of FOB/FCA/CFR value shall be paid through sight draft on Commissioning & acceptance of the equipment at BHEL Visakhapatnam, against submission of 10% performance bank guarantee. All Bank charges outside India are to supplier's account. Lump sum erection and commissioning charges if any, shall be payable after satisfactory erection & commissioning of the equipment by sight draft against certificate issued by the competent authority.
- 5.7.3 **Common to both India & Foreign Bidders.**
Erection & Commissioning (E&C) charges will be released after deduction of Income Taxes as per the Govt. of India rules. The TDS certificate will be issued by BHEL. Applicable service tax on E&C charges will be payable extra. The liability of depositing the same to the Govt. will be of the supplier.
- 5.7.4 **Loading criteria common to both Indian and foreign bidders:** Vendor should accept the payment terms specified above. However for any deviation to the payment terms offered with reference to the above criterion will be loaded with prime lending rate of SBI prevailing on date of opening of price bid + 2%, which shall be computed for the differential period between BHEL Visakhapatnam terms of payment and the offered basic price.
- 5.8 DUNS number (allotted by M/s. DUN & Bradstreet) shall be mentioned in your offer.
- 5.9 **Guarantee:** The equipment shall be guaranteed for a period of 18 months from the date of supply or 12 months from the date of commissioning and acceptance whichever is earlier.
Offers from vendors not accepting to the requested guarantee period will be rejected.

- 5.10 **Contract Execution Bank Guarantee (CEBG):** The successful tenderer shall furnish a Bank Guarantee from any Nationalized Bank for 5% of Purchase Order value (FOR Dispatching station value – Excluding taxes, duties, freight & insurance – for Indian bidders) & (FOB/FCA value – excluding freight & insurance – for foreign bidders) confirming that the order will be executed as per the terms and conditions and this should be valid till final dispatch date (LR/GR/BL/AWB) with additional 2 months claim period. Letter of Credit will be processed only after receipt of CEBG. The CEBG is to be furnished within 3 weeks from the date of Purchase order.
Offers from vendors not accepting to submit CEBG will be rejected.
- 5.11 **Performance Bank Guarantee (PBG):** The supplier shall furnish a Bank guarantee from any Indian Nationalized Bank approved by BHEL Visakhapatnam in the format, given by BHEL Visakhapatnam along with purchase order for 10% of the Purchase Order value (FOR Dispatching station value – Excluding taxes, duties, freight & insurance – for Indian bidders) & (FOB/FCA value – excluding freight & insurance – for foreign bidders) valid for period of guarantee with additional claim period of 2 months.
Offers from vendors not accepting to submit PBG will be rejected.
- The CEBG & PBG shall be obtained from any Indian Nationalized Bank/ Scheduled Commercial Banks.
- 5.12 **Liquidated damages:** Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional penalty at the rate of ½% of the value of goods for each week of delay subject to a maximum of 10% of the Purchase Order value.
- 5.12.1 **Loading Criteria for Liquidated Damages:** Any deviation from above LD Clause to the extent for which LD is not agreed by the vendor i.e., differential % value will be loaded on basic price, e.g. If some vendor agrees for say maximum of 6% LD then his price will be loaded by 4% (10 – 6) of his quoted basic price.
- 5.13 **Risk purchase:** If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL Visakhapatnam will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the delivery period mentioned in the Purchase Order.
Offers from vendors not accepting the above Risk Purchase terms will be rejected.
- 5.14 **Indian Agent & Agency commission:** An Indian Agent can represent only one Foreign Manufacturer against a particular Tender. The FOB/FCA/CFR price quoted by the Foreign bidder shall include the agency commission. However, the agency commission component payable to their Indian Agents shall be shown separately in the offer. This will be paid by BHEL Visakhapatnam in India Rupees, on satisfactory commissioning & acceptance of the equipment. Copies of current Agency Agreement / Authorization Letter in respect of Agency Commission shall be furnished along with offer. For calculation of Rupee equivalent of Agency Commission exchange rate as prevailing on the date of Purchase Order will be taken.
- 5.15 **Short shipment / Warranty replacement:** In case of any short shipment in the main equipment / spares, customs duty levied on such supplies, shall be borne by the supplier. Any warranty replacement during the warrantee period shall be on FOR, BHEL Visakhapatnam, basis.

- 5.16 **Inspection & Testing:** All goods shall be subject to inspection by BHEL Visakhapatnam or its authorized representatives at supplier's works or at BHEL Visakhapatnam stores. The supplier will not charge for the facilities provided for inspection of goods. In case of machine tools the machine would be inspected and proved at supplier's works prior to dispatch however, final inspection and acceptance of the machine will be carried after installation of the machine at BHEL, Visakhapatnam.
- 5.17 **Operating and Maintenance manuals:** The Bidders shall clearly mention in their offer that Operating Maintenance Manuals as called for in the Technical Specification in the required number of copies will be provided.
- 5.18 **Cenvat & VAT credit. (for Indian Bidders only):** The quotation must indicate Tariff item number and rate of Excise Duty applicable. The original Excise Duty Gate Pass will be required to be furnished in case charges to us. If the bidder is availing Cenvat credit for his input materials, the effect of proforma credit should be passed on to the purchaser.
- 5.19 **Packing:** The Supplier shall arrange for packing suitably in all respects considering the peculiarity of the material involves for normal transport by sea / air / rail road and suitably protected against effect of tropical salt laden atmosphere in the event of shipment being delayed at ports.
- 5.20 **Salient Points of HSE** (Health, Safety & Environment) that are to be considered while submissions of offer are:
- 5.20.1 Consumption benchmarks related to output shall be provided wherever applicable for key input resources (energy/fuels/chemicals)
- 5.20.2 Competency requirements for operation, maintenance and calibration, if any, shall be communicated
- 5.20.3 If any Hazardous chemicals as per MSIHC (Manufacturing, Storage and import of Hazardous Chemicals) Rules 1989/94/2000 are used, the MSDS shall be provided, along with on site & OFF site emergency plan (as applicable).
- 5.20.4 The noise level at operator level shall be within 90 DbA
- 5.20.5 OH&S (Occupational Health and Safety) control measures for safe working of machine as applicable shall be specified
- 5.20.6 The machine/equipment shall be fitted with guard for rolling and moving parts and shall comply with applicable OH&S legislations and Factories Act 1948
- 5.20.7 The supplier shall submit the layout drawing of operating controls, displays etc and operating instructions to enable ergonomics evaluation and approval
- 5.20.8 The recommended PPE (Personal Protective Equipment) for the equipment shall be furnished
- 5.20.9 Alarm System (both visual and audible) and Automatic switch off of the equipment shall be provided for any intrusion, overloading, short circuiting or any malfunctioning of the equipment.
- 5.20.10 Details of all hazardous / harmful substances discharges as by-products / wastes during operations of the machine / equipment, such as fumes, gases, dust particles, aerosols UV./IR (Ultra violet / Infra red) radiations, etc shall be furnished, along with their concentrations and their TLV, (Threshold Limit Value)

- 5.20.11 Appropriate pollution control measures shall be proposed to keep the emissions from the machinery / processes within the prescribed limit as stated in Environment Protection Rules 1986.
- 5.20.12 All furnaces, process units, DG sets, paint booths, shot blasting chambers, etc shall be provided with stack(s) of sufficient height as per guidelines laid down in the Environment Protection Rules 1986.
- 5.20.13 wherever industry specific standards are not available for control of pollutants, general emission standards shall be used
- 5.20.14 Chemicals banned due to their negative impact on the environment shall not be used on the process
- 5.20.15 Fuels with sulphur content less than 0.05% shall be proposed.
- 5.20.16 Details regarding nature of waste generated and appropriate disposal practices available shall be provided, along with the operation procedure of the plant / process.
- 5.20.17 Hazardous chemicals and flammable substances shall be transported only through authorized transporters and all safety practices as laid down in applicable legislative requirements such as Central Motor Vehicle Rules, Manufacture, Storage and Import of Hazardous Chemical 1989, etc. shall be followed.
- 5.20.18 Primary materials used in the equipment shall be specified and they shall be eco - friendly.
- 5.21 Evaluation of offers shall be on the basis of delivered cost (Net cash outflow to BHEL Visakhapatnam).
- 5.22 BHEL Visakhapatnam also reserves its right to allow to the Public Sector Enterprises ordering and price preference facilities as admissible under the existing policy.
- 5.23 BHEL Visakhapatnam reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at another project / unit.
- 5.24 BHEL Visakhapatnam shall be at liberty to reject or accept any tender, part or in full, at their own discretion and any such action is not liable for any question or claim against BHEL Visakhapatnam.
- 5.25 BHEL Visakhapatnam reserves the right to go for a Reverse Auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions governing RA are given below.

GENERAL TERMS AND CONDITIONS OF RA (REVERSE AUCTION)

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications. BHEL Visakhapatnam may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING ON INTERNET.

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL Visakhapatnam will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
3. BHEL Visakhapatnam will inform the vendor in writing in case of reverse auction, the details of service provider to enable them to contact & get trained.

4. Business rules like event date, time, start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
 5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event.
 6. BHEL Visakhapatnam will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL Visakhapatnam like Packing & Forwarding charges, taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL Visakhapatnam standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
 7. Reverse auction will be conducted on scheduled date & time.
 8. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
 9. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL Visakhapatnam through Service provider within 24 hours of Auction without fail.
 10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL Visakhapatnam as per prevailing procedure.
 11. In case BHEL Visakhapatnam decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL Visakhapatnam shall be opened as per BHEL Visakhapatnam's standard practice.
- 5.26 **Force Majeure clause:** If at the time during the continuance of this contract the performance in whole or in part by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events) then provided notice of happening of any such events is given by either party to other within twenty one days from the date of occurrence thereof neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist, if the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

CHECK LIST

Bidder's acceptance to BHEL Visakhapatnam's Standard Commercial Terms & Conditions.

Applicable for Indian bidders

(To be submitted along with the offer – please do not change the format)

BHEL Visakhapatnam Tender No: & Date:	Bidders Confirmation / response
Prices have been quoted on "FIRM PRICE" basis only (Yes / No)	
Prices have been quoted on "F.O.R BHEL Visakhapatnam" basis only (Yes / No)	
P & F (Please confirm whether included or not)	
Freight (Please confirm whether included or not)	
Insurance (Please confirm whether included or not)	
Validity of offer (we require a minimum period of 120 days from the date of Tender Opening – please Specify)	
Sales Tax (please Specify)	
Excise Duty (please Specify)	
Delivery period from the date of Purchase Order (please Specify). A loading @ ½ % of the Purchase Order value per week will be done for the grace period requested. For evaluation 4 weeks will be considered as one month. Vendors quoting a delivery period beyond the 'the requested delivery plus the allowed grace period' is liable for rejection.	
Liquidated damages as per clause 5.12 (we require acceptance to @ ½% per week subject to a maximum of 10%) (Yes / No)	
Risk Purchase as per clause 5.13 (Yes / No) (Offers from vendors not accepting the Risk Purchase terms will be rejected)	
Payment terms (As per Clause No. 5.7.1) (Yes / No)	
Contract Execution Bank Guarantee (CEBG) as per Clause 5.10 (Yes / No) (Offers from vendors not accepting to submit CEBG will be rejected)	
Performance Bank Guarantee (PBG) as per Clause 5.11 (Yes / No) (Offers from vendors not accepting to submit PBG will be rejected)	
Guarantee as per clause 5.9 (The equipment shall be guaranteed for a period of 18 months from the date of supply or 12 months from the date of commissioning and acceptance whichever is earlier) (Yes / No) (Offers from vendors not accepting to the guarantee period will be rejected)	
Inspection (please Specify the Place of Inspection)	
Erection & Commissioning/ Installation/ Training (Please confirm whether charges are included in the total cost or not)	
Approximate Net Weight of the total Consignment	
Approximate Gross Weight of the total Consignment	

Signature & Office Seal of the bidder

CHECK LIST

Bidder's acceptance to BHEL Visakhapatnam's Standard Commercial Terms & Conditions.

Applicable for foreign bidders (To be submitted along with the offer – please do not change the format)

BHEL Visakhapatnam Tender No: & Date:	Bidders Confirmation / response
Prices have been quoted on "FIRM PRICE" basis only (Yes / No)	
Prices basis (FOB/CFR/CIF – Please Specify)	
Insurance (Please confirm whether included or not)	
Validity of offer (we require a minimum period of 120 days from the date of Tender Opening – please Specify)	
Currency in which quoted (please Specify)	
Port of loading (please Specify)	
Country of Origin (please Specify)	
Delivery period from the date of Letter of Intent (please Specify) A loading @ ½ % of the Purchase Order value per week will be done for the grace period requested. For evaluation 4 weeks will be considered as one month. Vendors quoting a delivery period beyond the 'the requested delivery plus the allowed grace period' is liable for rejection.	
Liquidated damages as per clause 5.12 (we require acceptance to @ ½% per week subject to a maximum of 10%)	
Risk Purchase as per clause 5.13 (Offers from vendors not accepting the Risk Purchase terms will be rejected) (Yes / No)	
Payment terms (As per Clause No. 5.7.2)	
Agency commission (refer clause 5.14)	
Contract Execution Bank Guarantee (CEPG) as per Clause 5.10 (Yes / No) (Offers from vendors not accepting to submit CEBG will be rejected)	
Performance Bank Guarantee (PBG) as per Clause 5.11 (Yes / No) (Offers from vendors not accepting to submit PBG will be rejected)	
Guarantee as per clause 5.9 (The equipment shall be guaranteed for a period of 18 months from the date of supply or 12 months from the date of commissioning and acceptance whichever is earlier). (Offers from vendors not accepting to the requested guarantee period will be rejected) (Yes / No)	
Inspection (please Specify)	
Erection & Commissioning/ Installation/ Training (Please confirm whether charges are included in the total cost or not)	
Dimension of the Largest Part (please Specify)	
Packing Schedule (No of containers and their Sizes) (please Specify)	
Approximate Net Weight of the total Consignment (please Specify)	
Approximate Gross Weight of the total Consignment (please Specify)	

Signature & Office Seal of the bidder