

BHARAT HEAVY PLATE & VESSELS LIMITED.,
(A Subsidiary Bharat Heavy Electricals Limited)
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NOTICE INVITING TENDER(NIT)

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

SUB: Travelling Column Drilling Machine

Our Ref: **MM/2/10/3459/CAP/W-056/5058**

DATE: 21.06.2013

Sealed quotations in duplicate are invited from suppliers on **or before 24.07.2013** **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	2 Nos
	Encl: 1. Technical Specifications 15 Pages 2. Annexure-1 1 Page 3. Annexure-2 1 Page 4. Annexure-3 1 Page 5. Annexure-4 1 Page 6. Annexure-5 1 Page 7. General Terms/ commercial terms and conditions (INCLUDING CHECK LIST) 10 Pages	

For BHARAT HEAVY PLATE & VESSELS LIMITED,

For Dy. GENERAL MANAGER (MM)

TRAVELLING COLUMN DRILLING MACHINE

PART A

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QUALIFYING CRITERIA FOR THE SUPPLY OF TRAVELLING COLUMN HEAVY DUTY RADIAL ARM DRILLING MACHINES

SECTION – I : COMPANY PROFILE

The BIDDER has to provide the details pertaining to each clause in the table given below and wherever necessary additional sheets may be attached (giving clear reference number) to understand the profile of the BIDDER's COMPANY.

Sl. No.	PARTICULARS	VENDOR's RESPONSE
1.0	Number of Years of Experience of the BIDDER [OEM - Original Equipment Manufacturer] in the field of Design, Manufacture & Supply of Heavy Duty Travelling Column type Radial Drilling Machines	
2.0	Details on the Codes/Standards of Machine Design and Manufacture	
3.0	Details on Manufacturing Facilities available with the BIDDER for : a) Building Large Machine Castings b) Heat Treatment Facilities c) Heavy Machining & Grinding d) Machine Assembly & Testing	
4.0	Details of Quality System (with Stages of Internal Inspection) followed for the Machine Building and Testing of Capacity	
5.0	Details of Electrical/Electronic Control Panel Design, Manufacturing and Testing Facilities	

TRAVELLING COLUMN DRILLING MACHINE

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SECTION – II : QUALIFYING CRITERIA

The BIDDER has to compulsorily meet the following requirements to get qualified for submitting an offer for the Heavy Duty Radial Drilling Machines:

[Additional Sheets shall be attached with the OFFER, to provide requisite details]

Sl. No.	REQUIREMENTS	VENDOR's RESPONSE
6.0	The BIDDER shall have a minimum of TEN Years of Continuous Experience in the Field of Design, Manufacture & Supply of Heavy Duty Radial Arm Drilling Machines	
7.0	The BIDDER must have supplied at least FIVE numbers of Heavy Duty Radial Arm Drilling Machines with Spindle Power equal to or more than 15 kW, Drilling Capacity – 100 mm in Mild Steel, and Drilling Head Traverse over 1750 mm on the Machine Radial Arm.	
8.0	Performance Certificate from at least one customer who has been using the machine for more than one year shall be submitted in the enclosed format (Section – IV). Reference List of Customers with full contact details of CONTACT PERSON, who are the End Users of Heavy Duty Radial Arm Drilling Machines supplied as per Clause No.7.0 shall also be submitted.	
9.0	BHPV reserves the right to verify the information provided by vendor (including visit by a team of BHPV Officials to the Customer Works of the Vendor). In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.	
10.0	Details on SERVICE-AFTER-SALES Set-Up in India including the Addresses of Agents / Service Centers in India. [Details on the number of trained personnel with field of experience to handle the service needs of BHPV in time]	

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PART A
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SECTION – III : BID / OFFER FORMATS

The BIDDER has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser:

Sl. No.	REQUIREMENTS	VENDOR's RESPONSE
11.0	The BIDDER shall submit the offer in TWO PARTS - Technical [with PART A & PART B] & Commercial and Price Bid.	
12.0	The OFFER shall contain a comparative statement of Technical Specifications given by BHPV and the Offer Details submitted by the Bidder, against each Clause. A just 'YES' or 'CONFIRMED' or 'NODEVIATION' or 'COMPLIES' or 'ACCEPTED' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.	
13.0	The Technical Offer shall be supported by Product Catalogue and Data Sheets in ORIGINAL and complete technical details of 'Bought-Out-Items' with copies of Product Catalogue (if applicable)	
14.0	The Commercial Offer shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation of the inclusion of all the accessories, tooling, auxiliary parts, spares, consumables, etc. with the main and basic equipment, to meet the technical specification requirements.	
15.0	Earlier performance/field experience (including service support) if any, with BHPV / BHEL for the BIDDER's Equipment, will be a reckoning factor for the technical qualification of the OFFER.	
16.0	DELIVERY - The bidder shall quote the best possible delivery. However the delivery period (including the time for Pre-Dispatch Inspection clearance by BHPV) shall not exceed 12 months (which includes time for General Arrangement Drawing approval by BHPV also) from the date of Purchase Order. A grace period of 2 months in addition is provided. However additional grace period will have a loading for arriving at the PRICE COMPETITIVENESS of the Commercial Offer (if the offer is technically acceptable on all accounts). Details are given in the Commercial Terms of this Tender. The delivery period is reckoned from the date of Purchase order to date of dispatch from the vendor works. Bidder to specify the time required for E&C. BHPV reserves the right to fix E&C period during Finalization of offer in consultation with the bidder	

SECTION - IV

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.
 - a. Equipment Serial Number :
 - b. Spindle Motor Power in Horse Power/Kw :
 - c. Drilling Capacity in Steel in millimetres :
 - d. Drilling Head Traverse in millimetres :
 - e. Vertical Stroke of Radial Arm in millimetres :
 - f. Machine Column Traverse in X-axis in meters :
6. Performance of the Machine : Satisfactory / Not Satisfactory
7. Feedback on “After Sales Service” by the Supplier :
8. Remarks / Reasons for Recommendations to BHPV :
9. Contact Details
Name of the Contact Person :
Phone No. :
Fax No. :
E-mail ID :

Date:

Signature & Seal of the Authority
Issuing the Performance Certificate

**TECHNICAL SPECIFICATIONS FOR HEAVY DUTY TRAVELLING COLUMN
RADIAL ARM DRILLING MACHINES ON COMMON BASE**

AA. PURPOSE:

These heavy-duty radial drilling machines are meant for drilling and boring of holes in pipes and cylindrical shells (viz., Boiler Drum and Header Pipes) coming in Utility and Industrial Boilers. And also for hill side drilling of holes on hemi-spherical or semi ellipsoidal dished end covers. These machines shall be capable of drilling in curved shells of solid steel with thickness up to 150 mm. For Industrial Boiler Drum, nearly 1000 holes of diameter 51.8 mm (per work-piece) are to be drilled on a portion of circumference only, in multiple rows with reaming finish as per standards. 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 hydraulic testing. In all the above cases, the work-pieces with job rotators or 'V' Blocks or Jigs or Platform will be placed on Fitter's Bar (with slots for clamping) running throughout the length of the work-centre (21000 mm). These machines will be operated on three-shift basis.

BB. QUANTITY & MACHINE CONFIGURATION :

The tender is for two radial arm drilling machines, required for one work-centre where 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 21000 mm.

CC. JOB DETAILS :

A. Material :

- a. Steel with tensile strength of 60 kg / mm²
(SA106Gr.B/C, SA299, SA515/516Gr.60/70asper ASTM Standards)
- b. Cast- Iron with tensile strength of 25 kg / mm²
- c. Alloy Steel and Stainless Steel (martensitic) for Header pipes only
(SA 335 Gr.P11/P12/P22/P91/P23/P92 & Super 304 H as per ASTM Standards and X-20 CrMoV 121 as per DIN Standards)

B. JOB DIMENSIONS :

No.	PART DESCRIPTION	LENGTH in mtrs.	JOB DIAMETER in mm	WALL THICKNESS in mm	WEIGHT in TONS
1	Drum Shells	6.0 to 14.0	914 to 1676	40 to 150	20 to 60
2	Drum End-Cover	-	914 to 1676	60 to 150	1.5 to 6.0
3	Header Pipes	1.0 to 24 .0	219 to 914	20 to 120	1.0 to 10

C. TYPE OF DRILLS USED :

Standard 118 ° lip angle HSS drills without web thinning and Drills with replaceable carbide / HSS inserts.

D. EDGE PREPARATION :

Edge Preparation of drilled holes (asymmetrical cutting) by two cutting tool bits mounted in the same tool holder, taking cut simultaneously.

DD. DESCRIPTION OF JOBS [for TYPICAL JOB CONFIGURATION] :

Annexure – 1 to 5, enclosed with this specification, give the cross-sectional view of typical drum shell with stub holes (five rows on the top side) and typical drilling of holes in hemispherical end-covers. The shell wall thickness given in ANNEXURE-1 are 150 mm and 120 mm at the maximum.

EE. MACHINE SPECIFICATIONS :

S.No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.1.0	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 each 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 21,000 mm for drilling as per requirement of the job	Vendor to confirm	
1.2.0	DRILLING HEAD		
1.2.1	Drilling capacity in steel (TS 60 kg/sqmm).	150 mm	
1.2.2	Threading capacity in steel (TS 60 kg/sqmm)	M 76 x 6	
1.2.3	Boring capacity in solid steel (in steps)	170 mm	
1.2.4	Drilling capacity in solid cast iron	120 mm	
1.2.5	Tapping capacity in solid cast iron	M100 x 6	
1.2.6	Power of spindle motor	Not less than 18.5 kW	
1.2.7	Taper in spindle	MT 6	
1.2.8	Spindle stroke	Minimum 475 mm	
1.2.9	Spindle diameter in front bearing	Vendor to specify	
1.2.10	Number of spindle speeds	Vendor to specify	
1.2.11	Spindle speed range	Vendor to specify	
1.2.12	No of feeds	Not less than 12	
1.2.13	Spindle feed range in mm/rev. and mm/min.	Vendor to specify	
1.2.14	Auto depth control mechanism for spindle stroke.	Vendor to specify	
1.2.15	Quill diameter	Vendor to specify	
1.2.16	Maximum drilling thrust	Vendor to specify	
1.2.17	Maximum torque on spindle	Vendor to specify	
1.2.18	Mode of pre selection of feed and speed	Vendor to specify	

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S.No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.2.19	Drill head traverse speed for a motorized drill head traversing system	Vendor to specify	
1.2.20	Drill head locking mechanism	Vendor to specify & give technical details	
1.3.0 RADIAL ARM			
1.3.1	Maximum vertical distance between spindle nose to top of the bed	Vendor to specify [shall not be less than 3000 mm]	
1.3.2	Minimum vertical distance between Spindle nose to base of the machine, when the Radial Arm is at the lowest level on the Machine Column	Vendor to specify	
1.3.3	Maximum distance from the axis of the spindle to the guide ways on the Machine Column	Vendor to specify [shall not be less than 2500 mm, to suit the drilling application mentioned above]	
1.3.4	Minimum distance from the axis of the spindle to the guide ways of column	Vendor to specify [shall be around 500 mm]	
1.3.5	Drilling Head Traverse Stroke available along the Radial Arm	Vendor to specify [shall not be less than 1900 mm, to suit the drilling application mentioned above]	
1.3.6	Vertical Travel Stroke of the Radial Arm on the Machine Column	Vendor to specify [shall be not less than 1100 mm]	
1.3.7	Arm up / down speed	Vendor to specify	
1.3.8	Swing of the arm around the column	0 To 180 deg	
1.3.9	Arm dimensions	Vendor to specify	
1.3.10	Powered clamping mechanism of arm on the machine column. (With indicator)	Vendor to submit details	
1.4.0 MACHINE COLUMN & BASE			
1.4.1	Minimum distance between the centerline of two machine columns when the two machines are taken to the extreme end of the slide ways.	21000 mm	
1.4.2	Overall length of machine base for the above traverse in Point 1.4.1	Vendor to specify	
1.4.3	Minimum distance between the centerline of two columns of two machines, when they are brought together (with telescopic cover).	Vendor to specify	

TRAVELLING COLUMN DRILLING MACHINE

S.No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.4.4	Column traverse speeds (The continuous variable speed required shall be from 0.0 to 2000 mm / min)	Vendor to specify	
1.4.5	Column dimensions	Vendor to specify	
1.4.6	Powered locking of Saddle (Machine Base) with Bed to be provided.	Vendor to provide details.	
1.5.0	MACHINE GUIDE WAYS		
1.5.1	Width of Arm guide ways	Vendor to specify	
1.5.2	Width of column guide ways	Vendor to specify	
1.5.3	Hardness of guide ways	Vendor to specify [preferred values are 200-220 BHN for soft guide-ways and around 400 BHN for hardened cast iron slides]	
1.5.4	Sliding Surfaces on guide ways [BHPV preferred combinations]	Bidder to Give Details	
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		
1.6.0	CONSTRUCTION:		
1.6.1	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	
1.6.2	Video images on CD including hard copy explaining the technical features / Literature with photographs, drawings explaining the technical features shall be enclosed with the offer	Vendor to furnish	
1.6.3	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	
1.6.4	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	
1.6.5	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	

TRAVELLING COLUMN DRILLING MACHINE

S.No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.6.6	Column travel – if it is rack and pinion type, to provide inverted racks in order to protect racks from drill chips.	Vendor to specify	
1.6.7	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.	Vendor to specify	
1.6.8	For arm up and down travel, bellows and bottom support to be provided if it is screw rod / nut arrangement.	Vendor to specify	
1.6.9	Provision of Stainless Steel walk on type telescopic cover for guide-ways on the bed, considering that two machines will be located on a common bed for the entire length of machine bed and to operate both the machines to min and max distance from each other.	Vendor to specify	
1.6.10	For the entire length of each work-centre, metallic cable drag chain arrangement for input power cables, coolant & lubrication hoses shall be provided for easy drag and to avoid entangling with any other part of the system.	Vendor to specify	
1.6.11	Locking mechanism for provisions referred in Clause S.Nos. 1.2.20, 1.3.10 and 1.4.6 are to be spelt out with details	Vendor to give Technical Details	
1.6.12	Graduated Dials on headstock shall be of Stainless Steel / Chromium plated.	Vendor to confirm	
1.6.13	Up & down and Travel movement two parallel control required. One at headstock and other at control panel, operable at ground level, mounted on the machine column.	Vendor to confirm	
1.6.14	Flexible metal hose for coolant at headstock.	Vendor to confirm	
1.6.15	Centralised Lubrication System and all lubrication lines to be protected with metallic covers to protect from drilling chips.	Vendor to provide details	
1.6.16	Details of flood coolant system [Each Machine shall have a coolant discharge arrangement of 30 LPM – litres/minute, at 3 bar pressure at discharge end of the Coolant Pump. The Coolant Pump Motor speed shall be 1500 rpm. The work centre will have a common & centralized coolant tank for collection & re-circulation, with two independent coolant supply system with suitable valve arrangements]	Vendor to provide details	

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S.No.	PARTICULARS	SPECIFICATIONS	VENDOR'S OFFER
1.6.17	Power & Speed rating of Electric Motors for a) Spindle, b) Arm Elevation c) Drill Head Traverse on Arm, d) Column Travel e) Coolant Pumps BHPV prefers to have 1500 rpm Electric Motors.	Vendor to furnish	
1.7.0	MACHINE LIGHTS:		
1.7.1	Machine Lights (24 Volt AC) to be provided as built in with Headstock for sufficient illumination of complete working area for clear visibility.		Vendor to confirm
1.7.2	A magnetic base 24-volt portable spotlight with sufficiently long cable should also be provided.		Vendor to confirm
1.7.3	All light fittings, consumables, adapters/receptacles should have compatibility with Indian equivalents		Vendor to confirm
1.8.0	ELECTRICAL SYSTEM:		
1.8.1	415V + 10% / -10%, 50HZ +/-1.5 HZ, 3 Phase AC (3 wire system with out neutral) Power Supply Source will be provided by BHPV at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHPV's power supply point to different parts of the machine/control cabinets, shall be the responsibility of vendor.		Vendor to confirm
1.8.2	All electrical equipment shall be Tropicalized		Vendor to confirm
1.8.3	All electrical control cabinets & panels should be dust and vermin proof		Vendor to confirm
1.8.4	All electrical components in the cabinets should be mounted on DIN Rail		Vendor to confirm
1.8.5	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
1.8.6	Motors shall be from M/s Siemens / ABB or other reputed make conforming to IEC and acceptable to BHPV		Vendor to confirm
1.8.7	Cables leading to traversing groups shall be of plastic drag chains, Cables Drag Chain for Machine Column Traverse shall be in Metallic Execution.		Vendor to provide details.
1.8.8	Vendor should ensure the proper earthing for the machine and its accessories.		Vendor to confirm
1.9.0	OPERATION AND CONTROL SYSTEM:		
1.9.1	OPERATOR'S PANEL: Operator's panel in-built on the drill head is preferred. All switches on the Operator's panel should be within reach of operator for convenient, efficient & safe operation. All indications should also be conveniently placed accordingly.		Vendor to provide details
1.9.2	Inching operation facility to be provided on all movements of the machine.		Vendor to confirm

TRAVELLING COLUMN DRILLING MACHINE

S.No.	PARTICULARS	SPECIFICATIONS	VENDOR's OFFER
1.10.0	SAFETY ARRANGEMENTS:		
1.10.1	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.
1.10.2	A detailed list of all alarms / indications provided on machine shall be submitted by the Vendor.		Vendor to confirm
1.10.3	All the pipes, cables etc. on the machine should be well supported and protected.		Vendor to confirm
1.10.4	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
1.10.5	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
1.10.6	Emergency Switches at suitable locations as per International norms are to be provided.		Vendor to confirm
1.10.8	Projection of operating levers / Hand wheel on the drill head if any shall not be hindrance to operator safety.		Vendor to confirm
1.11.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE: [The Machine shall conform to following factors related to environment]		
1.11.1	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. This will be measured as per international standards like DIN 4563516. Vendor to demonstrate compliance to noise level, if so required.		Vendor to confirm
1.11.2	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.		Vendor to confirm
1.11.3	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.		Vendor to confirm
1.11.4	Vibration level of Machine Head Stock during drilling operations		Vendor to furnish details
2.0.0	TOOLINGS		
2.1.0	Reduction sleeves MT6-5, 6-4, 4-3 & 4-2, both long & short series.		Vendor to confirm
2.2.0	Tapping Tools with suitable Attachments for carrying out Tapping for the range of M 48 x 5 to M 100 x 6, in steps with full set of collets.		Vendor shall furnish list and details
3.0.0	LEVELING & ANCHORING SYSTEM		
3.1.0	Complete anchoring system including foundation bolts, anchoring materials, fixtures, levelling shoes, etc. shall be supplied for the Machine.		Vendor to confirm

S.No.	PARTICULARS	VENDOR'S OFFER
4.0.0	TOOLS FOR ERECTION, OPERATION & MAINTENANCE	
4.1.0	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
4.2.0	Test Mandrel for checking spindle run-out & alignment shall form the part of the scope of supply	Vendor to confirm
5.0.0	SPARES:	
5.1.0	Itemised break up 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
5.2.0	Mechanical & Hydraulic Spares: Bearings, clutches, gears and all types of pumps, Valves, pressure switches / transducers, filters, seals, 'O' rings, Hydraulic Hoses, etc.	Vendor to furnish
5.3.0	Electrical: All types of Relays, Contactors, Proximity Switches, Push Buttons, Indicating Lamps, Semiconductor Fuses, Special Fuses, Circuit Breakers, Main Power Switch.	Vendor to furnish
5.4.0	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 BHPV sufficiently in advance and provide drawings of parts / details of spares & Vendors to enable BHPV to procure these in advance, if required.	Vendor to furnish
5.5.0	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
6.0.0	GENERAL POINTS	
6.1.0	The offer shall clearly indicate the list of standard accessories that will be supplied along with the machine	Vendor to confirm and enlist
6.2.0	All hydraulic elements shall be of Vickers/Rexroth make	Vendor to confirm and enlist
6.3.0	All electrical devices like contactors, relays and limit switches, push buttons etc. shall be from Siemens / Alstom / Cuttler Hammer / Telemecanique.	Vendor to confirm and enlist
6.4.0	All components/devices/terminals are to be incorporated with ferrules. (Numbered)	Vendor to confirm

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PART B

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S.No.	PARTICULARS	VENDOR'S OFFER
7.0.0	DOCUMENTATION	
7.1.0	Three sets of following documents (Hard copies) in English language should be supplied along with the machine and one soft copy in CD/Pen Drive.	Vendor to confirm
7.2.0	Detailed Operation and Maintenance manual of machine with all drawings of machine assemblies/subassemblies/parts including Electrical & Electrical Block diagrams / Pneumatic/ Coolant / Hydraulic circuit diagrams. All Assembly/ Sub Assembly Drawings shall be supplied with the part list / Bill Of Materials also	Vendor to confirm
7.3.0	Catalogues, O&M Manuals and drawings of all bought out items, bearings wherever applicable.	Vendor to confirm
7.4.0	Electronic and electrical interconnecting drawings (i.e. between machine, control panel and drives). Hard Copy in Original: 3 Nos.	Vendor to confirm
7.5.0	Specification with drawings of clutch plates & brake plates.	Vendor to confirm
7.6.0	Hydraulic, coolant, lubrication and Electrical circuits with BOM	Vendor to confirm
7.7.0	Detailed specification of all rubber items and hydraulic/lube fittings	Vendor to confirm
7.8.0	The vendor shall submit complete Master List of parts used in the machine.	Vendor to confirm
7.9.0	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to confirm
7.10.0	Component Manufacturing Drawing shall be provided for all the wearing-out parts with material specifications.	
8.0.0	FOUNDATION:	
8.1.0	BHPV shall construct complete foundation for the machine. Vendor shall furnish the foundation details.	Vendor to confirm
9.0.0	ERECTION & COMMISSIONING	
9.1.0	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 BHPV at only one point to be indicated by Vendor in their foundation/layout drawings.	Vendor to confirm
9.2.0	Successful proving of BHPV components by the Vendor shall be considered as part of commissioning. All tests, as mentioned at Specification Clause No. 14.0 shall form part of the commissioning activity.	Vendor to confirm
9.3.0	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

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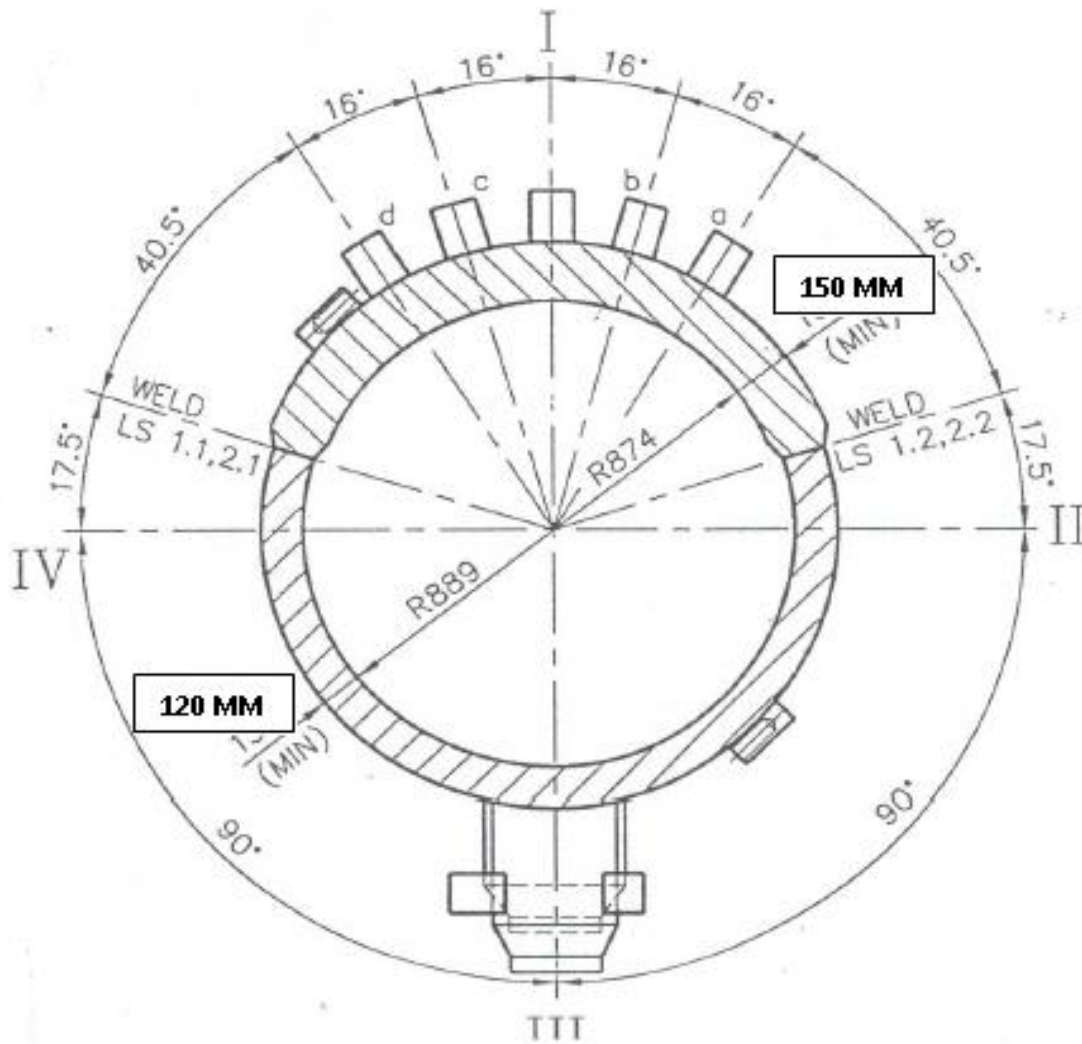
S.No.	PARTICULARS	VENDOR's OFFER
10.0.0	ACCURACY TESTS	
10.1.0	GEOMETRICAL ACCURACIES	
10.1.1	Geometrical Accuracy Tests shall be as per international standards [as per ISO 2423/1974]. Detailed Test Charts for the same, clearly showing the accuracies that can be achieved on the machine, shall also be submitted with the offer.	Vendor to confirm
10.1.2	All the above accuracies to be demonstrated to BHPV engineers during pre-acceptance tests at Vendors works and during Erection & Commissioning at BHPV Works.	Vendor to confirm
11.0.0	FINISH REQUIREMENTS	
11.1.0	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
12.0.0	AMBIENT CONDITIONS & THERMAL STABILITY	
12.1.0	Total machine and all supplied items should work trouble free and efficiently under following operating conditions and should give specified accuracies. Ambient Conditions: Temperature = 25 to 50 Degree Celsius Relative Humidity = 95% maximum.	Vendor to confirm
12.2.0	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
12.3.0	The machine, including attachments and accessories, should be suitable for 24 hrs. Continuous operation to its full capacity for 24 hour a day and 6 days a week throughout. Vendor to ensure and confirm the same.	Vendor to confirm
13.0.0	PROVE-OUT OF MACHINE CAPACITY	
13.1.0	The capacity and capability of the machine is to be demonstrated on a test piece on which drilling and tapping shall be done at BHPV. Test piece shall be supplied by BHPV.	Vendor to confirm
14.0.0	MACHINE INSPECTION and ACCEPTANCE: (Tests/Activities to be Performed by Vendor)	Should be accepted & confirmed by Vendor
14.1.0	Tests/Activities should be carried out at Vendor's Works	Vendor to confirm
14.1.1	Geometrical Accuracy Tests as per test chart.	Vendor to confirm
14.1.2	Full load test to demonstrate the maximum power & drilling capacity of the machine.	Vendor to confirm
14.2.0	Tests to be carried out at BHPV Works	Vendor to confirm
14.2.1	Geometrical Accuracy Tests as per test chart.	Vendor to confirm

TRAVELLING COLUMN DRILLING MACHINE

S.No.	PARTICULARS	VENDOR'S OFFER
14.2.2	Full load test to demonstrate the maximum power & drilling capacity of the machine.	Vendor to confirm
14.2.3	Training of BHPV machine operators in operation and maintenance of complete machine & accessories etc. by the Vendor's experts/engineers for 3 days at BHPV works	Vendor to confirm
15.0.0	PACKING	
15.1.0	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
16.0.0	GUARANTEE	
16.1.0	12 months from the date of commissioning and acceptance of the machine at BHPV Works	Vendor to confirm
17.0.0	SPECIAL NOTES : The vendor should submit the following information:	
17.1.0	Machine Model	Vendor to specify
17.2.0	Total connected load in kVA	Vendor to specify
17.3.0	Floor area required (Length, Width, Height) for complete machine & accessories	Vendor to specify
17.4.0	Painting of Machine/ Electrical Panels: RAL 6019 Pastel Green (Polyurethane Paint)	Vendor to specify
18.0.0	Following Tools are to be supplied along with the M/c.	
18.1.0	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)	
18.2.0	Boring attachment upto 170 mm to be provided.	
18.3.0	Vendor to quote separately for above items (items indicated in Sl. No. 18.0.0) in Price Bid and confirm supply of same in Technical offer.	

CROSS SECTIONAL OF DRUM SHELL

BELLING

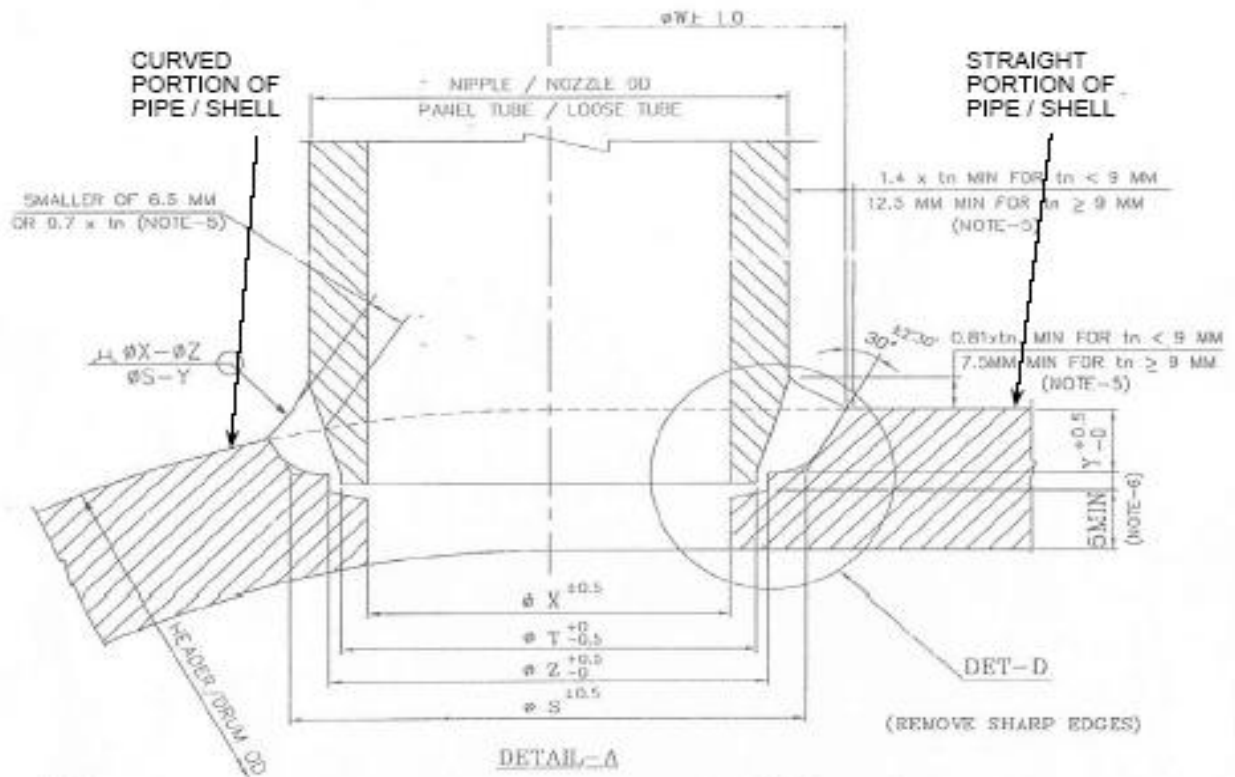


All dimensions are in 'mm'

RCDM-M&C-001

BHPV VISAKHAPATNAM

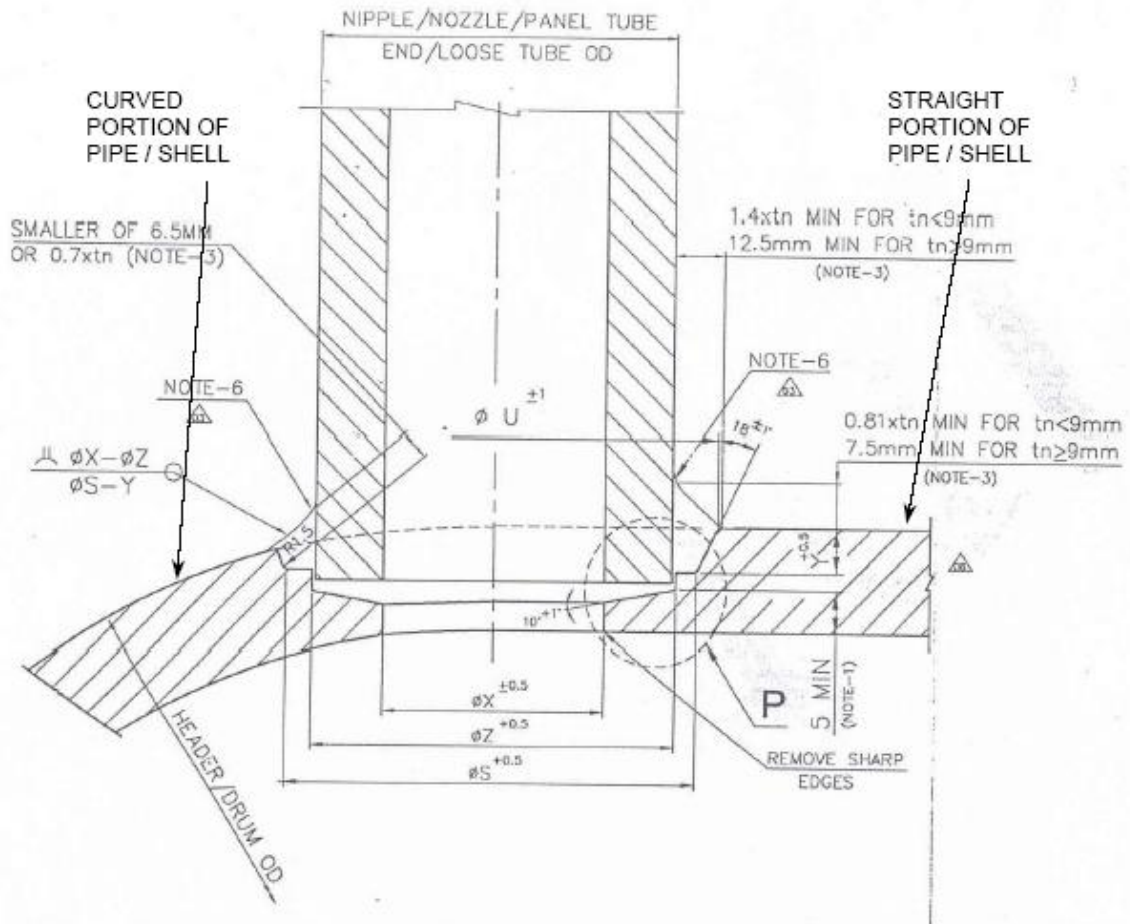
TYPICAL DRILLING & EDGE PREPARATION STYLE



All dimensions are in 'mm'

RCDM-M&CI-002
BHPV VISAKHAPATNAM

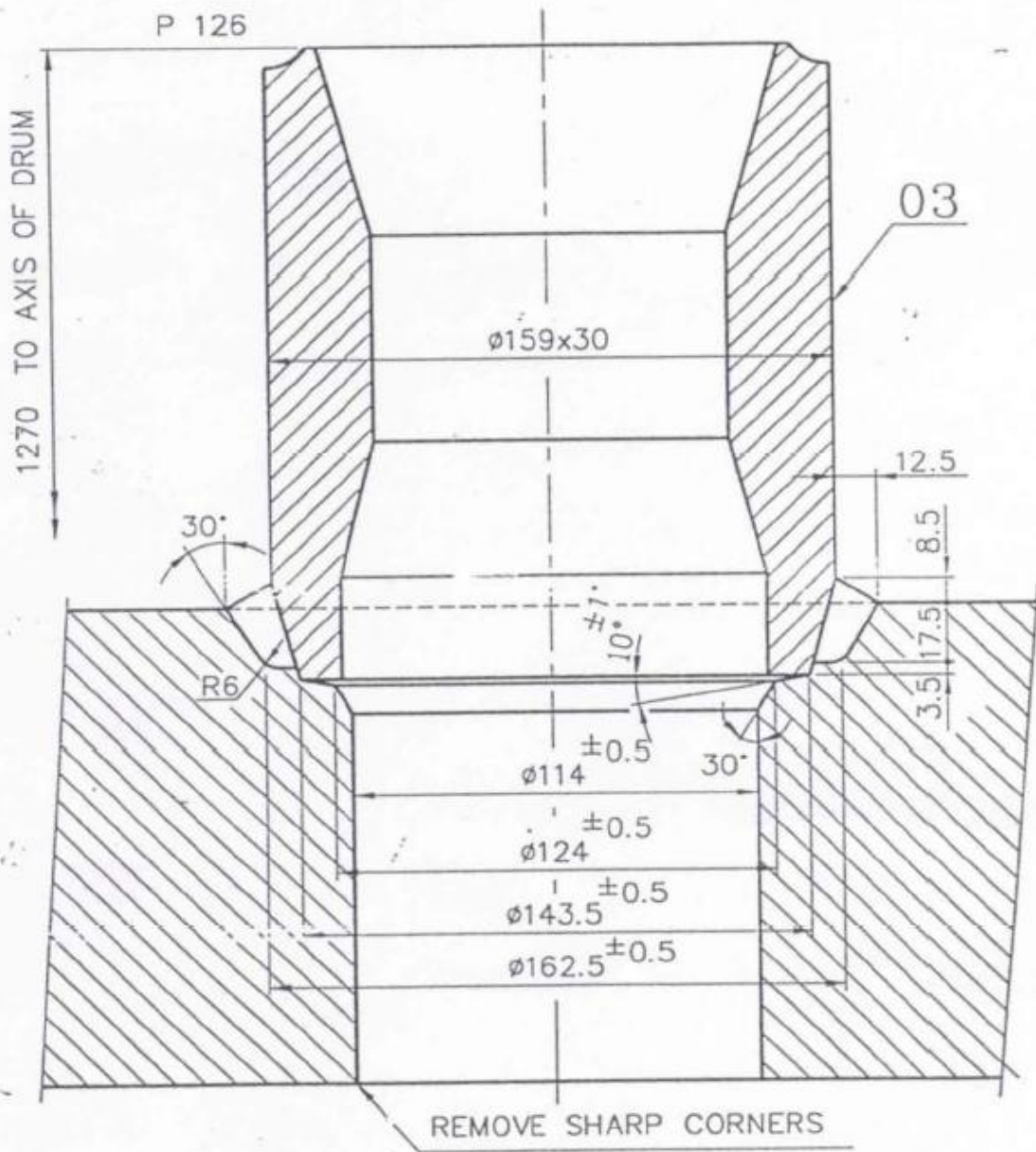
TYPICAL DRILLING & EDGE PREPARATION STYLE



All dimensions are in 'mm'

RCDM-M&C-003
BHPV VISAKHAPATNAM

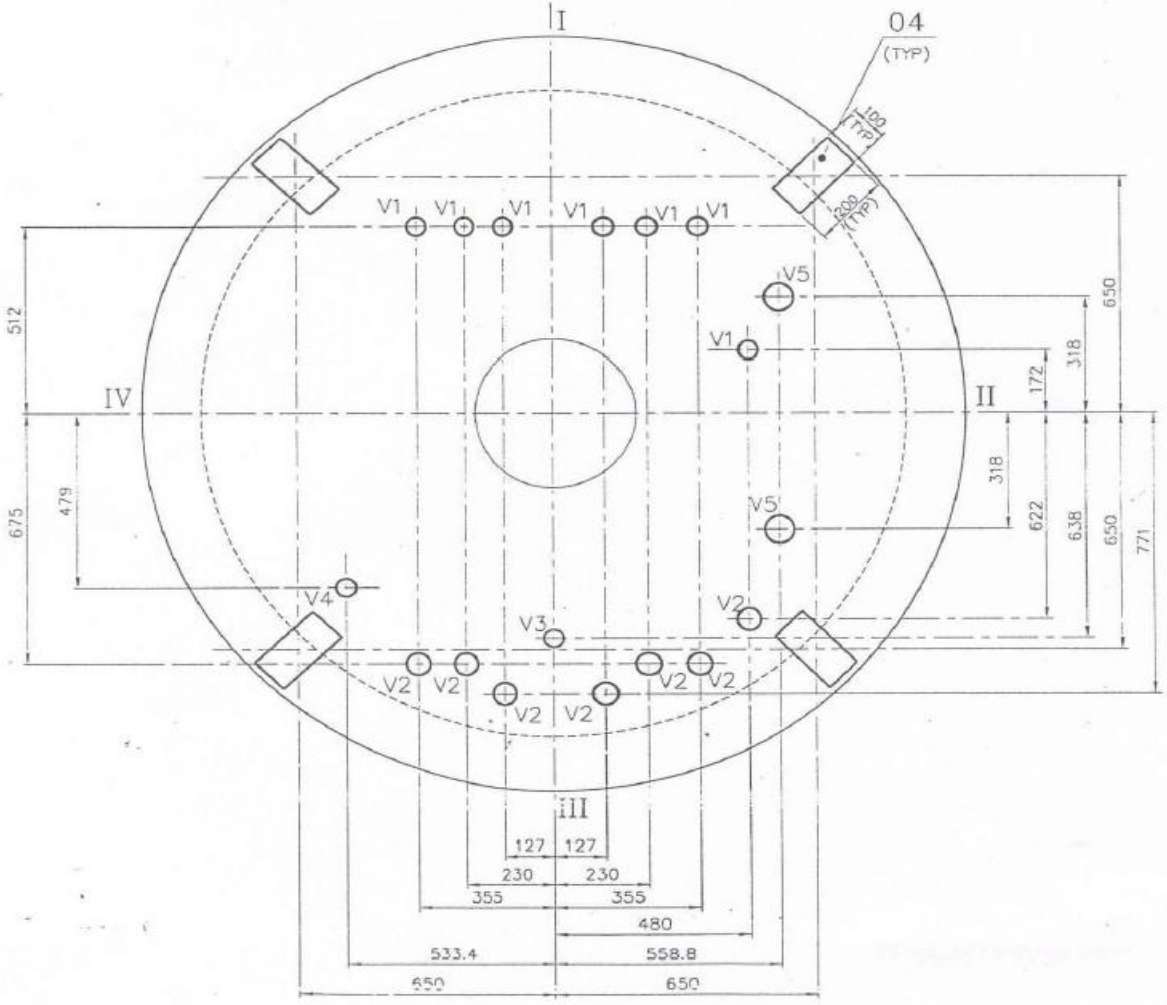
TYPICAL DRILLING & EDGE PREPARATION STYLE



All dimensions are in 'mm'

REDM-M&CI-004
BHPV VISAKHAPATNAM

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



All dimensions are in 'mm'

RCDM-M&C-005
BHPV 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

Dy. General Manager (MM)
BHARAT HEAVY PLATE & VESSELS LIMITED
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 BHPV 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. BHPV 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 BHPV 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 BHPV Visakhapatnam basis. Freight charges from works to BHPV 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 & BHPV 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:

5.7.1.1 BHEL, Trichy on behalf of BHPV (Subsidiary of BHEL) will arrange for an irrevocable, usance Letter of Credit (60 days from date of dispatch) after receipt of Inspection release note and against presentation of documents for 80% of payment (80% of basic price + 100% Taxes). And balance 20% of payment will be made after acceptance of material/commissioning of the equipment at BHPV, Visakhapatnam and on submission of Performance Bank Guarantee.

5.7.1.2 Documents to be submitted by Indian Bidders for negotiating LC:

1. Original Invoice in triplicate in the name of BHPV.
2. Original LR in the name of the LC issuing Bank
3. Original packing list in triplicate in the name of BHPV.
4. Original Test certificate in triplicate in the name of BHPV.
5. Inspection release Note.
6. One original Bank guarantee, if applicable in favour of BHPV.
7. Certificate issued by the beneficiary certifying that the materials dispatched and shown in the packing list are not less than that invoiced.
8. Insurance for 100% of the commercial invoice value made out in the name of LC issuing bank, covering all risks.
9. Any other conditions/documents as mentioned in the Purchase Order.

5.7.1.3 Additional conditions for Indian Bidders:

1. **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.
2. In the event of delayed presentation of documents beyond the validity for negotiation(Subject to acceptance of documents by Applicant), 5% of invoice value will be retained towards demurrage and other charges and the difference if any between actual charges and recovery will be settled between BHPV and beneficiary outside the purview of LC terms.

5.7.2 Foreign Bidders

An Irrevocable letter of Credit shall be established by BHEL, Trichy on behalf of BHPV (Subsidiary of BHEL) for 80% of FOB/FCA/CFR/ (excluding Indian Agent's commission) 2 months prior to shipment with a validity of 3 months and negotiation after shipment against shipping documents. Letter of Credit shall be opened through an authorized bank of BHEL in India. Balance 20% of FOB/FCA/CFR value shall be paid through sight draft on Commissioning & acceptance of the equipment at BHPV 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.

5.7.2.1 Documents to be submitted by Foreign Bidders for negotiating LC:

1. Original Invoice in triplicate in the name of BHPV.
2. Original bill of lading in triplicate in the name of the LC issuing bank.
3. Original packing list in triplicate in the name of BHPV.
4. One original certificate of origin.
5. Original Test certificate in triplicate in the name of BHPV.
6. Inspection release Note.
7. One original Bank guarantee, if applicable in favour of BHPV.
8. Certificate issued by the beneficiary certifying that one copy of non-negotiable documents comprising Bill of Lading, Invoice, Packing List, Certificate of country of origin and Test certificate sent to Port consignee.
9. Certificate issued by the beneficiary certifying that the materials shipped and shown in the packing list are not less than that invoiced.
10. Insurance for 110% of the commercial invoice value made out in the name of LC opening bank, covering all risks, clearly mentioning the name of claim settling agent in India. The claims will be settled in the same currency as that of LC.
11. Any other conditions/documents as mentioned in the Purchase Order.

5.7.2.2 Additional conditions for Foreign Bidders:

1. **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.
2. In the event of delayed presentation of documents beyond the validity for negotiation (Subject to acceptance of documents by Applicant), 5% of invoice value will be retained towards demurrage and other charges and the difference if any between actual charges and recovery will be settled between BHPV and beneficiary outside the purview of LC terms.

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 BHPV. 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 + %, which shall be computed for the differential period between BHPV terms of payment and the offered payment terms by vendor.

- 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 BHPV in the format, given by BHPV 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, BHPV 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 BHPV 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, BHPV - Visakhapatnam, basis.

- 5.16 **Inspection & Testing:** All goods shall be subject to inspection by BHPV or its authorized representatives at supplier's works or at BHPV 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 BHPV, 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 BHPV).
- 5.22 BHPV also reserves its right to allow to the Public Sector Enterprises ordering and price preference facilities as admissible under the existing policy.
- 5.23 BHPV reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at another project / unit.
- 5.24 BHPV 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 BHPV.
- 5.25 BHPV 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. BHPV 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. BHPV 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. BHPV 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. BHPV will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHPV like Packing & Forwarding charges, taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHPV 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 BHPV 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 BHPV as per prevailing procedure.
 11. In case BHPV 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 BHPV shall be opened as per BHPV’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 BHPV's Standard Commercial Terms & Conditions.

Applicable for Indian bidders

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

BHPV 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 BHPV" 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 BHPV's Standard Commercial Terms & Conditions.

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

BHPV 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