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(A Subsidiary Bharat Heavy Electricals Limited)
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NOTICE INVITING TENDER(NIT)

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

SUB: SLANT BED CNC LATHE

Our Ref: **MM/2/10/3437/CAP/W-031/5031**

DATE: 08.05.2013

Sealed quotations in duplicate are invited from suppliers on **or before 07.06.2013** **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.	SLANT BED CNC LATHE	1 No's
	Encl: 1. Qualifying Criteria PART A 4 pages 2. Technical Specifications PART B 18 Pages 3. General Terms/ commercial terms and conditions (INCLUDING CHECK LIST) 10 pages	

For BHARAT HEAVY PLATE & VESSELS LIMITED,

For Dy. GENERAL MANAGER (MM)

SLANT BED CNC LATHE

SECTION – I : QUALIFYING CRITERIA

The BIDDER has to compulsorily meet the following requirements to get qualified for considering the technical offer.

S. No.	REQUIREMENTS	Vendor's Response
1	Only those vendors (OEMs), who have supplied and commissioned at least two Slant bed CNC Lathe with 1. Spindle power 20 KW or more and 2. Turning length between centers 1500 mm or more in the past ten years and such machine should at present be working satisfactorily for a minimum period of one year after commissioning, as on the date of opening of this Tender are eligible to quote.	
	The vendor should submit the following information where similar machine has been supplied, for qualification of this offer.	
1.1	Name and postal address of the customer or company where similar machine is installed.	
1.2	Name and designation of the contact person of the customer.	
1.3	Phone, FAX no and email address of the contact person of the customer.	
1.4	Month and Year of commissioning of the machine.	
1.5	Parameters of machine supplied, viz. Spindle power, Max Turning length etc and the application for which the machine is supplied.	
1.6	Along with the Technical offer, the Vendor should submit one Performance certificate from the customer for the satisfactory performance of the machine for a period of minimum one year supplied to them. For obtaining the Performance certificate, a suggestive format is provided in SECTION – IV .	
1.7	BHPV reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected.	
2	DELIVERY - The bidder shall quote the best possible delivery. However the delivery shall not exceed 8 months with an additional grace period of 2 months, 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. 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 – I I

The BIDDER / VENDOR is requested to provide the following information:

S. No.	REQUIREMENTS	Vendor's Response
3	The BIDDER/VENDOR to furnish Reference List of Customers, with full address, details of contact person, where Slant bed CNC Lathes have been supplied in the past.	
4	Details of Slant bed CNC Lathes supplied to other BHPV units, if any. (Year of commissioning, Turning length and Spindle power).	
5	Details on SERVICE-AFTER-SALES Set-Up in India including the Address of Agents / Service Centers in South India.	
6	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – III

The BIDDER to note:

S. No.	REQUIREMENTS	Vendor's Response
7	The BIDDER / VENDOR shall submit the offer in TWO PARTS. 1. Technical Offer [with PART A & PART B] and Commercial offer. 2. Price Bid.	
8	The Technical Offer shall contain a comparative statement of Technical Specifications demanded by BHPV and Offer Details submitted by the Bidder , against each clause. A just 'CONFIRMED' or 'COMPLIED' or 'YES' or 'NO-DEVIATION' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.	
9	The Technical Offer shall be supported by product Catalogues & Data Sheets and also technical details of Bought-Out-Items with copies of Product Catalogue to the extent possible.	
10	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation.	

SECTION IV

PERFORMANCE CERTIFICATE

1. Supplier of the machine
2. Make & Model of the M/C
3. Month & Year of Commissioning
4. Application for which M/C is used
- 5
 - a) Spindle Power in Kw (cont. rating)
 - b) Max Turning length between centers
 - c) Swing over carriage
 - d) Spindle nose
6. Performance of the Equipment (**Tick** whichever **Satisfactory / Not Satisfactory** is **applicable**)
7. Any Other remarks

Date:

Signature & Seal of the Authority Issuing the
Performance Certificate

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
1	PURPOSE:	
	This Lathe is intended for Straight Turning, profile turning, Boring, Facing, threading (external / Internal) etc. Centre to centre distance = 1600mm	Vendor to confirm
1.1	WORK PIECE DETAILS:	
	Materials : Aluminium, SS ,Carbon Steels & other alloy steels having hardness upto 400 BHN Max weight of Work-piece = 4100 Kg	Vendor to confirm
2	MACHINE CONSTRUCTION:	
2.0.1	Vendor to furnish constructional details of the machine including explanatory drawings of various components/ assemblies like Head stock, carriage, Turret, Tailstock, Machine Bed, Feed Transmission System, Feed back System etc. of the machine with details of material & their hardness. The main spindle of the machine shall be hollow to allow long stems with large diameters to be fed inside.	Vendor to specify
2.0.2	Video images on CD / Hard copy of literature with photographs & drawings explaining the technical features shall be enclosed with the offer	Vendor to specify
2.0.3	Sliding door shall be provided with sufficient transparent windows to view machining progress and to avoid Chip / coolant Splash.	Vendor to confirm
2.0.4	Machine should be metric execution.	Vendor to confirm
2.1	MACHINE SPECIFICATION:	
2.1.1	Type of Bed	Slant Bed
2.1.2	Turning Diameter over cross slide:	650 mm
2.1.3	Swing Over Carriage	Vendor to specify
2.1.4	Maximum dia of chucking Job	650 mm
2.1.5	Maximum turning length with chuck(between centre)	1500 mm
2.1.6	Max. Weight carrying capacity with / without tailstock	Vendor to specify.
2.1.7	Chuck: Hydraulic 3 Jaw self-centering hollow chuck with hard reversible Jaws for OD and ID clamping.	Vendor to confirm

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.1.8	Chuck size	Vendor to specify
2.1.9	Provision for Dual chucking pressure and selection of two pre-set chucking pressures.	Vendor to confirm
2.2	SPINDLE:	
2.2.1	Spindle nose:	Vendor to specify
2.2.2	Spindle power Min (continuous rating)	40 KW, Vendor to specify.
2.2.3	Bore Through Spindle = 95 mm	Vendor to confirm
2.2.4	Spindle Motor Make: Fanuc or siemens & Model No:	Vendor to specify
2.2.5	Spindle speed (Infinitely variable): 12 to 1800 rpm	Vendor to confirm
2.2.6	Number of speed ranges (Selectable through program):	Vendor to specify.
2.3	FEEDS AND DRIVE SYSTEM:	
2.3.1	Feed Rate in X & Z Axes (Infinitely variable):	Vendor to specify
2.3.2	Rapid Feed Rate in X & Z Axes:	Vendor to specify
2.3.3	Maximum threading rate	Vendor to specify
2.3.4	Feed drive motors (AC servo motors) shall be digital type of Fanuc or Siemens. (Details of model, make, type etc. to be submitted with the offer)	Vendor to specify
2.3.5	Feed back system for X, & Z axes: Fanuc / Siemens / Heidenhain rotary encoders (Details to be submitted with the offer.)	Vendor to specify
2.3.6	Mechanism for locking / clamping the axes:	Vendor to specify
2.3.7	Type of power transmission: Pre-loaded backlash-free recirculating ball screw drive for feed drive axes. Detailed Specification for all ball screws used in the machine shall be submitted. The specification shall address the following points: (a) Diameter, (b) Pitch (c) Length (d) Make (e) Model	Vendor to specify
2.4	METALLIC TELESCOPIC COVERS	Vendor to specify
2.4.1	Metallic Telescopic Covers of rust resistant material shall be provided with wipers for guide ways of traversing axes. Provision should be made to avoid mixing of coolant & hydraulic oil.	Vendor to specify

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.5	ROLLER STEADY REST:		
2.5.1	Type: Hydraulic self- centering steady rest	Vendor to confirm	
2.5.2	Clamping range: 30 – 650 mm	Vendor to confirm	
2.5.3	Steady rest shall be with central lubrication, supplied with mounting elements and programmable positioning and arm control	Vendor to specify.	
2.6	TAIL STOCK:		
2.6.1	Quill: Built-in type, rotating tailstock quill.	Vendor to confirm.	
2.6.2	Quill stroke:	Vendor to specify.	
2.6.3	Quill movement by Hydraulic	Vendor to confirm.	
2.6.4	Quill diameter:	Vendor to specify.	
2.6.5	Quill taper:	MT4	
2.6.6	Tail stock center- cone angle	Either 60 degree or 90 (Drawing to be submitted)	
2.6.7	Max thrust on the Quill:	Vendor to specify.	
2.6.8	Detail of Positive Clamping & Unclamping of tail stock on bed	Vendor to submit details	
2.7	CARRIAGE:		
2.7.1	Z-axis travel:	Vendor to specify	
2.8	TURRET:		
2.8.1	Type - 8 Station Bi - Directional drum turret	Vendor to submit details	
2.8.2	No. of tool stations:	8	
2.8.3	Turret indexing- bi-directional, Random:	Vendor to confirm	
2.8.4	Type of Tool Holders	Vendor to specify	
2.8.5	Tool Shank size: 40mm x40mm	Vendor to confirm	
2.8.6	Max Boring bar size= 50 mm	Vendor to confirm	

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.8.7	Model, & make of turret:	Vendor to specify	
2.8.8	Coolant should reach up to tool tip in the tool holders:	Vendor to confirm	
2.8.9	Automatic operation / selection / indexing of turret through CNC program:	Vendor to confirm	
2.8.10	Additionally manual operation / selection through push buttons	Vendor to confirm	
2.9	OPERATION AND CONTROL SYSTEM:		
2.9.1	OPERATOR'S PANEL:		
2.9.2	Preferably Swiveling type operator's panel having complete CNC and machine control system with TFT of required configuration shall be provided at an ergonomically suitable location. All switches should be within reach of operator for easy & safe operation. All displays/indications should also be conveniently placed accordingly. Layout showing complete details should be submitted.	Vendor to submit	
2.10	CNC SYSTEM & FEATURES:		
2.10.1	Make: Fanuc / Siemens	Vendor to specify	
2.10.2	Type: PC based latest version acceptable to M/s. BHPV (With Simultaneous interpolation of two axes)	Vendor to Confirm	
2.10.3	Model: Suitable and Latest version, as available at the time of ordering, should be supplied.	Vendor to specify	
2.10.4	Details of Standard features: List to be submitted by Vendor.	Vendor to specify	
2.10.5	Details of optional features, recommended by vendor:	Vendor to specify	
2.10.6	The system should have full alphanumeric keyboard, TFT colour display (preferably 17"), additional draw-out type QWERTY Key Board and mouse in suitable enclosure, Ports for printer, network ready for LAN, electronic hand wheels for all axes, CD/DVD drive unit with CD/DVD writer for data input/output, hard disk of sufficient capacity (not less than 80 GB), graphic simulation and preinstalled system software & other required software etc. (Details should be submitted by Vendor).	Vendor to confirm & submit details	

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.11	MANUAL CONTROL:	
2.11.1	Complete manual control of machine with required switches/ keys should be provided on operator's panel for selection of required axis, axis direction, cutting feed, spindle speed, cutting feed on/off, display of axis position values etc. for manual operation without using CNC program, CNC option Manual Turn or MDI mode. Diagrams/ sketches for switches / keys provided on operator pendent should be submitted.	Vendor to confirm
2.12	UPS FOR CNC SYSTEM:	
2.12.1	UPS of 30 minutes for CNC system with inbuilt cooling and charge status display	Vendor to specify
2.13	MACHINE LIGHTS:	
2.13.1	Machine Lights for sufficient illumination of complete working area should be provided for clear visibility.	Vendor to confirm
2.13.2	Provision of 24 V hand lamp with sufficient cable length.	Vendor to confirm
2.13.3	All light fittings, consumables, adapters / receptacles should have compatibility with Indian equivalent	Vendor to confirm
2.13.4	Flashing / rotary type End of Cutting and Program Stop Light.	Vendor to confirm
2.14	AIR CONDITIONERS:	
2.14.1	Air Conditioners with Dehumidifiers of suitable capacity to be provided for all Electrical / Electronic Panels / Cabinets including Operator's Panel considering specified ambient conditions.	Vendor to Confirm Vendor to submit
	Make: Rittal / Warner & Finley or any other reputed make acceptable to BHPV. Specification to be submitted.	
2.15	HYDRAULIC SYSTEM:	
2.15.1	Make: Rexroth / Vickers or any other reputed make acceptable to BHPV	Vendor to specify
2.15.2	Hydraulic system should be centralized. Hydraulic Tank shall preferably be located at floor level All hydraulic pipelines to be neatly laid out. (Details should be furnished at contract stage)	Vendor to confirm

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.15.3	Hydraulic circuits shall be designed with minimum number of control valves and to suit oil of ISO VG 46 or 68 only. Also minimum number of check- points (Minimess points) to be provided wherever pressure is required to be measured for setting and trouble shooting. MINIMESS Pressure Gauge - 1 No with Connecting Hose to be provided.	Vendor to confirm	
2.15.4	Control voltage for all solenoid operated valves shall be 24V DC	Vendor to confirm	
2.15.5	Filtration System:	Vendor to specify	
2.15.6	Failure indication:	Vendor to specify	
2.15.7	Automatic shut off provision.	Vendor to submit	
2.15.8	Refrigerated type cooling system of sufficient capacity to maintain complete Hydraulic System, including lubrication oil, hydraulic oil and gearbox oil, etc. at a temperature not exceeding 45 °C irrespective of the ambient conditions. Vendor should submit complete details.	Vendor to specify	
2.15.9	Hydraulic pump capacity (flow / pressure). Pump should be selected such that maximum design pressure is not less than 1.5 times the operating pressure.	Vendor to specify	
2.15.10	Each pump should have an independent motor.	Vendor to confirm	
2.15.11	All bearings used in the machine should be from SKF, FAG, TIMKEN or any other reputed makes acceptable to M/s. BHPV.	Vendor to confirm	
2.16	First filling of all required Oils & Grease etc. Should be supplied by vendor.	Vendor to specify and confirm	
	Oil grade: ISO VG46 or 68		
	Grease: Servo gem grade 2 (preferred.)		
	Indigenous (Indian) source or Indian equivalent and specifications of oils / greases are also to be provided by the vendor.		
2.17	COOLANT SYSTEM:		
2.17.1	Recirculating type Coolant System for all 8 positions of turret with all accessories shall be provided.	Vendor to confirm	
2.17.2	Coolant operation shall be enabled through program.	Vendor to confirm	

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.17.3	Coolant on / off by push buttons on the Operator's panel also.	Vendor to confirm
2.17.4	Coolant Pressure:	Vendor to Furnish
2.17.5	Coolant flow rate:	Vendor to Furnish
2.17.6	Coolant collection and recirculation system should be leak proof to avoid spillage on shop floor.	Vendor to Confirm
2.17.7	Coolant Filtration System: Re-circulating type with suitable filtration unit. Vendor shall give details of offered filtration unit.	Vendor to submit
2.17.8	Coolant flow diagram showing filters, pumps, valves, tanks etc. to be submitted.	Vendor to submit
2.17.9	Coolant pump & coolant motor detail to be submitted.	Vendor to submit
2.17.10	Coolant Tank Capacity:	Vendor to specify
2.17.11	The coolant tank should be fitted with skimmer for regular cleaning of coolant from contamination.	Vendor to Confirm
2.18	ELECTRICAL:	
2.18.1	415V ± 10%, 50 HZ ±3 HZ, 3 Phase AC (3 wire system with out neutral) Power Supply 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. Requirement of grounding/earthing with required material details is to be informed by vendor well in advance so that the same could be incorporated during construction of foundation.	Vendor to Confirm
2.18.2	Tropicalisation: All electrical / electronic equipment shall be tropicalized.	Vendor to Confirm
2.18.3	All electrical & electronic control cabinets & panels should be dust and vermin proof and shall have IP 54 protection.	Vendor to Confirm
2.18.4	All electrical components in the cabinets should be mounted on DIN Rail	Vendor to Confirm
2.18.5	All electrical and electronic panels including operator's panel should be provided with fluorescent 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

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.18.6	Motors shall conform to IEC or Indian Standards	Vendor to Confirm	
2.18.7	All cables moving with traversing axes should be installed in caterpillar / Drag chain. Additionally, all the cable trays required for laying cables should be included in the offer.	Vendor to Confirm	
2.18.8	Vendor should ensure proper earthing for the machine and its peripherals.	Vendor to Confirm	
2.18.9	In-cycle hour counter with reset facility and digital energy meter shall be provided	Vendor to Confirm	
2.19	SAFETY ARRANGEMENTS:		
2.19.1	Machine should have adequate and reliable safety interlocks or devices to avoid damage to the machine, work piece and the operator due to the malfunctioning or mistakes. Machine functions should be continuously monitored and alarm / warning indications through lights/ alarm number with messages (on CNC display and panels) should be available.	Vendor to Confirm	
2.19.2	A detailed list of all alarms / indications provided on machine should be submitted by the supplier.	Vendor to specify	
2.19.3	All the pipes, cables etc. on the machine should be well supported and protected. These should not create any hindrance to machine operator's movement.	Vendor to Confirm	
2.19.4	All the rotating parts used on machine should be guarded and statically & dynamically balanced to avoid undue vibrations.	Vendor to Confirm	
2.19.5	Emergency Switches at suitable locations as per International Norms should be provided.	Vendor to Confirm	
2.19.6	Oil & water lines should not run with electrical cable in the same tray / trench.	Vendor to Confirm	
2.2	ENVIRONMENTAL PERFORMANCE OF THE MACHINE:		
2.20.1	Noise level shall not exceed 85 dB (A) at normal load condition, 1 meter away from the machine.	Vendor to Confirm	
2.20.2	There shall not be any emissions from the machine except fumes of cutting fluid during machining.	Vendor to Confirm	
2.20.3	There should not be any effluent from the machine. In case there are any effluents from the machine, requisite effluent treatment plant or pollution control device should be built into the machine by the supplier.	Vendor to Confirm	

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
2.20.4	No hazardous chemicals shall be used in the machine.	Vendor to Confirm	
2.20.5	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to Confirm	
2.20.6	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.	Vendor to Confirm	
2.21	CHIP CONVEYOR:		
2.21.1	A chip conveyor to convey short and curly chips to the chip bin. A Chip bin of appropriate size, with wheels and handle for movement, should also be supplied.	Vendor to confirm	
2.21.2	Type of chip conveyor:	Vendor to specify	
2.21.3	Width of conveyor	Vendor to specify	
2.21.4	Elevation of chip conveyor for chip bin:	Vendor to specify	
2.21.5	Material of chip conveyor	Vendor to specify	
2.21.6	Provision for smooth flow of chips to the conveyor:	Vendor to specify	
2.21.7	Operation of chip conveyor (forward & reverse) through push buttons on operator's panel should be possible.	Vendor to confirm	
2.21.8	Layout showing location of chip conveyor should be submitted.	Vendor to submit	
3	ULTRA ISOLATION TRANSFORMER:		
3.1	Indian make Ultra Isolation Transformer suitable for complete machine, its drives, controls, PLC etc. shall be offered.	Vendor to confirm	
3.2	Make: NEEL / SERVO	Vendor to specify	
3.3	Model & Rating:	Vendor to specify	
3.4	Spares Package for the Ultra Isolation Transformer for 2 years working should also be offered.	Vendor to confirm	
3.5	Catalogue of the Ultra Isolation Transformer shall be submitted.	Vendor to submit	

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
4	SERVO VOLATGE STABILIZER:		
4.1	Indian make Oil / Air Cooled servo Controlled Voltage Stabilizer suitable for complete machine, its drives, controls, PLC etc with no undesirable Harmonics in the stabilizer output.	Vendor to specify	
4.2	Make. : NEEL / SERVO	Vendor to specify	
4.3	Model & Rating (Suitable for the machine load. Vendor to specify the noise level also)	Vendor to specify	
4.4	Spares Package for the Voltage Stabilizer for 2 years working should also be offered.	Vendor to Confirm	
4.5	Catalogue of Voltage Stabilizer to be submitted.	Vendor to Submit	
5	COMPRESSED AIR POINTS:		
5.1	Compressed air at 5 to 6 Kg/cm ² will be made available at one point if required. The vendor shall indicate the inlet point for compressed air in the layout drawing of the machine.	Vendor to Confirm	
6	TOOLING: (Tooling specified in tender is tentative. However final list of tooling will be finalized during finalization of tender / Placement of PO). Unit price for each of the tooling to be quoted separately.		
6.1	Facing tool holder on turret	2 Nos	
6.2	Axial Tool Holder for square shank tool	2 Nos	
6.3	Radial Tool Holder	2 Nos	
6.4	Boring Tool Holder for dia 50 mm Boring Bar	2 Nos	
6.5	Threading tool holder on turret (for external threading)	2 Nos	
6.6	Threading tool holder on turret (for int. threading / boring bar)	1 No	
6.7	Tool holder on turret (for holding 32 mm U drill)	1 No	
6.8	Reduction sleeve 50 / 8	1 No	
6.9	Reduction sleeve 50 / 10	1 No	
6.10	Reduction sleeve 50 / 12	1 No	
6.11	Reduction sleeve 50 / 16	1 No	
6.12	Reduction sleeve 50 / 20	1 No	
6.13	Reduction sleeve 50 / 25	1 No	

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
6.14	Reduction sleeve 50 / 32	1 No
6.15	Reduction sleeve 50 / MT2	1 No
7	ACCESSORIES:	
7.1	List of standard accessories supplied along with the machine.	Vendor to furnish
7.2	4 Jaw manual chuck with Jaws – Dia 355 mm	1 No.
7.3	Additional Hard jaw for 4 Jaw manual chuck	1 set
7.4	Additional Hard jaw for 3 Jaw self centering hydraulic chuck	1 set
7.5	Soft jaws for 3 Jaw self centering hydraulic chuck	3 sets
7.6	Spare rollers / bearings for steady rests:	1set
7.7	Tail stock centers:	2 Nos
8	FAULT DIAGNOSTIC SYSTEM:	
8.1	Supplier's own diagnostic system with required hardware and software should be supplied and installed on the CNC system. This should include standard auto-diagnostic system with supporting hardware and software which shows detailed cause and remedy for the fault on the display and supplier's smart diagnostic system for full video diagnostic help for faults related to mechanical and electrical maintenance.	Vendor to confirm
8.2	Help guide should be provided to use both diagnostic systems	Vendor to confirm
9	PORTABLE DATA LOADING DEVICE: (optional)	
9.1	Portable Data loading device with sufficient length of interface cable, HDD of size not less than 40GB, CD Drive, TFT Display of size 14" and suitable preinstalled software for loading PLC program, RS 232 Port, Ethernet chord, USB port, Machine data and CNC part programs shall be supplied with the machine. Vendor should furnish details.	Vendor to confirm
10	LEVELING & ANCHORING SYSTEM:	
10.1	Complete anchoring system including foundation bolts, anchoring materials, fixators, leveling shoes etc should be supplied.	Vendor to confirm

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
11	TOOLS FOR OPERATION & MAINTENANCE:		
11.1	Necessary tools like Torque Wrench, Spanners, Keys, grease guns etc for operation and maintenance of the machine should be supplied. List of such tools should be submitted with offer.	Vendor to confirm & submit	
12	SPARES:		
12.1	<p>1) The Vendor shall recommend and submit list of spares required for the machine for two years of trouble free operation on three shifts /day basis under two headings as</p> <p>a) Mechanical & hydraulic spares and</p> <p>b) Electrical & electronic spares.</p> <p>The list shall generally include the following items.</p> <p>a) Mechanical & Hydraulic Spares: All types of pumps, All types of Valves, All types of pressure switches / transducers, All types of filters, All types of seals</p> <p>b) Electrical & Electronic Spares: All types of Relays, Contactors, Proximity Switches, Push Buttons, Indicating Lamps, Semiconductor Fuses, Special Fuses, Circuit Breakers, Main Power Switch, Encoders, Scanning Heads for Linear Scales, MMC module, NCU module, Operator's panel with Display Unit, Floppy Disk Unit, I/O Cards for PLC, Servo Motors for Feed Drives, Power Module & Control Cards for Main Drive as well as Feed Drives etc.</p> <p>c) Un-priced list of spares with quantities, specified at a&b above, should be submitted with this technical offer.</p> <p>d) Unit Price of each item figuring in c shall be submitted with the price bid.</p>	Vendor to Submit	
12.2	All types of spares for the machine and its accessories should be available for minimum ten years, after supply of the machine. If any spares or controls are likely to become obsolete within this period, the vendor should inform BHPV and provide details of it's suppliers to enable BHPV to procure them in advance.	Vendor to Confirm	
12.3	In case of ordering, a complete list of spares for the machine and its accessories along with spares specification / type / model, and name & address of the spare supplier shall be submitted along with documentation while supplying the machine.	Vendor to confirm	

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
13	DOCUMENTATION:	
13.1	3 sets of following documents (3 Hard copies) in English language should be supplied along with the machine	Vendor to confirm
13.2	Operating manuals of Machine & CNC system	Vendor to confirm
13.3	Programming Manuals of Machine & CNC system	Vendor to confirm
13.4	Detailed Maintenance manual of machine with all drawings of machine assemblies / sub-assemblies / parts including Electrical / Pneumatic / Coolant / Hydraulic circuit diagrams.	Vendor to confirm
13.5	Maintenance, Interface & commissioning manuals for CNC system, spindle & feed drives.	Vendor to confirm
13.6	Manufacturing drawings for all supplied tool holders, coolant connections, adapters, sleeves, fixtures etc.	Vendor to confirm
13.7	Catalogues / O&M Manuals of all bought out items.	Vendor to confirm
13.8	Detailed specification of all rubber items and hydraulic/lube fittings	Vendor to confirm
13.9	Bearings: Make& Specification for all bearings used in the machine.	Vendor to Specify
13.10	Ball Screws: Detailed Specification for all ball screws used in the machine shall be submitted.	Vendor to specify
	The specification shall address the following points:	
	(a) Diameter, (b) Pitch, (c) Length, (d) Make (e) Model	
13.11	Operating Manuals, Maintenance Manuals & Catalogues for Isolation Transformer and voltage stabilizer.	Vendor to confirm
13.12	PLC program printouts (Ladder diagram & Statement list) with comments in English.	Vendor to confirm
13.13	PLC program on CD, NC data & PLC data on CD.	Vendor to confirm
13.14	Complete back up of hard disk on GHOST CD and clear written Instructions (1 copy) to take back up and reloading of a new hard disk.	Vendor to confirm
13.15	The vendor shall submit complete Master List of parts used in the machine.	Vendor to Submit
13.16	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to confirm

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
13.17	GA drawings, Machine detailed constructional drawings with dimensions, Civil Foundation layout drawings, Hydraulic / Pneumatic / Electrical / Electronic circuits with BOM, are to be submitted within 45 days from the date of ordering (in case of an order) for approval by BHPV.	Vendor to confirm
13.18	Bidder to submit GA Drawings along with offer for evaluation	Vendor to Submit
14	TRAINING:	
14.1	The Vendor shall train Two BHPV Engineers in Operation and Maintenance (Mechanical, Electrical/ Electronics and CNC System) of the Machine at Vendor's works for a period not exceeding 5 working days.	Vendor to confirm
14.2	Airfare, boarding & lodging for the BHPV Engineers will be borne by BHPV	
14.3	The Vendor shall impart training to BHPV's Machine Operators and Maintenance crew in Operation and Maintenance after the commissioning of the Machine at BHPV works for not less than 6 working days	Vendor to confirm
14.4	Competent, English speaking experts shall be arranged by the vendor during training for satisfactory & effective training of BHPV personnel	Vendor to confirm
14.5	Vendor to quote on the basis of per man per day for training at vendor's works.	Vendor to specify
15	FOUNDATION:	
15.1	Vendor shall submit the preliminary layout drawing for getting BHPV's approval within one month from the date of Letter of Intent (LOI). Vendor shall submit complete foundation load data details including static and dynamic loads within three months after getting BHPV's approval. The layout should consist of all requirements pertaining to complete machine including space requirement for Voltage Stabilizer, Isolation Transformer, & any other accessories. BHPV shall design and construct complete foundation for the machine.	Vendor to confirm

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
16	ERECTION & COMMISSIONING:		
16.1	1. Supplier to take full responsibility for supervision of the erection. Start up, testing of machine, its control system & all types of other supplied equipment, machining of test pieces etc. are the responsibility of the supplier. 2. Service requirement like power, air & water shall be provided by BHPV at only one point to be indicated by supplier in their foundation/layout drawings. 3. Other requirements like crane shall also be provided by BHPV, free of cost.	Vendor to confirm	
16.2	Erection & Commissioning of Voltage stabilizer, Isolation Transformer shall also be responsibility of the vendor.	Vendor to confirm	
16.3	Tools, Tackles, Test Mandrels, instruments and other necessary equipment including Laser equipment required to carry out all above activities should be brought by the supplier.	Vendor to confirm	
16.4	The supplier shall arrange commissioning spares required for commissioning of the machine.	Vendor to confirm	
16.5	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	
16.6	Schedule of Erection and Commissioning shall be submitted with the offer.	Vendor to confirm	
16.7	Duration, terms & conditions for E&C should be furnished with this technical offer in detail. Charges for the same shall be quoted separately in price bid.	Vendor to confirm	
17	ACCURACY TESTS:		
17.1	GEOMETRICAL ACCURACIES:		
17.1.1	Geometrical Accuracy Tests shall be in accordance with ISO <u>13041 standard or equivalent applicable standard.</u>	Vendor to confirm	
17.1.2	Head Stock Spindle run out (Radial & Axial):	Vendor to specify.	
17.1.3	All other accuracies to confirm to ISO 13041 (Latest Revision) or Suppliers Test chart whichever is finer.		

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
17.1.4	Tail stock Quill taper run-out:	Vendor to specify.
17.1.5	Cylindricity of turning:	Vendor to specify.
17.1.6	True roundness of turning:	Vendor to specify.
17.1.7	Facial run-outs:	Vendor to specify.
17.1.8	All the above accuracies should be demonstrated to BHPV engineers during pre-acceptance at Suppliers works and during Erection & Commissioning at BHPV Works.	Vendor to confirm
17.2	MACHINE POSITIONING ACCURACIES & REPEATABILITY:	Vendor to confirm
	Should be measured as per VDI/DGQ 3441 using LASER INTERFEROMETER.	
17.2.1	Positioning accuracy in X axis (Pa) per 1000 mm:	± <u>0.010 mm</u>
17.2.2	Positioning accuracy in Z axis (Pa) per 1000 mm:	± <u>0.015 mm</u>
17.2.3	Repeatability in X axis (Ps): per 1000 mm	± <u>0.005 mm</u>
17.2.4	Repeatability in Z axis (Ps): per 1000 mm	± 0.008 mm
18	AMBIENT CONDITIONS & THERMAL STABILITY:	
18.1	Power Supply : AC 415 V ±10%	Vendor to confirm
	Frequency : 50 Hz ±3HZ	
	Phases : 3 phase 3 wire system	
	Compressed air supply: 5-6 kg/cm ²	
	Ambient Temperature: max 45 °C	
	Relative Humidity = 93%	
	Vendor to confirm that machine is suitable for above conditions	
18.2	Weather conditions are tropical. Atmosphere may be dust laden during some part of the year. Machine will be installed in the normal shop floor condition. Vendor to confirm that machine is suitable for above	Vendor to confirm
18.3	Thermal Stability of the machine shall be good enough to withstand the specified ambient conditions in order to meet the accuracy requirements of BHPV components. Vendor to confirm for trouble-free operation of the machine.	Vendor to confirm

Sl. No.	PARTICULARS AND BHPV SPECIFICATION		BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
18.4	The Vendor should confirm that the machine and its accessories is suitable for continuous operation at its full capacity for 24 hours a day and 7 days a week through out	Vendor to confirm	
19	MACHINE ACCEPTANCE: (Tests/Activities should be Performed by Vendor)	Vendor to confirm	
19.1	Tests/Activities should be carried out at supplier's works on the machine before dispatch:		
19.1.1	Geometrical accuracies as per standard test chart provided by the supplier.	Vendor to confirm	
19.1.2	Machine positioning accuracies & repeatability should be measured as per VDI/ DGQ 3441 / ISO 230 – 2 (latest revision) using laser interferometer.	Vendor to confirm	
19.1.3	The machine should be tested for continuous running of 48 hrs. If any break down occurs during this test, the test should be repeated for 48 hrs from restarting.	Vendor to confirm	
19.1.4	Demonstration of all features of the machine, control system & accessories.	Vendor to confirm	
19.1.5	Machining of test piece as per NAS/AFNOR/ISO. Vendor to supply test piece and tooling for it's machining.	Vendor to confirm	
19.2	Tests/Activities should be carried out at BHPV works while commissioning the machine:		
19.2.1	Geometrical accuracies as per test chart provided by the supplier.	Vendor to confirm	
19.2.2	Machine positioning accuracies & repeatability should be measured as per VDI/DGQ 3441 / ISO 230 – 2 (latest revision) using laser interferometer.	Vendor to confirm	
19.2.3	Full load test to demonstrate the maximum power & cutting capacity of the machine.	Vendor to confirm	
19.2.4	The machine should be tested for continuous running of 48 hrs. If any break down occurs during this test, the test should be repeated for 48 hrs from restarting.	Vendor to confirm	
19.2.5	Demonstration of all features of the machine, control system & accessories to the satisfaction of BHPV for efficient and effective use of the machine	Vendor to confirm	
19.2.6	Machining test piece as per NAS/AFNOR/ISO. Vendor to arrange Test pieces and tooling for it's machining.	Vendor to confirm	

SB CNC LATHE TECHNICAL SPECIFICATION (Part B)

Sl. No.	PARTICULARS AND BHPV SPECIFICATION	BIDDERS OFFER (WITH COMPLETE TECHNICAL DETAILS)
20	PACKING:	
20.1	Sea worthy & rigid packing for all items of complete machine, CNC System, all Accessories and other supplied items to avoid any damage/loss in transit. When machine is dispatched in containers, all small loose items shall be suitably packed in boxes.	Vendor to specify
21	GUARANTEE:	
21.1	12 months from the date of acceptance of the machine at BHPV OR 18 months from dispatch, whichever is earlier	Vendor to confirm
22	GENERAL:	
22.1	Machine Model:	Vendor to specify
22.2	Total connected load (KVA):	Vendor to specify
22.3	Floor area required (L x W x H) for complete machine & accessories:	Vendor to specify
22.4	Painting of Machine / Electrical Panels:	Vendor to confirm
	Painting of Machine / Electrical Panels will be RAL 6011 Apple Green (Polyurethane Paint)	
22.5	Total weight of the machine:	Vendor to specify
22.6	Weight of heaviest part of machine:	Vendor to specify
22.7	Weight of the heaviest assembly / sub-assembly of the Machine:	Vendor to specify
22.8	Dimensions of largest part/ sub-assembly/ assembly of the machine:	Vendor to specify

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