

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

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

**SUB: Design, Manufacture, Supply, Erection,
Testing and Commissioning of 5T Semi
Gantry Crane**

Our Ref: **MM/2/10/3399/CAP/W-024/5024**

DATE: 08.05.2013

Sealed quotations in duplicate are invited from suppliers on **or before 03.06.2013** **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.	Design, Manufacture, Supply, Erection, Testing and Commissioning of 5T Semi Gantry Crane	4 No's
	Encl: 1. Qualifying Criteria PART A 4 pages 2. Technical Specifications PART B 10 Pages 3. Annexure - 1 1 Page 4. General Terms/ commercial terms and conditions (INCLUDING CHECK LIST) 10 pages	

For BHARAT HEAVY PLATE & VESSELS LIMITED,

For Dy. GENERAL MANAGER (MM)

PART A

SECTION-I: -QUALIFING CRITERIA

The bidder/vendor (OEM) has to compulsorily meet the following requirements to get qualified for consideration of the technical offer for the supply of semi gantry crane

S. No.	PARTICULARS	VENDOR'S RESPONSE
1.0	<p>Only those Bidder/vendor (OEM), who have supplied and commissioned at least Two 5Ton capacity Gantry or Semi Gantry crane, class-3 with minimum span of 5 Mtr or higher and should have supplied similar capacity crane in the past five years and such crane is presently working satisfactorily for more than one year after commissioning (on the date of opening of Tender), should quote.</p> <p>Performance certificate from the customers (minimum 2) regarding satisfactory performance of machine supplied to them (suggestive format enclosed) should be submitted along with technical offer.</p>	
2.0	<p>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.</p>	
3.0	<p>The bidding FIRM should have 'in-house' or 'self- owned' facility for FABRICATION and TESTING at 125 % of the rated capacity</p>	
4.0	<p>The vendor should have minimum 10 years experience in design, fabrication and supply of cranes.</p>	
5.0	<p>DELIVERY - The bidder shall quote the best possible delivery. However the delivery period shall not exceed 8 months 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.</p> <p>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</p>	

SECTION – II

The vendors are requested to provide the following details

S. No.	PARTICULARS	VENDOR'S RESPONSE
6.0	Number of Years of Experience of the BIDDER / VENDOR (OEM) in the field of design, manufacture, supply, erection & commissioning of cranes	
7.0	Number of cranes supplied, installed and commissioned till date	
8.0	Number of cranes supplied, installed and commissioned till date in the QUOTED MODEL	
10.0	Details on SERVICE-AFTER-SALES Set-Up in India including the Addresses of Agents / Service Centre in India and Asia	
11.0	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – III

Bidder / Vendor (OEM) to note the following

S.No.	REQUIREMENTS	VENDOR'S RESPONSE
12.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS - Technical [with PART A & PART B] & Commercial and Price Bid.	
13.0	The Offer shall contain a comparative statement of Technical Specifications given by BHPV and the Offer Details submitted by the Bidder, against each clause. Where details are required, a mere 'CONFIRMED' or 'COMPLIES' or 'YES' or 'NO-DEVIATION' or similar words in the technical comparative statement may lead to disqualification of the Technical Offer.	
14.0	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 and Selection Criteria	
15.0	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	
16.0	BIDDER has to indicate the Country of Origin for the supply of equipment.	

PERFORMANCE CERTIFICATE
(On Customer's Letter Head)

1. Supplier of the Equipment :

2. Make & Model of the Equipment :

3. Month & Year of Commissioning :

4. Application :

5. Details
 - a) Crane Type :
 - b) Crane Capacity (Metric Tonnes) :
 - c) Crane span :
 - d) Mechanism class :

6. Performance of the Equipment : Satisfactory / Not Satisfactory

7. Any other remarks:

Date:

Signature & Seal of the Authority
Issuing the Performance Certificate

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

Technical specifications for 5T semi gantry cranes with double girders (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
1.0.0	APPLICATION	a. The subject crane is meant for the purpose of handling small to medium components, (within the lifting capacity of the crane)in a heavy and large steel fabrication shop floor. b. The crane will be put to use for continuous duty with CT, LT and Hoist movements, which may occur simultaneously (within the operating parameters specified under Clause Nos. – 3.1.0, 3.4.0 and 3.5.0). c. The shop floor environment will be dust prone, humid, welding fume filled and ambient temperature going up to 45°C, due to pre-heating of jobs.	
2.0.0	SCOPE OF SUPPLY	a. Design as per Tender Specifications b. Detailed Design, Manufacture, Assembly and Testing before Despatch c. Supply in Modules / Sub-Assemblies d. Commissioning and Performance Prove-Out at BHPV Works e. Performance Guarantee for 12 months, from the date of commissioning or 18 months from the date of supply whichever is earlier.	
3.0.0	TECHNICAL SPECIFICATIONS		
3.1.0	CAPACITY	Lifting Capacity	
3.1.1	Hoist	5 Metric Tonnes	
3.2.0	SPAN	Wheel Centre to Wheel Centre Dimensions	
3.2.1	Long Travel (LT) & Height of Lift	1. Approx. 110000 mm / 8000 mm – 1 No. 2. Approx. 60000 mm / 5000 mm – 3 Nos.	
3.2.2	Cross Travel (CT)	1. 11000 mm – 1 No. 2. 10000 mm – 3 Nos.	
3.2.3	Top of rail is floor level		
3.2.4	Rail of 60lb / mtr to be supplied as per clause 3.2.1		
3.2.5	Bidder to quote per meter rate for the rail as specified at Clause No. 3.2.4		
3.3.0	Height of Lift		
3.3.1	Height of Lift	As above (Clause No.3.2.1)	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
3.3.2	Rail to Rail Height	1. 8000 mm – 1 No. 2. 5000 mm – 3 Nos. (Rail on the Floor to Rail on Side Bracket)	
3.4.0	DUTY CYCLE	Related to Drive Motor & Mechanisms	
3.4.1	Hoists	40 % CDF	
3.4.2	Long Travel	40 % CDF	
3.4.3	Cross Travel	40 % CDF	
3.5.0	SPEED	Operating / Working Speed [Maximum]	
3.5.1	Hoist	5.0 mtrs. / minute.	
3.5.2	Cross Travel (CT)	15.0 mtrs. / minute.	
3.5.3	Long Travel (LT)	30.0 mtrs. / minute.	
3.6.0	MOTOR RATINGS	Electric Motor Ratings & Frame Sizes shall be as per IS-325 and IS-1231 and also suitable for 300 starts per hour.	
3.6.1	Main Hoist	Min 7.5 kW – 6 Pole 40%CDF, S4 duty motor	
3.6.2	Cross Travel (CT)	Min 2.6 kW - 6 Pole 40%CDF, S4 duty motor	
3.6.3	Long Travel (LT)	Min 3.7 kW x 2 – 6 Pole 40%CDF, S4 duty motor	
3.7.0	GEAR BOX	Gear Box Size	
3.7.1	Main Hoist	Vendor to specify	
3.7.2	Cross Travel (CT)	Vendor to specify	
3.7.3	Long Travel (LT)	Vendor to specify	
3.8.0	HOIST ROPE DETAILS	Size and Number of Falls of Rope	
3.8.1	Main Hoist	Dia. 12 mm; Falls - 4	
3.9.0	CONTROL	Pushbutton control from cabin & Radio remote control	
3.10.0	Location of Cabin	Located above wheel assembly.	
3.11.0	Type of Control	VVVF	
3.12.0	Control Voltage	110 V AC	
3.13.0	Input Power Supply	415 V with \pm 10% fluctuation, 50HZ with \pm 3% fluctuation, 3 Phase- AC	
3.14.0	Duty Class	Class – 3 [Indoor Service]	
3.15.0	Mechanism Group Classification	M 6	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
3.16.0	DESIGN STANDARD	IS – 807 & 3177 / 2006	
3.17.0	Runway Rail Size		
3.17.1	Cross Travel (CT)	ISR 60 Lbs. / Yard – Rail by vendor	
3.17.2	Long Travel (LT)	CR 80 – Rail by vendor	
3.18.0	Wheel Size		
3.18.1	Cross Travel (CT)	250 mm	
3.18.2	Long Travel (LT)	400 mm	
3.19.0	Brake Drum Size	Hoist Brake Drum Sizes	
3.19.1	Main Hoist	200 mm	
3.19.2	Cross Travel (CT)	160 mm	
3.19.3	Long Travel (LT)	160 mm	
4.0.0	MAIN FEATURES	Crane Operational Features	
4.1.0	Control System	VVVF drive for all motors	
4.2.0	Crane Operation	Pushbutton control from cabin & Radio remote control	
5.0.0	STRUCTURAL FABRICATION	Crane Structure Constructional Details	
5.1.0	Bridge / Leg/ End Carriage/ Bogie	PLATE FORMED Box type Construction	
5.2.0	Raw Material	IS: 2062 Only steel plates tested and certified for quality by reputed inspection authorities, shall be used. Test Certificates to be produced for BHPV verification and form part of the documentation.	
5.3.0	Welded Joints	To be followed for Bridge/leg Fabrication	
5.3.1	Number of Joints allowed	Maximum two joints only allowed. Splice joint is not permitted.	
5.3.2	Welding Electrodes	a. For all Horizontal Welding E 7018 / ER70S-6 (MIG) Electrode only should be used. b. For all Vertical Welding E 7048 / ER70S-6 (MIG) Electrode only should be used.	
5.3.3	Welded Joint Testing	All Butt Welded Joints (both compression / tension and flanges / web joints) shall be subjected to 100% X-Ray Testing and X-Ray Films to be produced for BHPV verification and form part of the documentation.	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
5.4.0	Splice Joints	NO SPLICE JOINT IS ALLOWED IN GIRDER FABRICATION [Girder has to be of SINGLE PIECE only].	
5.5.0	Platform on Girders	The Platforms provided on both the Girders shall be fixed through BOLTED JOINTS using fit bolt only.	
5.6.0	Wheel Assembly	The Wheel Assembly coming for Cross Travel (CT) & Long Travel (LT) shall be of LIVE AXLE SYSTEM with L-Type Bearings. [Refer to BHPV Drawing No. 3-M-02R-0011993. Drawing is enclosed and given as ANNEXURE -1].	
5.7.0	Heat Treatment & NDT Examination	The Trolley shall be Stress Relieved if required after welding and NDT examinations. All weldings shall be tested by NDT means [MPI, LPI & RT].	
5.8.0	Machining Operation	All mechanical mating surfaces and wheel seating areas are to be machined to the required finish and protected	
5.9.0	Surface Cleaning	Both the Girders, legs, end-carriages and the Trolley are to be shot blasted or chemically treated for surface cleaning, after completion of all operations but prior to painting.	
5.10.0	Painting	The crane parts are to be painted as follows : a. One coat of Primer with 25 microns of DFT (Dry Film Thickness) and 48 hours of compulsory curing after painting. b. Two coats of Enamel Paint (Colour – Golden yellow) each with a DFT of 25 microns and intermittent curing of minimum 16 hours.	
6.0.0	MECHANICAL ELEMENTS		
6.1.0	Gears	Gears in all the Stages shall be helical in design and to be of machined, lapped / ground and hardened.	
6.2.0	Gear Box Casing	Shall be of fabricated type and stress relived by thermal heat-treatment process, prior to machining.	
6.3.0	Gear & thruster oil	Required grade oil should be supplied	
6.4.0	Rope Drum	Shall be of fabricated type and stress relieved. The circumferential weld joints shall be tested by 100 % X-Ray for quality assurance. Or seamless pipe to suit the requirement	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
6.5.0	Type of Coupling	Only GEARED COUPLING to be used a. between Electric Motor and Gear Box b. between Gear Box and Rope Drum c. between Gear Box and Trolley Wheels	
6.6.0	Wheels	The Wheels shall be of Forged and Wheel Tread hardened to 300/350 BHN. Wheels shall be fitted with L-Type Bearings	
6.7.0	Mechanical Joints	Fit Bolts as per IS 3640-1982 for all joints coming in main members and platform with reamed holes	
6.8.0	Pulley Dimension	Rope Pulley diameter shall be 23 times that of Rope diameter	
6.9.0	Hook	Hook latch shall be provided for the hook	
6.10.0	Tools	The following tools of makes acceptable to BHPV shall be supplied along with each crane (Vendor to clearly specify the makes of each items in the offer)	
6.10.1	List of Tools	1. Double end spanner - one set 2. Ring spanner - one set 3. Hammer 2lbs - one no 4. Screw driver - one set 5. Screw spanner - one set 6. Cutting pliers - one set 7. line tester - one no 8. Grease gun - one no	
6.11	Limit Switches	Hoist shall be provided with rotary and counter weight limit switches	
7.0.0	ELECTRICAL ELEMENTS		
7.1.0	Operational Controls	The Crane shall be provided with the following – Push Button station in cabin (Mounted over LT wheel assembly and Radio remote control - 2 step push button type	
7.2.0	Control Voltage	110 V AC	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
7.3.0	Type of Brakes	a. Main Hoist - DCEM Brake b. Cross Travel - Thruster Brake c. Long Travel - Thruster Brake	
7.4.0	Protection	All Panels, Limit-Switches and Motors shall have IP 54 protection. (Outdoor Service)	
7.5.0	Electric Contactors	All Panels shall have only SIEMENS / L&T Contactors and shall be suitable for AC3 Duty Class.	
7.6.0	Contactors Rating	The rating of all Contactors shall be at least 50% higher than the respective electric motor full load current, at the specified duty cycle.	
7.7.0	Long Travel Motion	A Dual Drive Mechanism shall be provided for LT (Long Travel) Motion.	
7.8.0	Controller Steps	4-Step 40amps master Controller with two neutral inter lock has to be provided for a. Main Hoist b. Long Travel c. Cross Travel	
7.9.0	Current Collection System	Flexible trailing cable system mounted on retracting supporting system should be used. The conductors should consist of insulated multi conductor (or several single conductors) cables (extra flexible having copper conductors only). The flexible trailing cables should have ample length and should be supported by means of properly designed movable clamps. These clamps should be fitted with rollers and should run freely on guide rails allowing relative movement of trolley without undue stress. Vendor to ensure that voltage drop is kept within -5% while designing the trailing cable current collection system.	
7.10.0	Electric Design	All electrical elements shall be so selected, that they withstand 25% overload of the crane at any time of operation	
7.11.0	Cables	All cables for power & control circuit shall be of flexible copper only except LT and main power for which armoured cable to be used. For CT festoon cables arrangement shall be provided with roller trolleys	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR's OFFER
7.12.0	Push Button Station	Electric Light, Fan, Warning Bell and Emergency Stop Push Button shall be provided in the push button station	
7.13.0	Crab Wiring	The CRAB shall be fully wired without junction box	
7.14.0	Hoist limit switches	Hoist shall be provided with both rotary and counter weight limit switches.	
8.0.0	SELECTION of BOI and COMPONENTS	The makes of Components or Bought-Out-Items shall be strictly as per the list given below.	
8.1.0	Hoist Hooks	HERMAN MOHTTA / HERCULES / SILPA UDYOG / SMRITI FORGINGS / KARACHIWALA	
8.2.0	Wire Rope	USHA MARTIN / FORT WILLIAM / RA WIRE ROPE	
8.3.0	Electric Motors	GEC / BHARAT BIJLEE / SIEMENS / / ALSTHOM	
8.4.0	Thruster Brake Unit	ELECTROMAG / SPEED-O-CONTROL / OMEGA	
8.5.0	Limit Switch (Gravity Type)	SIEMENS / INDUSTRIAL SYNDICATE / BCH / SKC / SOC	
8.6.0	Contactors	SIEMENS / ABB / GE/ Schenider	
8.7.0	Over-Load-Relay	SIEMENS / ABB / GE/ Schenider (THERMAL TYPE)	
8.8.0	HRC Fuses	GE /SIEMENS / Schenider	
8.9.0	Rotary limit switch	SIEMENS / OMEGA / SOC / INDUSTRIAL SYNDICATE	
8.10.0	Switch fuse unit	SIEMENS / GE/ Schenider	
8.11.0	Moulded case CB	SIEMENS / GE / Schenider	
8.12.0	Pneumatic Time Delay	Only BCH make	
8.13.0	Push - Buttons	SIEMENS / AIRON	
8.14.0	Connectors	ELMAX make or reputed make with IS approved with acceptable BHPV	
8.15.0	Couplings	WMI / FENNER / ALFEX / REPUTED	
8.16.0	Bearings	SKF / FAG / TIMKEN	
8.17.0	Cables	Reputed Makes & ISI Approved acceptable by BHPV.	
8.18.0	Resistance box	OHMARK / BCH	
8.19.0	VVVF Drives	ABB / SIEMENS / ROCKWELL / SCHNEIDER	
8.20.0	DCEM brakes	BCH only	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
8.21.1	Radio Remote Control	ITOWA / Telecrone (Microprocessor type) Other elements: Bidder to specify make	
9.0.0	DOCUMENTS/ DETAILS for APPROVAL	The following documents and details are to be submitted for BHPV Approval, prior to taking up the manufacture of the crane.	
9.1.0	Drawings and Documents	<p><u>Set I:</u></p> <ul style="list-style-type: none"> a. Calculations for Selection of Electric Motors, Gear Reducers, Brakes, Couplings, etc. b. Calculations for Bridge Girder, Legs, Crab, End - Carriage and their connections. c. GA Drawing of the Crane. d. GA Drawing of Trolley e. GA Drawing of Individual Mechanisms. <p><u>Set II:</u></p> <ul style="list-style-type: none"> a. Drawings of Bridge, Legs, End-Carriage, Leg bogies and their connection. b. Sub-Assembly Drawing for Wheels, Hook Blocks, Gear Boxes, Hoist rope drums and all brake Drums. c. Wiring Diagram with Logic Circuits. d. Cable Selection & schedule based on Current Rating. <p>Initially <u>Set I</u> drawings to be submitted in one lot and approval to be obtained from BHPV.</p>	

TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
9.2.0	Technical Details	a. Total Weight of the Crane including all Electrical Equipment b. Total Weight of Trolley including all Electrical Equipment c. Weight of each Bridge assembled and ready for erection with and without Mechanical and Electrical Equipment. d. Weight of End-carriage assembled and ready for erection e. Total Weight of Structural, Mechanical and electrical Equipment and indicated separately also. f. Weight of Operator's Cabin together with all Equipment mounted in it.	
10.0.0	INSPECTION	The following Schedule of Stage Inspections is to be strictly adhered to, prior to dispatch from the Supplier's Works	
10.1.0	STAGE – I	a. Verification of Test Certificate for Raw Materials used for Girders, legs, End- Carriages, Trolley, Gear Box Casings, etc. b. Verification of X-Ray Report of Butt-Joints coming in the Girders and Random Testing on the Welds, by physical examination. c. Box Girder setting before closing of the Bottom Flanges – for inspecting the quality of welding and presence of waviness d. Trolley Frame Fabrication before setting the Mechanisms e. End-Carriage Fabrication before closing of the Bottom Flanges	
10.2.0	STAGE – II [Final Inspection]	a. Inspection of Bridges, legs, End-Carriages and platform fabrication. b. Verification of Span & Diagonal Dimensions, Checking of Wheel Alignment, Mechanical Assemblies and Total Alignment. c. Free running of all the Mechanisms. d. Measurement of CAMBER in the Bridges. e. Full / Rated Load Test for bridges and trolley and Deflection Test f. Deflection and Permanent Set Measurement. g. 25% OVER-LOAD Lifting Ability Check.	

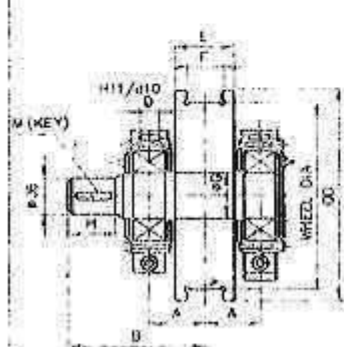
TECHNICAL SPECIFICATIONS FOR 5T SEMI GANTRY CRANES WITH DOUBLE GIRDERS (PART B)

S. No.	PARTICULARS	BHPV SPECIFICATIONS	VENDOR'S OFFER
11.0.0	CRANE ERECTION & COMMISSIONING		
11.1.0	Mechanical Erection	Erection of the Crane will be done by BHPV, However, vendor shall provide erection supervision for which vendor shall include in the scope of supply	
11.2.0	Crane Commissioning	Commissioning of the Crane and Performance Prove –Out for 125% of Crane's Capacity and Smooth Functioning of the Crane (at BHPV Works) shall be the RESPONSIBILITY of the supplier.	
12.0.0	O & M MANUALS	Each Crane shall be provided with THREE Copies of Erection, Operation & Maintenance Manual hard copy as well as soft copy in CD, containing the following technical details	
12.1.0	Drawings & Details	<ul style="list-style-type: none"> a. Crane GA Drawing b. Crab Assembly Drawing c. Total Crane Wiring Schematics d. Detailed Wiring Diagrams for Sub-Systems / Panels e. Wheel Assembly Drawings f. Bottom Block Assembly Drawing g. Gear Box Assembly Drawings h. Coupling Drawing and Details i. Specifications/Ratings of All Bought- Out-Items j. Warranty / Guarantee Card for all Bought-Out-Items k. Trouble Shooting Chart for Main and all Sub-Systems l. VVVF drive logic circuits 	
13.0.0	PERFORMANCE GUARANTEE	The Performance of the Total Crane and/or the Components / Sub-Assemblies / Bought- Out-Items shall be guaranteed for a minimum period of 12 months from the date of performance acceptance at BHPV Works or 18 months from the date of supply whichever is earlier.	

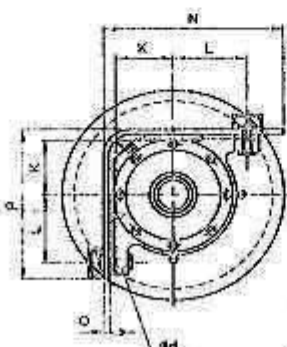
ALL DIMENSIONS ARE IN MM

2. Material - Low Carbon Steel
 3. Dimensions - AS ST

SL No.	W.A. (WHEEL DIA) IN 3RD	RAIL SIZE	DIMENSIONS																	COUPLING No.	SKF BRG No. & BRG. SIZE	TOTAL WEIGHT IN Kg. FOR DRIVE & IDLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
			A	B	D	E	F	ØG	H	ØJ	K	L	ØM	N (KEY)	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DP	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HP	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IP	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	LM	LN	LO	LP	LP	LR	LS	LT	IU	IV	IW	IX	IY	IZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	LM	LN	LO	LP	LP	LR	LS	LT	IU	IV	IW	IX	IY	IZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LM	LN	LO	LP	LP	LR	LS	LT	IU	IV	IW	IX	IY	IZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MP	MR	MS	MT	IU	IV	IW	IX	IY	IZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NP	NR	NS	NT	IU	IV	IW	IX	IY	IZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OP	OR	OS	OT	IU	IV	IW	IX	IY	IZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PP	PR	PS	PT	IU	IV	IW	IX	IY	IZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QP	QR	QS	QT	IU	IV	IW	IX	IY	IZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RP	RR	RS	RT	IU	IV	IW	IX	IY	IZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SP	SR	SS	ST	IU	IV	IW	IX	IY	IZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TP	TR	TS	TT	IU	IV	IW	IX	IY	IZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UP	UR	US	UT	IU	IV	IW	IX	IY	IZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VP	VR	VS	VT	IU	IV	IW	IX	IY	IZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WP	WR	WS	WT	IU	IV	IW	IX	IY	IZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XP	XR	XS	XT	IU	IV	IW	IX	IY	IZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YP	YR	YS	YT	IU	IV	IW	IX	IY	IZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZP	ZR	ZS	ZT	IU	IV	IW	IX	IY	IZ
16	BDO/850	CR-100 CR-126	190	450	80	210	150	152	140	130	212	255	32	32x18x130	687	588	20	150	80	107	22330	870.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
15		CR-80	168	420	80	180	110	152	125	110	212	256	32	28x16x115	687	508	20	150	80	106	150x320x108	845.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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13	/10/750	CR-100 CR-126	180	420	71	210	150	132	125	110	180	224	32	28x16x115	607	517	20	130	80	106	150x320x108	781.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
12		CR-80	180	400	71	180	110	132	125	110	180	224	32	28x16x115	607	517	20	130	80	106	150x280x93	720.50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
11	630/680	CR-80, CR-100 & CR-126	180	420	71	210	150	132	125	110	180	224	32	28x16x115	567	517	20	130	80	106	150x280x93	653.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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4		CR-80 CR-100	145	315	40	180	105	76	85	70	112	140	22	20x12x75	345	345	16	90	50	103	75x160x55	192.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
3	320/370	CR-80 CR-100	117.5	260	40	125	85	61	65	55	85	112	17	16x10x55	312	287	16	80	50	102	75x160x55	157.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
2	250/280	CR-80 CR-100	105	250	32	125	85	61	65	55	76	100	17	16x10x55	254	249	12	60	40	102	75x160x55	118.50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
1	200/230	CR-80 CR-100	95	220	32	100	67	46	55	40	71	85	17	12x8x45	239	232	12	65	40	101	75x160x55	118.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



DRIVING WHEEL ASSY



IDLE WHEEL ASSY

MATERIAL :-
 SHAFT - 40Cr/15Cr12Mo5
 WHEEL - S355K10/SAE5140
 TREAD PORTION WHEEL HARDNESS 500 TO 550 (HRC)

<input checked="" type="checkbox"/> REFERENCE SCALE: DRAWN CHECKED APPROVED DATE: 20-10-2000	DESCRIPTION: MACHINE CRANE WHEEL ASSY	MATERIAL:	STANDARD:	RECEIPTS NOS:	DRAWING No.	SHEET No.
	REFERENCE:	MATERIAL:	STANDARD:	RECE		

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