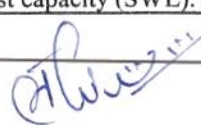
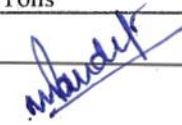
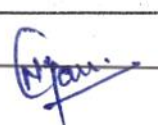



BHARAT HEAVY ELECTRICAL LIMITED, JHANSI			
		Spec. No.	CRTJ/9584
		Item No.	SP/CRTJ/9584/01-02
		Location	New Bogie Shop
		Qty.	02 Nos.
SCOPE: Design, Manufacturing, Testing, Supply, Erection & Commissioning of 3 Ton Semi Gantry Crane along with Shrouded Bus Bar			
Note:			
1. Vendor must submit complete information against clause No. 19 (Qualifying criteria) and the offers meeting this clause would only be processed.			
2. The "offered" column and the "deviations" column (if applicable) of this format shall be filled in by the vendor and submitted along with the offer. Technical details also need to be submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non-compliance.			
3. The offer and all the documents enclosed with the offer shall be in English only.			

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
1	PURPOSE:			
1.1	Single Girder Semi Gantry cranes are required to provide precise control over the positioning of heavy components of Vande Bharat Bogies. This precision is crucial for ensuring that all parts fit together correctly, reducing the risk of assembly errors and rework.	Vendor to confirm		
1.2	The subject crane is meant for the purpose of handling small to medium components in loco bogie shop area.	Vendor to note		
1.3	The crane will be put to use for 365 Days continuous duty with CT, LT and Hoist movements, which may occur simultaneously.	Vendor to note		
2	SCOPE:			
2.1	Design, manufacture, supply, erection & commissioning of 2 Nos. 3-Ton capacity Semi Gantry Cranes with shrouded DSL and suitable current collectors.	Vendor to confirm		
3	QUANTITY REQUIRED:			
3.1	Semi Gantry Crane (3 Tons capacity) on same side of Gangway : 2 Nos.	Vendor to confirm		
3.2	Total length of Shrouded DSL required for 2 Cranes on same side of Gangway : 60 metres	Vendor to confirm		
4	MAIN PARAMETERS:			
4.1	Type of Crane: Semi Gantry Crane as per IS 3177	Vendor to confirm		
4.2	No. of Hook - 1 No.	Vendor to confirm		
4.3	Class & duty: M5 as per IS 3177-1999	Vendor to confirm		
4.4	Main Hoist capacity (SWL): 3 Tons	Vendor to confirm		

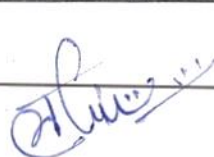
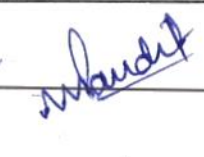
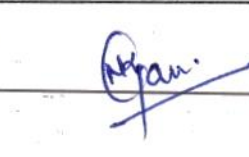
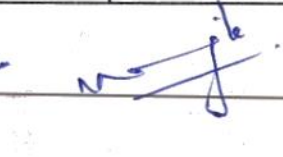





SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE


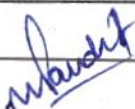

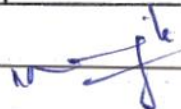
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
4.5	Maximum Height of crane (Distance from floor level to top of crane) : 7 meters	Vendor to Note and confirm		
4.6	Working clearance distance from centre of gantry rail to nearest obstruction (sideways): 300 mm	Vendor to Note		
4.7	Span: (Wheel Centre to Wheel Centre Dimension)			
4.7.1	Long Travel Span : 60 meters	Vendor to confirm		
4.7.2	CT Span : 10 meters	Vendor to confirm		
4.8	Height of Lift : 5 meters (min.)	Vendor to confirm		
4.9	Rail to Rail Height: (Rail on the Floor to Rail on Side Bracket)	Vendor to specify		
4.10	Duty cycle: (Related to Drive Motor & Mechanisms)			
4.10.1	Hoists : 40 % CDF	Vendor to confirm		
4.10.2	Long Travel: 40 % CDF	Vendor to confirm		
4.10.3	Cross Travel : 40 % CDF	Vendor to confirm		
4.11	Hoist:			
4.11.1	Hoist Speed : Double Speed VFD Control	Vendor to confirm		
4.11.1.1	Hoist Speed :4 Meter/Min.	Vendor to confirm		
4.11.1.2	Inching Speed for Main Hoist: 0.4 metres/minute	Vendor to confirm		
4.11.2	Hook approach	Vendor to confirm and specify		
4.11.2.1	Main Hoist: DSL side 1500 mm Max., Opposite side 750 mm Max.	Vendor to confirm		
4.11.3	Number of trolleys: One	Vendor to confirm		
4.11.4	Type of Hook : C Type Single Shank with safety latch	Vendor to confirm		
4.11.5	Hook latch for hoist: Required	Vendor to confirm		
4.11.6	Number of falls of Hoist wire rope :4	Vendor to specify		
4.11.7	Hoist gearbox	Vendor to specify		
4.11.8	Type of Pulley Grooved: Single Grooved	Vendor to confirm		
4.11.9	Rope Dia.: 8 mm Min.	Vendor to confirm		
4.11.10	Hoist wire ropes: 6/36 construction as per IS:2266-1989	Vendor to confirm		
4.11.11	Hoist Motor : 2.2 KW Min.	Vendor to specify		
4.11.12	Brake Hoist : Electromagnetic disc brake	Vendor to confirm		
4.11.13	Limit Switch Hoist : Rotary Limit switch + Gravity Limit Switch.	Vendor to confirm		
4.11.14	IP Protection Hoist Motor : IP 55	Vendor to confirm		
4.12	Cross Travel:			
4.12.1	CT Speed : Double Speed VFD Control			
4.12.1.1	CT Speed :15 Meter/Min. (Max.)			
4.12.1.2	CT Speed : 5 Meter/Min. (Min.)	Vendor to confirm		
4.12.2	CT Drive : With vertical gearbox	Vendor to confirm		
4.12.3	C.T. Trolley Motor : 0.37 KW Min.	Vendor to specify		

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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
4.12.4	C.T. Trolley Type : 4 Wheel Design Trolley	Vendor to specify		
4.12.5	Cross Travel (CT) rail	Vendor to specify		
4.12.6	C.T. Wheel dia. : 250 mm			
4.12.7	Brake C.T. : Electromagnetic disc brake	Vendor to confirm		
4.12.8	Limit Switch C.T. : Two Stage Operational Limit Switch	Vendor to confirm		
4.12.9	IP Protection C.T. Motor :IP 55	Vendor to confirm		
4.13	Long Travel:			
4.13.1	LT : Double Speed VFD Control			
4.13.1.1	LT Speed :20 Meter/Min. (Max.)			
4.13.1.2	LT Speed : 5 Meter/Min. (Min.)	Vendor to confirm		
4.13.2	LT Drive: Twin corner drive with horizontal type gear box	Vendor to confirm		
4.13.3	Number of wheels for LT drive: 4	Vendor to confirm		
4.13.4	Diameter of wheels for LT drive: > = 400 mm	Vendor to confirm		
4.13.5	Number of driven wheels for LT drive: 50% or more	Vendor to confirm		
4.13.6	Size of gantry rail (Long Travel) : Rectangular MS Flat Bar (40 mm X 40 mm) min.	Vendor to specify		
4.13.7	L.T. Motor : 0.37 KW Min.	Vendor to specify		
4.13.8	End Carriage Type : 4 Wheel Design Trolley	Vendor to confirm		
4.13.9	Brake L.T. : Electromagnetic disc brake	Vendor to confirm		
4.13.10	Limit Switch L.T. : Two Stage Operational Limit Switch	Vendor to confirm		
4.13.11	IP Protection L.T. : IP 55	Vendor to confirm		
4.13.12	Buffer type : Rubber	Vendor to confirm		
4.14	Motor Data (Hoist, LT, CT)			
4.14.1	Motors Type : 3 Ph. SQ Cage Induction Motor	Vendor to confirm		
4.14.2	Motors Standard : IEC Standard	Vendor to confirm		
4.14.3	Insulation Class : F Class	Vendor to confirm		
4.15	Structure Data			
4.15.1	Width of Crane: Supplier to indicate actual value in meters	Vendor to specify		
4.15.2	Girder Specification :Complete Girder for the span of 10 Mtr. Along with the mounting plate the End carriage of the semigantry crane shall be inline with relevant IS.	Vendor to confirm		
4.15.3	Girder Deflection : Span/750 (As per IS Standard)	Vendor to confirm		
4.16	STRUCTURAL FABRICATION (Constructional Details):			
4.16.1	Bridge/Girder: Shall be of box type construction.	Vendor to confirm		

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
4.16.2	Platform on Girders: The Platforms provided on the Girders shall be fixed through bolted joints only.	Vendor to confirm		
4.16.3	Raw Material: Only steel plates tested and certified for quality by reputed inspection authorities, shall be used.	Vendor to confirm		
4.16.4	Wheel Assembly:			
4.16.5	The Wheel Assemblies of Cross Travel (CT) and Long Travel (LT) shall be of Live Axle System with L-Type Bearings only. Details to be submitted by the vendors.	Vendor to submit details		
4.17	MECHANICAL ELEMENTS:			
4.17.1	Gears: Gears in all the Stages shall be helical in design and to be of machined, lapped and hardened	Vendor to confirm		
4.17.2	Gear Box Casing: Shall be of fabricated type and stress relieved by thermal heat-treatment process, prior to machining.	Vendor to confirm		
4.17.3	Rope Drum: Shall be of fabricated type and stress relieved. The circumferential weld joints shall be tested by 100 % X-Ray quality.	Vendor to confirm		
4.17.4	Type of Coupling: Only Geared Couplings to be used for a) Between Electric Motor and Gear Box, b) Between Gear Box and Rope Drum and c) Between Gear Box and Trolley Wheels.	Vendor to confirm		
4.17.5	Wheels: Shall be of forged and Wheel Tread hardened to 250-300 BHN. Wheels shall be fitted with L-Type Bearings	Vendor to confirm		
4.17.6	Mechanical Joints: Fit Bolts (as per IS 3640 -1982) for all joints coming in main members.	Vendor to confirm		
4.17.7	Pulley Dimension: In accordance to relevant IS & Rope diameter.	Vendor to confirm		
4.17.9	Bumpers (End Stoppers):			
4.17.9.1	Bumpers of adequate size shall be provided on both CT & LT to stop the crane in the event of an overshoot by the operation.	Vendor to provide		
4.17.10	Ladder:			
4.17.10.1	A ladder of sufficient height shall be provided to climb up the crane safely and to land over the platform safely.	Vendor to provide		
4.17.11	Maintenance Platform :			
4.17.11.1	A full length maintenance / service platform of load carrying capacity apprx. 200 Kgs. of sufficient width shall be provided for maintenance. A hand rail and toe guard shall also to be provided. All foot-walk and platform shall have anti-skid grating for decking.	Vendor to provide		
4.17.12	Wheel Guard for LT: Suitable wheel guard shall be provided.	Vendor to provide		
4.18	Electrical Control Panel:			
4.18.1	Control of Crane: All the operations of the crane shall be controlled from Radio Remote	Vendor to confirm		

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
4.18.2	Control Voltage: Shall be 110V AC	Vendor to confirm		
4.18.3	Input Power Supply: Shall be 415V \pm 10%, 50Hz \pm 3%, 3 Phase- AC.	Vendor to confirm		
4.18.4	Control Panel : Sheet steel housing, powder coated, colour Siemens Grey	Vendor to confirm		
4.18.5	Control Panel will mount on crane leg.	Vendor to confirm		
4.18.6	Main switch 3-pole, lockable : Required.	Vendor to confirm		
4.18.7	Cable entry via connector, reserve drillings are closed with blanking plugs	Vendor to confirm		
4.18.8	IP Protection Panel : IP 55	Vendor to confirm		
4.18.9	Hoist Supply Type : Through Festooning System	Vendor to confirm		
4.18.10	L.T. Supply Type :Through shrouded Busbar System	Vendor to confirm		
4.18.11	Hooter with flasher :1 Nos. for each crane	Vendor to confirm		
4.18.12	Current collector : 1Set. for each crane	Vendor to confirm		
4.18.13	Anticollision Device : 2 Nos. for each crane	Vendor to confirm		
4.19	DSL & Current Collector System:			
4.19.1	Suitable capacity Three Phase Shoudded Bus Bar DSL with all required accessories considering 2 nos. semi gantry crane (3 Ton Each) use to be provided.	Vendor to confirm		
4.19.2	Erection of DSL and supply of fixing elements are vendor's scope.	Vendor to confirm		
4.19.3	Current collection system suitable for this crane shall be offered along with the crane.	Vendor to confirm		
4.19.4	Bay Length (For DSL) : 60 Meters	Vendor to confirm		
4.20	Lubrication:			
4.20.1	Suitable lubrication system shall be provided for gear box, all rotating parts wherever applicable. Details of the same to be furnished.	Vendor to furnish		
4.21	Radio Remote Controller: RRC shall comprise of the following	Vendor to confirm		
4.21.1	A) Transmitter: It shall be suitable for 2 steps control of AC drive through push buttons. The 2- steps pushbutton remote must have following functions: • Hoist: Up/Down, through 2 steps Pushbuttons. • Long Travel: Left/Right, through 2 steps Pushbuttons. • Cross Travel: Fwd/Right, through 2 steps Push buttons. • Hooter Operation: Normal push button • Crane lights ON/OFF push button • Emergency Stop: Raised distinctive push button. • Key switch: Removable unique key to disable transmitter. • Battery check facility & indicator. • Push buton for drive fault reset. B) Receiver with antenna suitable for above transmitter. C) Battery charger. D) 2 set of batteries for transmitter.	Vendor to confirm		
4.21.2	Transmitter: The transmitter shall be lightweight, rugged, reliable and made from ABS plastic. It shall be operable from Ni-Cd rechargeable battery, which shall provide minimum 72 hours of operations with full charge. It shall be supplied housed in a protective leather cover.	Vendor to confirm		

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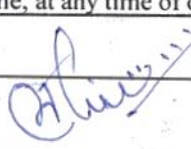
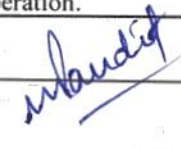

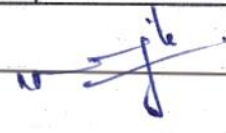
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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE

Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
4.21.3	Receiver: It shall be supplied housed in a suitable panel and shall have antenna for receiving transmitter signals. It shall have following features:	Vendor to confirm		
4.21.4	Operating range should be minimum 120 MTRs.	Vendor to confirm		
4.21.5	The output relays for driving motion contactors shall be heavy duty, rated for 10Amps at 110V AC.	Vendor to confirm		
5	ELECTRICAL ELEMENTS:			
5.1	415V + 10% / -15%, 50HZ +/-3 HZ, 3 Phase AC Power Supply Source will be provided by BHEL at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets, shall be the responsibility of vendor. Requirement of grounding/earthing with required material details is to be informed by vendor well in advance so that same could be incorporated during construction of foundation.	Vendor to confirm		
5.2	Motors shall conform to IEC or Indian Standards	Vendor to confirm		
5.3	Vendor should ensure the proper earthing for the cranes and its peripherals.	Vendor to confirm		
5.4	All electrical components in the cabinets should be mounted on DIN Rail.	Vendor to confirm		
5.5	All electrical equipment shall be suitably protected by HRC fuses/ MCBs/ Overload relays & single phase preventives.	Vendor to confirm		
5.6	All electrical & electronic control cabinets & panels should be dust and vermin proof .	Vendor to confirm		
5.7	Centralized electrical panel with auxiliary step down transformer, contactors, back up protection fuses, indicating lamps etc. to be provided with audio and visual alarms for each equipment. - All controls and annunciation equipment should be suitable for 240 V AC. - Suitable interlock as described against each equipment shall be provided for safe and trouble free operation.	Vendor to confirm		
	- All instrument control hardware and alarms shall be mounted on a suitable control panel. - The machine shall be fully equipped with adequate instrumentation having provision of Auto and manual operation as mentioned. All necessary control and indicating panel shall be provided.			
5.8	Electric Contactors: All Panels shall have SIEMENS/L&T/GE contactors suitable for Crane operations.	Vendor to confirm		
5.9	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.	Vendor to confirm		
5.10	Electrical Design: All Electrical Elements shall be so selected, that they withstand 25% overloading of the crane, at any time of operation.	Vendor to confirm		

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
5.11	Long Travel Motion: A Dual Drive Mechanism shall be provided for LT (Long Travel) Motion.	Vendor to provide		
5.12	Bridge Light: One LED fitting with light under the bridge shall be provided.	Vendor to confirm		
6	DOCUMENTS/DETAILS for APPROVAL: The following documents / details shall be submitted to BHEL for Approval within one month of PO placement, prior to taking up the manufacture of the crane.	Vendor to confirm		
6.1	GA Drawing of the Crane.	Vendor to submit		
6.2	GA Drawing of Crab with Trolley.	Vendor to submit		
6.3	GA Drawing of Individual Mechanisms.	Vendor to submit		
6.4	Drawings of Bridge, End-Carriage, Leg and their connections.	Vendor to submit		
6.5	Sub-Assembly Drawing for Wheels, Hook Blocks, Gear Boxes & Hoist Drums.	Vendor to submit		
6.6	Calculations for Selection of Electric Motors, Gear Reducers, Brakes, Couplings, etc.	Vendor to submit		
6.7	Calculations for Bridge Girder, Crab, End - Carriage and their connections.	Vendor to submit		
6.8	Wiring Diagram with Logic Circuits.	Vendor to submit		
6.9	Cable Selection based on current rating.	Vendor to submit		
7	O & M MANUALS: 5 Copies of Erection, Operation & Maintenance Manual, containing the following technical details shall be submitted.	Vendor to submit		
7.1	Catalogues, O&M Manuals of bought out items, including drawings (Electrical & electronic circuit, PLC Logic, machine assembly drawings, hydraulic circuit).	Vendor to confirm		
7.2	Specifications/Ratings of All Bought-Out-Items	Vendor to confirm		
7.3	Trouble Shooting Chart for Main and all Sub-Systems	Vendor to confirm		
7.4	One additional set of all the above documentation in soft copy.	Vendor to confirm		
8	SAFETY ARRANGEMENTS:			
8.1	Apart from standard safety arrangements machine should also have adequate and reliable safety interlocks / devices to avoid damage to the crane due to the malfunctioning or mistakes. Crane functions should be continuously monitored and audio visual warning indication / alarm number with message (on panels) should be available.	Vendor to confirm		
8.2	A detailed list of all alarm / indications provided on cranes should be submitted by the supplier with the offer.	Vendor to confirm and specify		
8.3	All the pipes, cables etc. on the machine should be well supported and protected.	Vendor to confirm		
8.4	All the rotating parts used on machine should be statically & dynamically balanced to avoid undue vibrations.	Vendor to confirm		
8.5	Emergency Switches at suitable locations as per international norms are to be provided.	Vendor to confirm		
8.6	Safety lights at suitable locations.	Vendor to confirm		
9	CRANE LIGHTS:			
9.1	Machine Lights for sufficient illumination of complete working area should be provided for clear visibility.	Vendor to confirm		

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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
9.2	All light fittings, consumables, adapters/receptacles should have compatibility with Indian equivalents	Vendor to confirm		
10	ERECTION AND COMMISSIONING :			
10.1	Erection and commissioning is the responsibility of the supplier. Service requirement like power, air & water shall be provided by BHEL at only one point to be indicated by supplier in their foundation/layout drawings.	Vendor to confirm		
10.2	Tools, Tackles, instruments and other necessary equipment required for commissioning of the machine should be brought by the supplier.	Vendor to confirm		
10.3	Commissioning spares, required for commissioning of the equipment within stipulated time, shall be brought by the supplier on returnable basis.	Vendor to confirm		
10.4	All Cover Plates required for the equipment and its peripherals including pits, if any, shall be supplied and installed by the vendor.	Vendor to confirm		
10.5	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 colours of paint used.	Vendor to confirm		
10.6	Duration for E&C after call of commissioning from BHEL - 3 Months Max.	Vendor to confirm and specify		
10.7	E&C schedule for machine in Bar chart	Vendor to submit		
10.8	Successful proving of BHEL components by the supplier shall be considered as part of commissioning. All tests, as mentioned at clause 12.0 (Machine Acceptance Criteria) shall form the part of commissioning activity.	Vendor to confirm		
10.9	Complete anchoring system including foundation bolts, anchoring materials etc. shall be vendors scope.	Vendor to confirm		
11	FOUNDATION:			
11.1	Vendor shall submit the preliminary layout drawing for getting BHEL's approval. Complete foundation design including details like static / dynamic loads etc. and final layout drawings shall be submitted by the supplier with in a month after getting PO for BHEL's approval. The Layout should consist of all requirements pertaining to complete machine and all accessories. BHEL shall construct complete foundation for the machine.	Vendor to confirm		
12	MACHINE ACCEPTANCE:			
12.1	Tests/activities should be carried out at supplier's works on the machine before dispatch.	Vendor to confirm		
12.1.1	Physical Inspection of crane and all assessories	Vendor to confirm		
12.1.2	Measurement of CAMBER in the Bridges.	Vendor to confirm		
12.1.3	Full / Rated Load Test and Deflection Test.	Vendor to confirm		
12.1.4	Deflection and Permanent Set Measurement.	Vendor to confirm		
12.1.5	25% OVER-LOAD Lifting Ability Check.	Vendor to confirm		

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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
12.1.6	LT, CT and Hoist speeds	Vendor to confirm		
12.2	Tests/activities should be carried out at BHEL works on the machine.	Vendor to confirm		
12.2.1	Physical Inspection of crane and all accessories	Vendor to confirm		
12.2.2	Full / Rated Load Test and Deflection Test.	Vendor to confirm		
12.2.3	25% OVER-LOAD Lifting Ability Check.	Vendor to confirm		
12.2.4	LT, CT and Hoist speeds	Vendor to confirm		
12.3	Inspection Agency: BHEL/Third Party appointed by BHEL/Consultant.	Vendor to confirm		
12.4	All the above mentioned requirements to be read in conjugation with specification, IS 3177 & applicable standards.	Vendor to confirm		
13	SPARES:			
13.1	Itemised breakup of mechanical, electrical and electronic spares used on the machine in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis should be offered by vendor. The list to include following, in addition to other recommended spares: (Unit Price of each item, make & model of spare shall be offered.	Vendor to confirm and submit		
13.2	All types of spares for total machine and accessories should be available for at least ten years after supply of the machine. If machine or control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & suppliers to enable BHEL to procure them in advance, if required	Vendor to confirm		
13.3	Vendor to confirm that complete list of spares for machine and accessories, along with specification / type / model, and name & address of the spare supplier shall be furnished along with documentation to be supplied with the machine	Vendor to confirm and submit		
14	PACKING:			
14.1	Proper packing of the items is to be ensured to avoid any damage in transit.	Vendor to confirm		
15	PERFORMANCE GUARANTEE:			
15.1	The Performance of the Total Crane and / or the Components / Sub-Assemblies / Bought-Out-Items shall be guaranteed for a minimum period of 24 months from the date of acceptance of the crane at BHEL Works.	Vendor to confirm		
16	TRAINING:			
16.1	BHEL Persons shall be trained at BHEL Works in the field of Operation and Mechanical, Electrical & Electronics maintenance of cranes & other supplied equipment.	Vendor to confirm		
17	AMBIENT CONDITIONS & THERMAL STABILITY:			
17.1	Maximum noise level shall be 85 dB(A) at normal load condition, 1 M away from the machine.	Vendor to confirm		
17.2	Tropicalisation: All electrical / electronic equipment shall be tropicalized.	Vendor to confirm		

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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
17.3	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to confirm		
17.4	Paint of the machine should be oil resistant and should not peel off.	Vendor to confirm		
17.5	Ambient Conditions : Temperature = 5 to 50 degree Celsius , Relative Humidity : 95 %	Vendor to Note and confirm		
17.6	Thermal Stability of the complete Plant keeping in view specified Ambient Conditions and accuracy requirements of BHEL components and trouble free operation of the Plant should be ensured by VENDOR.	Vendor to Note and confirm		
18	GENERAL :			
18.1	Crane Model:	Vendor to specify		
18.2	Total connected load (KVA):	Vendor to specify		
18.3	Floor area required (Length, Width, Height) for complete equipment & accessories	Vendor to specify		
18.4	Paint Confirming IS 5: 1984 ;Colour Shade No. 591 of Asian / Appcolite/ Nerolac/ Berger make.	Vendor to confirm		
18.5	One coat of Primer with 25 micron DFT (Dry Film Thickness) and 48 hours of compulsory curing after painting.	Vendor to confirm		
18.6	Two coats of Enamel Paint each with a DFT of 25 micron and intermittent curing of 16 hours.	Vendor to confirm		
18.7	First fill oil, grease etc. for the commissioning of the crane shall be provided by the supplier	Vendor to confirm		
18.8	Tool box with standard tools shall be supplied with the crane.	Vendor to confirm		
18.9	Total weight of the equipment.	Vendor to specify		
18.10	Weight of heaviest part of crane	Vendor to specify		
18.11	Vendor to submit, along with offer, the reference list of customers where similar machines have been supplied mentioning the customer, Machine Model, major specifications of the supplied machine, Year of Supply etc.	Vendor to specify		
18.12	Detailed catalogues, sketch/ photographs of the machine should be submitted with the offer.	Vendor to specify		
18.13	Delivery period: 5 months Max.	Vendor to confirm and specify		
18.15	Test certificate for crane: Part of supplier's scope. To be inspected and certified by "Competent Person" as per Factories Rules/Acts/Laws before use.	Vendor to confirm		
19	QUALIFYING CRITERIA:			

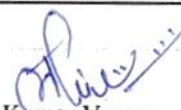
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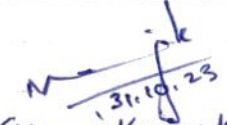
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SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 3 TON SEMI GANTRY CRANE				
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
19.1	Qualifying Criteria: Only OEM or OEM authorized dealer / partners, who have supplied at least 02 numbers min. 3 ton or higher capacity Semi Gantry Cranes in the past 7 years from the date of tender opening should quote. If the bidder is OEM-authorized dealer or partner or distributor then bidder to submit valid authorization certificate from OEM & Letter from OEM for technical support for this tender. The following information is also to be submitted by all the bidders for qualification of their offer.	Vendor to Confirm		
19.2	Purchase order copy (Unpriced) for supply of 2 nos. min. 3 ton or higher capacity Semi Gantry Cranes during last 7 years from the date of this enquiry. If the bidder is OEM-authorized dealer or partner or distributor Purchase Order in the name of principal is also accepted.	Vendor to submit		
19.3	One no. Performance certificate from the customer of the same crane for min. one-year satisfactory operation from date of commissioning during last 7 years from the date of this enquiry.	Vendor to submit		
19.4	Name of the customer/company where similar crane is supplied.	Vendor to submit		
19.5	Complete postal address of the customer.	Vendor to submit		
19.6	Date of supply	Vendor to submit		
19.7	Date of commissioning.	Vendor to submit		
19.8	Name and designation of the contact person of the customer.	Vendor to submit		
19.9	Phone number & email address of the customer's contact person.	Vendor to submit		
19.10	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false / incorrect, the offer shall be rejected.	Vendor to Confirm		


Lalit Kumar Verma
(Mgr./ WEX)


Nitin Kumar Gaur
(DGM/ WEX)


Manish Pandit
(Mgr./ LMM)


(Manoj Kumar Kashyap)
Manager/ WEX