



BHARAT HEAVY ELECTRICAL LIMITED, JHANSI

SPEC NO. - MT-6236 Rev. 01
LOCATION - TRM (Bay-9)

ITEM NO. - MT-17/1556
QTY - 01 NO.

SCOPE: Design, Manufacturing, Supply, Erection & Commissioning of 1 No. - 150 Tons Core Building and Lifting Platform

Note:

1. Vendor must submit complete information against clause No. 12 (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
3. The offer and all the documents enclosed with the offer shall be in English only.

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 150 TONS CORE LIFTING PLATFORM			
Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER
1	PURPOSE & WORKPIECE MATERIAL.		
1.1	Core building and lifting platform shall be used for making of transformer core. The platform shall be in two parts attached to each other. The main platform is placed on the floor area while the tilting platform is bolted with supporting beam and it can be tilted at 90 degree from the horizontal surface using EOT crane.	Vendor to Confirm.	
1.2	Work Piece Material :- Material used is silicon steel sheets stacked together to form Transformer Core having weight of 150 Tonnes.	Vendor to Confirm.	
1.3	SCOPE: Design, manufacturing, supply, erection & commissioning of 1 No. 150 Tons core building and lifting platform as indicated above. The drawings provided are for basic reference and for informational purposes only. Vendor may schedule a visit to BHEL, Bhopal to observe the existing core building and lifting platform for functional and structural insights. Vendor to design the core building and lifting platform based on the observations and specific requirements provided by BHEL, Jhansi and ensure the design complies with relevant safety, engineering and regulatory standards. Vendor to manufacture all components of the core building and lifting platform according to the design approved by BHEL, Jhansi.	Vendor to Confirm.	
1.4	JOB REQUIREMENT (To be assembled on core building and lifting platform): A) Max number of Core Limbs - 5 B) Core will be assembled with Top Yoke C) Min/Max Core Dia (D) - 700/1200 mm (Adjustable) D) Min/Max Limb Centre distance between Centre limb and 2 side limbs (C) - 2000/2500 mm (Adjustable) E) Min/Max Limb Centre distance between 2 side limbs & 2 outside limbs (C1) - 1100/1500 mm (Adjustable) F) Min/Max Core height (A) - 3000/4000 (Adjustable) G) Min/Max Exterior distance of 5 Limbs (E) - 7000/8500 mm (Adjustable) H) Max Weight of Core with feet and all mechanicals - 150 Tons	Vendor to Confirm.	
2	SPECIFICATION:		
2.1	Configuration:- The core building platform shall be fabricated from steel plates, channels & I beams. The equipment shall be of robust and stress relieved steel structure. The equipment shall consist of the following.	Vendor to Confirm.	
2.1.1	The building platform shall be fabricated from MS plate channels, I beams etc having building area 5000mm x 9900 mm with ladder arrangement. Building platform should be strong enough to take suitable loading of hydraulic clamping of core by hydraulic jack of 40/60 tonnes. Thickness of the steel plates after machining shall not be less than the specified thickness in the drawing.	Vendor to Confirm.	
2.1.2	Tilting platform shall be of size 2430 mm x 9900 mm.	Vendor to Confirm.	
2.1.3	Tilting platform shall be supported by clamping I-beam and tie rods. The size of I beam to be decided suitably as per loading requirement.	Vendor to Confirm.	
2.1.4	Note:- Main building platform & Tilting platform have to be machined to the required accuracy as per clause 7.1.	Vendor to Confirm.	
2.1.4.1	All necessary fixtures and arrangement for core building, tightening and lifting shall be in scope of vendor.	Vendor to Confirm.	
2.1.4.2	Supporting bridges for frame - 2100mm high. Drawing no TRM/f-2097 (Annexure-4) (item 1.2.4 & 7) : Qty-10 nos.	Vendor to Confirm.	
2.1.4.3	Supporting bridges for frame - 1700mm high Drawing no TRM/f-2097 (Annexure-4) (item 1.2.4 & 7) : Qty-22 nos.	Vendor to Confirm.	
	Core support Drawing no TRM/f-2097 (Annexure-4) (item 8 to 11) : Qty-15 nos.	Vendor to Confirm.	

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Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
2.1.4.4	Clamping pads for supports Drawing no TRM/f-2097 (Annexure-4) (item 12 & 13) : Qty-30 nos.	Vendor to Confirm.		
2.1.4.5	Screw jacks Drawing no TRM/f-2098 (Annexure-5) (item 12 to 14) : Qty-20 nos.	Vendor to Confirm.		
2.1.4.6	Clamping pads for screw jacks Drawing no TRM/f-2097 (Annexure-4) (item 12 to 14) : Qty-80 nos.	Vendor to Confirm.		
2.1.4.7	Clamping bolts for clamping pads Drawing no TRM/f-2097 (Annexure-4) (item 15 to 16) : Qty-110 nos.	Vendor to Confirm.		
2.1.4.8	Axle for core supports Drawing no TRM/f-2097 (item 17) (Annexure-4) : Qty-15 nos.	Vendor to Confirm.		
2.1.4.9	Studs for axles Drawing no TRM/f-2097 (item 18) (Annexure-4) : Qty-30 nos.	Vendor to Confirm.		
2.1.4.10	Cross pieces for frame 670mm Long Drawing no TRM/f-2097 (item 20) (Annexure-4) : Qty-2 nos.	Vendor to Confirm.		
2.1.4.11	Cross pieces for frame 1210mm Long Drawing no TRM/f-2097 (item 19) (Annexure-4) : Qty-2 nos.	Vendor to Confirm.		
2.1.4.12	Angle cross pieces for adjusting as per Drawing no TRM/f-2098 (item 1 to 5) (Annexure-5) : Qty-3 nos.	Vendor to Confirm.		
2.1.4.13	Angle cross pieces for staking Drawing no TRM/f-2098 (item 6 to 11) (Annexure-5) : Qty-3 nos.	Vendor to Confirm.		
2.1.4.14	Core support 2400mm Long Drawing no TRM/f-2097 (item 15 to 16) (Annexure-4) : Qty-8 nos.	Vendor to Confirm.		
2.1.4.15	Core support 2000mm Long Drawing no TRM/f-2097 (item 17 to 18) (Annexure-4) : Qty-8 nos.	Vendor to Confirm.		
2.1.5	Rocker rails drawing TRM/G-2093 (item no-20) (Annexure-1)	Vendor to Confirm.		
2.1.6	All necessary fixtures and arrangement for core building, tightening and lifting shall be in scope of vendor.	Vendor to Confirm.		
2.1.7	Note:- Above items to be machined, tested and assembled as per their drawings. The lifting platform must be equipped with a suitable positive locking arrangement (Rocker support with Rocker guide pin and rack rail) to securely hold the platform in place. The locking mechanism must engage securely and be able to hold the platform firmly at various angles as required by the application.	Vendor to Confirm.		
2.1.8	Suitable provisions (Pulley type) to be provided for platform tilting with EOT crane.	Vendor to Confirm.		
2.2	TOOLS AND ACCESSORIES			
2.2.1	Special tools & equipment required for erection of the platform shall be brought by the vendor.	Vendor to Confirm.		
2.2.2	Necessary tools like Torque Wrench, Spanners, Allen Keys, grease guns etc. for operation and maintenance of the equipment should be supplied.	Vendor to Confirm.		
2.2.3	Assembly of core staking bed & intermediate member to Drg.12068101236 (Annexure-6) having over all dim. 4400mm x 591mm x 1000mm width each consisting of following items. Qty - 5Sets	Vendor to Confirm.		
2.2.4	Staking bed made of 300mm x 140mm x 1000mm RS beam, 100mm x 50mm x 414mm RS channel, 16k / 10k steel plates having over all dim. 1000mm x 1000mm x 445mm as per drg.12068101237 var-00 (Annexure-7) Qty-2 Nos.	Vendor to Confirm.		
2.2.5	Staking bed made of 300mm x 140mm x 1000mm RS beam, 100mm x 50mm x 414mm RS channel, 16k / 10k steel plates having over all dim. 1000mm x 445mm x 500mm as per drg.12068101237 var-01 (Annexure-7) Qty - 2 Nos.	Vendor to Confirm.		
2.2.6	Staking bed made of 300mm x 140mm x 250mm RS beam 100mm x 50mm x 414mm RS channel, 16k / 10k steel plates having over all dim. 1000mm x 445mm x 250mm as per drg.12068101237 var-02 (Annexure-7) Qty - 2 nos.	Vendor to Confirm.		
2.2.7	Staking bed made of 300mm x 140mm x 125mm RS beam 100mm x 50mm x 414mm RS channel, 16k / 10k steel plates having over all dim. 1000mm x 445mm x 125mm as per drg.12068101237 var-03 (Annexure-7) Qty - 2 nos.	Vendor to Confirm.		
2.2.8	Staking bed made of 100mm x 50mm x 414mm RS channel, 16k/10k steel plates having over all dim. 570mm x 445mm x 125mm as per drg.12068101237 var-04 (Annexure-7). RS beam 300x140x125 Qty - 2 nos.	Vendor to Confirm.		
2.2.9	Assy of intermediate member made of 125mm x 70mm x 4400mm, 125mm x 70mm x 425mm RS beam 12k steel plates 20k x 30 x 100 steel stopper having over all dim.4400mm x 570mm x 146mm as per drg.12068101237 var-05(Annexure-7). The assy shall be machined with tolerance Ra.20. Qty-1 No.	Vendor to Confirm.		
3	DOCUMENTATION :- Five set of following documents (Hard Copies) with one soft copy in CD / Pen drive in English Language should be supplied along with plate form	Vendor to Confirm.		
3.1	Operating manual of platform	Vendor to Confirm.		
3.2	Detailed maintenance manual of platform with all manufacturing drawings of platform assembly / subassembly/parts.	Vendor to Confirm.		
3.3	Detailed design and manufacturing drawings of all assemblies / parts.	Vendor to Confirm.		
4	FOUNDATION :-			
4.1	Vendor shall submit the preliminary G.A. drawing for getting BHEL's approval. Complete foundation design including details like static / dynamic loads etc. and final drawings shall be submitted by the supplier with in one month after getting PO for BHEL's approval. The Layout should consist of all requirements pertaining to assembly of complete core building and lifting platform with all accessories. BHEL shall construct complete foundation.	Vendor to Confirm.		
5	LEVELING AND ANCHORING SYSTEM:			
5.1	Complete anchoring system including foundation bolts, anchoring materials etc. shall be vendors scope.	Vendor to Confirm.		

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DESCRIPTION FOR BHEL REQUIREMENT			
Sr. No.	ERECTION & COMMISSIONING :-	ACTION BY VENDOR	BIDDER OFFER
6	ERECTION & COMMISSIONING :- Erection and commissioning is the responsibility of the supplier. Service requirement like power and air shall be provided by BHEL on FOC basis at only one point to be indicated by supplier in their foundation/layout drawings. Other requirements like EOT crane and lifting tackles etc. shall be provided by BHEL as per availability. Details of these requirements should be informed by vendor in advance in the offer. Cranes, Tools, Tackles, instruments and other necessary equipment required for erection and commissioning of the equipment should be brought by the supplier. Commissioning spares, required for commissioning of the equipment within stipulated time, shall be brought by the supplier on returnable basis.	Vendor to Confirm.	
6.1		Vendor to Confirm.	
6.2	Portion, if any of the equipment, 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.	
6.3	Duration for E&C after call of commissioning from BHEL - 1 Months Max.	Vendor to confirm and specify	
6.4	E&C schedule	Vendor to Submit	
6.5	Successful proving of BHEL components by the supplier shall be considered as part of commissioning. All tests, as mentioned at clause 5 shall form the part of commissioning activity.	Vendor to Confirm.	
6.6	Any thing else required for successful commissioning of core building platform shall be vendors scope without any extra cost to BHEL.	Vendor to Confirm.	
6.7	Successful proving on BHEL Transformer Core of 150+ 25%(187.5)Ton by the supplier shall be considered as part of commissioning. (The weight of 150 Tonnes is as per clause 1.2)	Vendor to Confirm.	
6.8	Levelling of core building and lifting platform to the desired level of accuracy shall be done by vendor.	Vendor to Confirm.	
6.9	ACCURACY TESTS :-		
7	Complete prove out of core assembly platform with proper levelling of 0.2 mm per meter length should be carried out to the satisfaction of BHEL.	Vendor to Confirm.	
7.1	Vendor to submit Quality assurance plan w.r.t. manufacturing of core assembly and lifting platform in line with relevant Indian standard	Vendor to Confirm.	
7.2	Vendor to submit test chart for inspection.	Vendor to Confirm.	
7.3	PACKING :-		
8	Standard & rigid packing for all items of complete platform, all accessories and other supplied items to avoid any damage/loss in transit. When platform is despatched in containers, all small loose items shall be suitably packed in boxes.	Vendor to Confirm.	
8.1	PLATFORM ACCEPTANCE:		
9	Inspection shall be carried out at supplier's works on the Core Assembly and Lifting Platform before dispatch.	Vendor to Confirm.	
9.1	Vendor to provide all test certificate w.r.t. material, welding as per submitted QA plan.	Vendor to Confirm.	
9.1.1	Vendor to demonstrate all the functions of the Core Assembly and Lifting Platform for its proper functioning.	Vendor to Confirm.	
9.1.2	Vendor to carryout accuracy test in line with clause no-5.3.	Vendor to Confirm.	
9.1.3	Tests to be carried out at BHEL works while commissioning the Core Assembly and Lifting Platform.	Vendor to Confirm.	
9.2	Vendor to carryout accuracy test in line with clause no-7.1, 7.3.	Vendor to Confirm.	
9.2.1	Vendor to demonstrate all the functions of the Core Assembly and Lifting Platform for its proper functioning.	Vendor to Confirm.	
9.2.2	Job prove out of Core Assembly and Lifting Platform operation in 25% over loaded condition.	Vendor to Confirm.	
9.2.3	GUARANTEE :-		
10	24 months from the date of acceptance of the platform.	Vendor to Confirm.	
10.1	GENERAL :- The vendor should submit the following information.		
11	Model of the platform.	Vendor to Specify	
11.1	Total Tilting and lifting load in Tons.	Vendor to Specify	
11.2	Floor area required (Length, Width, Height) for complete platform & accessories.	Vendor to Specify	
11.3	Painting of Platform Panels : RAL 6011 Apple Green (polyurethane paint)	Vendor to Specify	
11.4	Total weight of the part / platform	Vendor to Specify	
11.5	Weight of heaviest part of platform	Vendor to Specify	
11.6	Weight of the heaviest assembly / subassembly of the platform	Vendor to Specify	
11.7	Dimensions of largest part / subassembly of the platform	Vendor to Specify	
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Sr. No.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	BIDDER OFFER	DEVIATION / REMARK
11.9	Vendor to submit GA drawings for BHEL's approval within one Month after placement of purchase order before start manufacturing.	Vendor to Submit		
11.10	Supply period: 6 months from date of drawing approval by BHEL.	Vendor to confirm and specify		
12	QUALIFYING CONDITIONS :-			
12.1	Only those vendors, who have experience in manufacturing of equipment of min. 150 Ton capacity used for lifting / tilting / transportation in the past 7 years from the date of tender opening should quote. The following information is also to be submitted by all the bidders for qualification of their offer.	Vendor to confirm		
12.2	Purchase order copy (Unpriced) for supply of one no. equipment of min. 150 Ton capacity used for lifting / tilting / transportation in the past 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		
12.3	Proof of supply (Invoice / GEM Crac / Commissioning certificate / Performance certificate from the customer) of the same equipment.	Vendor to Submit		
12.4	Name of the customer / company .	Vendor to Submit		
12.5	Complete postal address of the customer.	Vendor to Submit		
12.6	Year of commissioning.	Vendor to Submit		
12.7	Application for which the Equipment is supplied	Vendor to Submit		
12.8	Name and designation of the contact person of the customer.	Vendor to Submit		
12.9	Phone , Fax no. and e-mail address of the contact person of the customer	Vendor to Submit		
12.1	BHEL may assess vendor's capability to manufacture a 150-ton core building and lifting platform in line with specification.	Vendor to Submit		
12.11	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		


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