



BHARAT HEAVY ELECTRICAL LIMITED, JHANSI

Specification No. 7206 Rev 01 dtd. 07.09.19
Item No. ME-177/2755
Location BAY-9
Quantity 2 nos.

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF OIL SILO (OIL STORAGE TANK)

NOTE:-

1. Vendor must submit complete information against clause no. 17.0 (Qualifying Condition). The offer meeting this clause would only be processed.
2. Vendor to furnish the offer using this standard template of the specification. While furnishing the offer, no change is to be made in the first three columns (i.e. 'S.NO.', 'DESCRIPTION FOR BHEL REQUIREMENT' & 'ACTION BY VENDOR'). Only the 'Offered' column and where applicable, the 'Deviations' & 'Remarks' Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.
3. The offer and all documents enclosed with offer should be in English language only.
4. Where ever 'Vendor to specify' or 'suitable' is mentioned, suitable backup data or calculation or justification is required for establishing the suitability.
5. Circuit diagram of the system offered is to be enclosed with proper writeup.

NAME & ADDRESS OF THE SUPPLIER :

TELEPHONE NOS. :

FAX NOS. :

E-MAIL ADDRESS :

NAME & ADDRESS OF THE INDIAN AGENT :

TELEPHONE NOS. :

FAX NOS. :

E-MAIL ADDRESS :

SCOPE: DESIGN, SUPPLY, ERECTION & COMMISSIONING OF OIL SILOS (OIL STORAGE TANKS) COMPLYING WITH SPECIFICATIONS AS BELOW

S. NO.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	OFFERED	DEVIATION / REMARK
1.0	PURPOSE & WORKPIECE MATERIAL:			
1.1	OIL SILOS (OIL STORAGE TANKS) are required with the following specification for filtration, heating and storage of raw as well as processed transformer oil under vacuum.	Vendor to confirm		
2.0	SCOPE OF SUPPLY AND SCOPE OF WORK:			
2.1	Scope of supply Design, Manufacturing, Supply of following equipment in line with specification covered under point 3.0 : A. OIL SILO (OIL STORAGE TANK), Capacity: 60 KL, Operating Vacuum: 0.5 Torr - QTY-02 nos. (Vendor may visit the site before submitting the offer to understand the site requirement)	Vendor to confirm		
2.2	Scope of work Erection & Commissioning and proving of supplied plants/ equipment.	Vendor to confirm		
3.0	SPECIFICATION:			
3.1	OIL SILO (OIL STORAGE TANK) Capacity-60 KL, STATIONARY -QTY-02 NOS. The specification governs the quality requirement of design, manufacturing, supply, erection and commissioning of 60 KL capacity OIL SILO (OIL STORAGE TANK) complete in all respect.	Vendor to confirm		

For civil
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S. NO.	DESCRIPTION FOR BHEL REQUIREMENT
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for civil
~~dispute~~
8/16/19

~~Walt~~
11/9/19

~~Bob~~
11/9/19

~~Bob~~
11/9/19

Don

James

SCOPE: DESIGN, SUPPLY, ERECTION & COMMISSIONING OF OIL SILOS (OIL STORAGE TANKS) COMPLYING WITH SPECIFICATIONS AS BELOW			
S. NO.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	DAVIATION / REMARK
3.1.2.16	All other Valves and accessories such as Non Return Valve, Oil Silo (Oil Storage Tank) Drain Valve etc. shall be in the scope of vendor.	Vendor to confirm and specify	
3.1.2.17	Complete vessel shall be provided with necessary insulation and cladding with G.I. Sheet so that out side surface temperature shall not be more than 55 degC in any condition. BHEL shall provide insulation material only and cladding G.I. sheet and other anchoring material etc. shall be supplied by vendor.	Vendor to note and confirm	
3.1.2.18	All steel surfaces exposed to weather to be given a primary coat of zinc chromate. Second coat of oil, heat and weather resistant paint. Final two coats of glossy oil and weather resistant light gray paint. DFT of paint surface of final coating of paint shall not be less than 150 microns.	Vendor to confirm	
3.1.2.19	Drawing of the offered OIL SILO(OIL STORAGE TANK) shall be submitted to BHEL for approval before start of fabrication.	Vendor to confirm	
4.0	ELECTRICAL SYSTEM:-		
4.1	415V +/- 10%, 50 HZ +/- 3%, 3 phase AC (3 wire system without neutral) Power Supply Source will be provided by BHEL at a single point near the OIL SILOS (OIL STORAGE TANKS) as per layout recommended by VENDOR. All step down transformers, rectifiers & regulators shall also be supplied by the vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the 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	
4.2	All electrical components in the cabinets should be mounted on DIN Rail.	Vendor to Confirm	
4.3	VENDOR should ensure the proper earthing for the OIL SILO(OIL STORAGE TANKS) and its peripherals.	Vendor to Confirm	
4.4	All electrical equipments shall be suitably protected by HRC fuses/ MCBS/ Overload relays & single phase preventives.	Vendor to Confirm	
5.0	SAFETY ARRANGEMENTS:-		
5.1	Following safety features in addition to other standard safety features should be provided on plants:-	Vendor to Confirm	
5.2	OIL SILOS(OIL STORAGE TANKS) should have adequate and reliable safety interlocks / devices to avoid damage to the workpiece and the operator due to the malfunctioning or mistakes.	Vendor to Confirm	
5.3	All the pipes, cables etc. on the Plant should be well supported and protected.	Vendor to Confirm	
5.4	All the rotating parts used with OIL SILOS(OIL STORAGE TANKS) should be statically & dynamically balanced to avoid undue vibrations.	Vendor to Confirm	
5.5	Emergency switch at suitable location as per International Norms are to be provided.	Vendor to Confirm	
6.0	ENVIRONMENTAL PERFORMANCE:-		
6.1	If any safety / environmental protection enclosure is required, it should be built in the plant by the VENDOR and certification of conformance to the pertinent act/rule shall be furnished.	Vendor to Confirm	
7.0	TOOLS FOR ERECTION, OPERATION & MAINTENANCE:-		
7.1	Special tools and equipment required for erection of the OIL SILOS(OIL STORAGE TANKS) shall be brought by the VENDOR on returnable basis.	Vendor to Confirm	
8.0	SPARES:-		
8.1	Complete list of spares for OIL SILOS (OIL STORAGE TANKS) 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 OIL SILOS(OIL STORAGE TANKS).	Vendor to Confirm	

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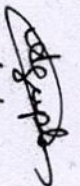
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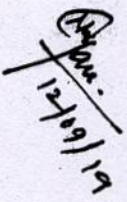
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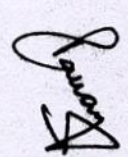
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SCOPE: DESIGN, SUPPLY, ERECTION & COMMISSIONING OF OIL SILOS (OIL STORAGE TANKS) COMPLYING WITH SPECIFICATIONS AS BELOW

S. NO.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	OFFERED	DEVIATION/ REMARK
9.0	DOCUMENTATION: Four sets of following documents (Soft copy in CD as well as Hard copies) in English language should be supplied along with the plant:-	Vendor to Confirm		
9.1	Operating manuals of Plant with handbook for operation.	Vendor to Confirm		
9.2	Detailed Maintenance manual of Plants with all drawings of assemblies/ sub- assemblies/ parts including Electrical / Pneumatic / Heating circuit diagrams.	Vendor to Confirm		
9.3	All Assembly / sub assembly Drawings as commissioned shall be supplied with the part list also.	Vendor to Confirm		
9.4	Catalogues, O & M Manuals of all bought out items including drawings, wherever applicable.	Vendor to Confirm		
9.5	Detailed Specification of all rubber items & Fittings.	Vendor to Confirm		
9.6	Soft copy of O & M Manual alongwith drawings to be provided.	Vendor to Confirm		
10.0	TRAINING:	Vendor to Confirm		
10.1	BHEL Persons shall be trained at BHEL Works in the field of Operation and Mechanical & Electrical maintenance of Oil SILOS(OIL STORAGE TANKS) & other supplied equipment	Vendor to Confirm		
11.0	FOUNDATION:	Vendor to Confirm		
11.1	VENDOR shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Intent (LOI) / P.O. Foundation work will be executed by BHEL. However, detailed foundation drawing with reinforcement details needs to be given by vendor within 4 weeks from the date of approval of lay-out drawing. All fixators, insert plates, supports & brackets shall be supplied by the vendor.	Vendor to Confirm		
12.0	ERECTION & COMMISSIONING			
12.1	Supplier to take full responsibility for carrying out the erection & commissioning, start up, testing of plants. Service requirement like power, steam & air shall be provided by BHEL at only one point (to be indicated by supplier in their foundation / layout drawings). Other requirements like crane, trolley shall be arranged by the vendor. Details of the requirements should be informed by VENDOR in advance (one month prior to the scheduled date of start of erection activities).	Vendor to Confirm		
12.2	Successful proving of BHEL components by the supplier shall be considered as part of commissioning. All tests, as mentioned at clause 14.0 (Plant Acceptance) shall form the part of commissioning activity.	Vendor to Confirm		
12.3	Tools, Tackles, Test Material, Instruments and other necessary equipment including Laser Equipment, if any, required to carry out all above activities should be brought by the supplier on returnable basis.	Vendor to Confirm		
12.4	Commissioning spares, required for commissioning of the Plants within stipulated time, shall be brought by the supplier.	Vendor to Confirm		
12.5	All Cover Plates, Platforms(Gill Type), Railing etc. required for the Plants and its peripherals if any, shall be supplied and installed by the vendor.	Vendor to Confirm		
12.6	Portion, if any, of the Plants, accessories and other supplied items where paint has rubbed off or peeled off 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 paints used.	Vendor to Confirm		
12.7	Vendor may note that the E & C charges in this case have been mandatorily fixed at 10% of the total cost. This apportioned price has to be Compusonly agreed by all vendors & no deviation shall be acceptable for this.	Vendor to Confirm		

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S. NO.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	OFFERED	DEVIATION / REMARK
13.0	AMBIENT CONDITIONS & THERMAL STABILITY:			
13.1	OIL SILOS(OIL STORAGE TANKS) and all supplied items should work troublefree and efficiently under following operating conditions and should give specified accuracies. POWER SUPPLY: Voltage : 415 V -10%, +10%. Frequency : 50 Hz +1.5Hz, -1.5Hz No. of phases : 3, no neutral Ambient Conditions : Temperature = 5 to 50 degree celsius, Relative Humidity : 95 % (Vendor to confirm that Plants suitable for above). 13.2 Weather conditions are tropical. Atmosphere may be dust laden during some part of the year. Oil SILOS(OIL STORAGE TANKS) shall be installed in open to sky condition. Max. temperature variation is up to 25 deg Celsius in 24 hours. (VENDOR to confirm that Plants are suitable for above).	Vendor to Confirm		
13.3	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 confirm that Plants are suitable for above).	Vendor to Confirm		
14.0	PLANT ACCEPTANCE : (Tests / Activities To be Performed by VENDOR)			
14.1	Tests / Activities to be carried out at supplier's works in presence of BHEL Representative on the plant before despatch :	Vendor to Confirm		
14.1.1	Inspection of components, assemblies & sub assemblies with test certificates of OEM.	Vendor to Confirm		
14.2	Tests to be carried out at BHEL Works while commissioning the Oil SILOS(OIL STORAGE TANKS):	Vendor to Confirm		
14.2.1	Demonstration of all features of the Oil SILO(OIL STORAGE TANK) and all accessories to the satisfaction of BHEL for their efficient and effective use.	Vendor to Confirm		
14.2.2	Welding Joint NDT test report shall be submitted by vendor.	Vendor to Confirm		
14.2.3	Inspection & Testing of OIL SILO(OIL STORAGE TANK) shall be done as per " IS: 803, Point 9.3.5: Circularity & Shape & Point 12.0: Testing of tanks".	Vendor to Confirm		
15.0	GUARANTEE :			
15.1	24 months from the date of commissioning of the all three plants.	Vendor to Confirm		
16.0	GENERAL : The VENDOR should submit the following information for Oil Treatment Plant and Vacuum Pumping Unit Separately :			
16.1	Vacuum Pump Make and Model	Vendor to specify		
16.2	Total connected load (KVA)	Vendor to specify		
16.3	Floor area required (Length, Width, Height) for individual Plant & accessories	Vendor to specify		
16.4	Painting of Plant / Electrical Panels : Polyurethane paint (Preferably Apple Green). All the pipeline should be painted in line with 'IS 2379:1990- Pipelines- identification- color code'.	Vendor to specify		
16.5	Total Weight of the Plant	Vendor to specify		

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S. NO.	DESCRIPTION FOR BHEL REQUIREMENT	ACTION BY VENDOR	OFFERED	DEVIATION / REMARK
17.0	QUALIFYING CONDITION:			
17.1	Only Original Equipment Manufacturers (OEMs) or their Authorized Dealers/Partners meeting the following conditions are eligible to participate in the tender: (a) The vendors, submitting the quotation, should have supplied and commissioned at least 3 nos. 60 KL capacity or higher capacity OIL SILOS (OIL STORAGE TANKS) in the past seven years from the date opening of part-I bid of this tender can participate. Or Indian Vendors who have a running Collaboration/ Joint Working arrangement with Foreign Manufacturer [meeting above specified qualifying conditions mentioned in 17.1 (a)] can also participate. Such Indian Vendors shall have to submit a back to back guarantee from their foreign partner for satisfactory performance of the offered plants and collaboration certificate/ joint venture documents to be submitted alongwith offer.	Vendor to confirm & furnish		
17.2	The following information is to be submitted by the VENDOR about the companies where such tanks have been supplied. This is required from all the VENDORS for qualification of their offer.	Vendor to Confirm		
17.2.1	Name of the customer / company where such OIL SILOS(OIL STORAGE TANK) are installed (unpriced copy of purchase order to be furnished in line with point no. 17.1)	Vendor to furnish		
17.2.2	Name, designation, complete postal address, Phone no. and E-mail address of the contact person of the customer.	Vendor to furnish		
17.2.3	Year of commissioning.	Vendor to furnish		
17.2.4	Application for which tanks have been supplied.	Vendor to furnish		
17.2.5	Performance certificate from the customer regarding satisfactory performance for minimum one year after commissioning of at least 1 no. OIL SILO (OIL STORAGE TANK) supplied in line with point no. 17.1.	Vendor to furnish		
17.3	BHEL reserves the right to verify information or visit the place of installation of customer as indicated by VENDOR. In case the information is found to be false / incorrect, the offer shall be rejected.	Vendor to note & confirm		
18.0	TERMS & CONDITIONS			
18.1	Time of Project Completion including material supply, E&C and prove-out (within 30 Weeks from date of LOI)	Vendor to Confirm		
18.2	Schedule of Supply and Erection & Commissioning shall be submitted after placement of order.	Vendor to Confirm		

<i>for civil</i> <i>11/9/19</i> Ashwini Gupta Sr. Engineer/FCX	<i>11/9/19</i> Prabhat Kalyar Dy. Mgt./TRM	<i>11/9/19</i> Satish Soni Dy. Mgt./WEX	<i>11/9/19</i> D. K. Sharma Mgt./COX	<i>11/9/19</i> Nitin Kumar Gaur Sr. Manager/WEX	<i>11/9/19</i> Dhirendra Kumar Sr. Manager/COX-TEST	<i>11/9/19</i> Pavraj Kumar Sr. Manager/WEX
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