



BHARAT HEAVY ELECTRICALS LTD.,
CORPORATE R&D DIVISION
VIKAS NAGAR, HYDERABAD-500093 (INDIA)

Enquiry No. :

Date :

28/05/2010

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SPEC.NO.

PS: HVE:10: EF:01/00

SPECIFICATION CUM COMPLIANCE CERTIFICATION FOR EPOXY FLOORING IN UHV LAB

Important

1. Vendor must submit complete information against clauses Nos 11.0 and 12.0. The offer meeting these clauses would only be processed.
2. The offer and all documents enclosed with offer should be in English language only.
3. BHEL reserves the right to verify the information submitted by the vendor. The offer with false/ incorrect/incomplete information may be rejected.
4. Vendor shall sign and stamp all sheets.
5. Offers submitted shall be valid for a period of minimum 6 (six) months from date of commercial bid.
6. Revised technical bid may be necessary should the specification require up gradation/ modification on technical scrutiny of offers.
7. Vendor must respond to all points in the specification.

ADDRESS OF THE SUPPLIER :	ADDRESS OF THE INDIAN AGENT :
TELEPHONE NOS.:	TELEPHONE NOS.:
FAX NOS.:	FAX NOS.:
CONTACT PERSON:	CONTACT PERSON:
E-MAIL ADDRESS :	E-MAIL ADDRESS :

SCOPE: Supply and installation of Epoxy Eurethane floor system in Ultra High Voltage laboratory at BHEL complying with following specifications.

Quantity: System consisting of prime coat, screed coat, and topping coat and total built up thickness of the floor should be 5mm

Serial No.	DESCRIPTION OF REQUIREMENT	DESIRED ACTION	OFFERED BY THE VENDOR	DEVIATIONS (IF ANY, ELSE PRINT NONE)	REMARKS(Only on deviations)
1.0	Purpose of epoxy flooring system: Providing and laying 4mm thick high density epoxy based heavy duty industrial screen flooring and topped with 1mm thick of self leveling compound to achieve total thickness of 5mm. This system will make a smooth surface and will be used to take load movements on air casters. The floor also offers resistance to absorb water, oil, and industrial chemicals etc. Very easy to clean the surface.	Vendor to note			
1.1	End use of the Area: Test equipment like Impulse Voltage Generator, AC test transformer, Switchgear panel, potential divider and test objects etc. will be installed at different locations. Total load of 25 tons will be distributed in the 40 X 24 meters area.	Vendor to note			
1.2	Description of the Area: The size of the test bay is 24 metres X 24 metres, the size of the assembly area is 19.7 metres X 8.9 metres and the size of the utility area is 19.7 metres X 8.9 metres. Total floor area is around 930 square meters	Vendor to note			
1.3	Temperature inside the test hall : Maximum expected ambient temperature is 45 ° C.	Vendor to note as input parameter			

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2.0	Material specifications:				
2.1	Performance properties: Flexible modified epoxy for crack bridging, impact absorption and application over substrates with high deflection or vibration. Epoxy flooring composition system shall be a resin rich composite with low viscosity, clear epoxy primer for maximum bond potential. 100% solids, top coat for final seal.	Vendor to conform			
2.2	Matrix coating system: Consists of prime coat, screed coat and topping coat	Vendor to conform			
2.3	Primary coating: The primary coat is a two component full solids coating with excellent bonding on to concrete surface. The application is by lambskin short pile roller / screeder at a spreading rate of 0.25 to 0.75 kgs per square meter. Total built up thickness should be 200 micron. Primary coat is allowed to get track free before application of heavy duty industrial screed.	Vendor to conform			
2.4	Screed coating: Base lining is done with a three component solvent free epoxy urethane urea screed to fill the post holes / dents on the base floor and level the undulation / pot holes of the base floor. The spreading rate for this is to be determined by the extent of leveling required for the base floor and thickness that is proposed to build up. The built up thickness of this screed floor shall be around 3000 microns. The screed is kept for curing upto 4 to 5 hours to get workable strength for next procedure. An intermediate coat (Base coat) is to be applied to avoid any pinholes, waviness etc.	Vendor to conform			
2.5	Top finish coat: Two component epoxy urethane urea coating which is applied by lambs wool roller / roller notched trowel. Total built up thickness shall be around 2000 microns. Dust & dirt has to be removed from the surface before starting the top coat. The colour pigment will be finalised at the time of purchase order.	Vendor to conform			

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3	Surface preparation:				
3.1	Acid itching: Acidic water is to be used to clean the floor. By means of scrubber (machine or mannual) & washing with sufficient water, all oil, grease & foreign particles are to be cleaned properly from the surface.	Vendor to conform			
3.2	Cleaning of the soaked oil : to get good bonding of the epoxy floor & durability it is essntial to check the presence of oil (if any) inside the floor. Burning procedure is to be carried out(if required) to remove the oil till the floor become bright white.	Vendor to conform			
3.3	Filling of the pot holes / cracks: The pot holes and expansion joints (if any) are to be filled with the suitable material. The pat holes are to be filled & leveled with pot filling compound. Similarly the cracks & expansion joints have to be filled with crack seal compound which is having the expansion & compression properties as per the surrounding temperature	Vendor to conform			
3.4	Self leveling compound: After final coating ,it should be kept for 24 hours for functional cure. Self leveling compound can be applied if required. to make the surface smooth and level.	Vendor to conform			
4.0	Material properties: The properties of the material like solids by volume, water absorption, hardness shore,Tensile strength, compreessive strength, linear shrinkage ,surface hardness and desity etc shold be as perrelavant standards.	Vendor to specify the standards			
5.0	Documentation: A sets of following documents (Hard Copies) in English should be supplied along with the materials.				
5.1	Test and Guarantee certificates	Vendor to conform			
5.2	Brouchers / catalogues/ literature etc.	Vendor to conform			
6.0	Fecilities provided by BHEL				
6.1	BHEL will provide required water ,electricity and storage place for materials, tools brought by supplier and civil work (if any)	Vendor to note			
7.0	Execution of work: The execution of work should be carried out under supervision of an expert engineers and technitians deputed by vendor	Vendor to conform			
8.0	Commencement of work: the The system shall executed by the vendor at the indenter's premises after clearance from the indenter. Required items for the execution within stipulated time shall be brought by vendor on the returnable basis.	Vendor to conform			
9.0	Charges for execution: Execution charges can be mentioned separately, however included within the scope of supply.	Vendor to conform			
10.0	Performance guarantee : 12 months from the date of completion of the work	Vendor to conform			
11.0	General: Sketch / photographs of the works carried out earlier shall be substantiated with technical offer including guaranteed parameters and meet all the classes mentioned in this NIT	Vendor must supply			

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12.0	Qualification Requirements: Vender should have dealt with similar work for at least three years. The supplier should give a reference list . Further, the vendor must have service personnel to support the repair works in future, as and when required, by BHEL.	Vendor to conform			