

SPECIFICATION OF MICA DUST COLLECTION SYSTEM					
SN	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED/ TO CONFIRM	OFFERED	DEVIATIONS	REMARKS
1.0	PURPOSE The mica dust collection system should be sturdy standalone MS fabricated unit housing motorised blower, filter and dust collection bags and with suitable ducts for suction of copper mixed mica dust at the point of generation during turning of commutators of DC traction machines on lathe machine.	Vendor to confirm			
1.1					
2.0	SPECIFICATIONS:-				
2.1.1	Blower motor of suitable capacity to achieve the air velocity and volume at the point of suction. Only IS:325, F-class insulation motor shall be accepted for the blower unit	Vendor to specify			
2.1.2	Guaranteed air velocity at the point of suction = 27 mtrs / sec (min)	Vendor to specify			
2.1.3	Guaranteed air flow at the point of suction = 2500 cubic meter/hr (min)	Vendor to specify			
2.1.4	Hood design at the point of suction to suit the job. The relevant details are given below- 1. Centre height of lathe = 1200mm 2. Chuck diameter = 610mm 3. Cutting OD of job = 260mm 4. Job OD = 440mm 5. Job extension from chuck face = 150mm 6. Rate of generation of copper mixed mica dust = 125gm/min	Vendor to confirm			
2.1.5	Good quality of bag filter should be used.	Vendor to confirm			
2.1.6	Suitable type of mechanical arrangement should be provided for manual shaking for release of collected dust inside the hopper	Vendor to confirm			
2.1.7	Good quality of HDPE dispensable bag of capacity not less than 75000 cubic cm to collect copper mix mica dust should be used.	Vendor to specify			
2.1.8	The noise level of complete dust collection system should not be more than 80 db.	Vendor to confirm			
2.1.9	Suitable & appropriate MS and/or PVC ducting should be provided as needed.	Vendor to confirm			
2.1.10	Compact push button type starter with MCB and over load relays should be provided at easily approachable position. Renowned makes of SIEMENS, ABB, etc. should be used..	Vendor to confirm			
2.2	MAINTENANCE:				
2.2.1	All the parts of the equipment should have easy accessibility for maintenance works, inspection and repair works without need for excessive dismantling.	Vendor to confirm			
2.3	AMBIENT CONDITIONS & SYSTEM STABILITY :				
2.3.1	Total equipment and all supplied items should work trouble free and efficiently under following operating conditions and should give specified operational accuracies. Power Supply: Voltage: 415V ± 10% Frequency: 50 Hz ± 3% No of Phase= 3, 3 wire system. (no neutral) Ambient conditions: Temperature = 5 to 50 °C Variation of 25 °C (max) Relative humidity = 95% max	Vendor to confirm			

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2.4	SPARES				
2.4.1	The supplier should recommend and offer itemwise price breakup of mechanical, consumable and electrical spares to be maintained in sufficient quantity for 2 years of trouble free operation on three shifts continuous running basis.	Vendor to specify			
2.4.2	Essential spares to be supplied along with the machine/unit. 1) 1 Set of bag filters. 2) 100 Nos of disposable dust collection bags. 3) Dust collector suction mouth (hood) - 1 no 4) Impeller for blower used - 1 no	Vendor to confirm			
2.4.3	List of bought out items to be furnished along with name & address of the supplier and tentative cost of each item.	Vendor to specify			
2.5	PAINTING:				
2.5.1	The equipment should be given two coats of red oxide primer and finished with two coats of polyurethane paint.	Vendor to specify			
2.6	PACKING:				
2.6.1	Sea worthy & rigid packing for all items of complete equipment & spares.	Vendor to confirm			
3.0	INSPECTION:				
3.1	The testing and inspection of the dust collector will be witnessed by BHEL at the supplier's works. An inspection call shall be given by the supplier at least 20 days before the date of inspection. Four copies of inspection & test certificate and guarantee certificate shall be submitted and got approved before dispatch.	Vendor to confirm			
3.2	Demonstration of guaranteed performance parameters / physical inspection of all features, assemblies, subassemblies, accessories, etc shall be done to the full satisfaction of BHEL representative.	Vendor to confirm			
4.0	ERECTION & COMMISSIONING & PROVING OF THE EQUIPMENT				
4.1	Supplier will be solely responsible for the erection, commissioning and proving the system at BHEL works.	Vendor to confirm			
4.2	Separate lump-sum charges for erection, commissioning and proving should be indicated in the offer.	Vendor to confirm			
4.3	The system shall be proved at Bhopal in all respect for accuracy and guaranteed performance during commissioning. Special tools for equipment proving, if any, shall be brought by the supplier.	Vendor to confirm			
4.4	During erection & commissioning, BHEL operators & engineers will be trained by the supplier's experts/ engineers.	Vendor to confirm			
4.5	First fill consumables should be supplied with the system	Vendor to confirm			
4.6	Compressed air, 3 phase 3 wire, no neutral 415V AC supply point, and material movement facility shall be provided by BHEL.	Vendor to confirm			
5.0	DOCUMENTATION:				
5.1	Four sets of following documents (Hard copies) in English language should be supplied along with the equipment	Vendor to confirm			

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5.2	Operating and maintenance manuals of the equipment and supplied accessories. Maintenance manual of equipment should contain System Description, Block diagram, Schematic drawings, Circuit diagrams & hardware details, Trouble shooting charts, All Assembly/ Sub Assembly Drawings shall be supplied with the part list.	Vendor to confirm			
5.3	Calibration certificates for instruments and meters from NABL accredited laboratory.	Vendor to confirm			
5.4	Inspection and Guarantee certificate of the equipment	Vendor to confirm			
6.0	GUARANTEE: The dust collection system should be guaranteed for 12 months from the date of acceptance of the equipment. Free after sales services is to be provided during the guarantee period including free replacement of defective parts.	Vendor to confirm			
6.1					
7.0	GENERAL: THE SUPPLIER SHOULD FURNISH THE FOLLOWING INFORMATION ALONG WITH THE OFFER				
7.1	Equipment model (blower motor, starter, etc) :	Vendor to specify			
7.2	Total connected load (KVA) :	Vendor to specify			
7.3	Total weight of the system	Vendor to specify			
7.4	Floor area required (Length, Width, Height) for complete equipment & accessories	Vendor to specify			
7.5	Air velocity guaranteed at the point of suction	Vendor to specify			
7.6	Air flow guaranteed at the point of suction	Vendor to specify			
7.7	Detailed catalogues, sketch/ photographs and technical literature of the equipment and accessories/ attachments. Foundation requirements, if any, must be specified.	Vendor to specify			
7.8	General arrangement drawing of the equipment showing the constructional features, capacities of the individual components, duct sizes, etc	Vendor to specify			
7.9	List of standard accessories	Vendor to specify			
7.10	Optional accessories, consumables and supporting facilities.	Vendor to specify			
8.0	QUALIFYING CONDITION: Only makes of renowned companies who have supplied at least 2 dust collector of similar or higher capacity in the past ten years and such equipment is presently working satisfactorily for more than three years after commissioning may be quoted in the tender. The following information is to be submitted by the vendor about the companies where similar equipment have been supplied.	Vendor to specify			
8.1					
8.2	Name of the customer / company where similar equipment is installed/ supplied. (Copy of purchase order should be attached).	Vendor to specify			
8.3	Complete postal address of the customer.	Vendor to specify			
8.4	Year of commissioning.	Vendor to specify			
8.5	Name and designation of the contact person of the customer.	Vendor to specify			
8.6	Phone, FAX no. and email address of the contact person of the customer.	Vendor to specify			
8.7	Performance certificate from the customers regarding satisfactory performance of equipment supplied to them .	Vendor to specify			
8.8	On verification, if the information furnished above is found false / incorrect, the offer shall be rejected.	Vendor to confirm			