

BHARAT HEAVY ELECTRICALS LIMITED, JHANSI				
	Specification No.		9991	
	Item No.		SP/MISC/9991/1-3	
	Location		BAY -6	
	Quantity		1 SET. (03 NOS.)	
<b>NOTE :</b>				
1	VENDOR must submit complete information against clause No.11.0 The offer meeting this clause would only be processed.			
2	The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted 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 documents enclosed with offer should be in English language only.			
<b>SCOPE :</b>				
DESIGN,SUPPLY, INSTALLATION, TESTING, ERECTION AND COMMISSIONING OF AIR WASHER UNITS 70000 CFM WITH SUITABLE DUCTING.				
S.N O.	DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / CONFIRME D BY	OFFERED	DEVIATIONS
1	<b>SCOPE</b>			
1.1	This specification governs the quality requirements of supply & commissioning of air washer units capacity 70,000 CFM With suitable ducting. IN BAY - 6	vender to confirm		
2	<b>REQUIREMENT</b>			
2.1	DESIGN, SUPPLY, INSTALLATION , TESTING AND COMMISSIONING OF AIR WASHER UNITS CAPACITY 70,000 CFM.in bay-6 shop size 144mtr(L) x 18 mtr(W) x11mtr(H)	vender to confirm		
2.2	<b>QUANTITY - 03 NO</b>	vender to confirm		
3	<b>SPECIFICATION</b>			
3.1	<b>AIR WASHER UNITS 70000 CFM.</b>			
	Modular type Air washer units 70000 CFM/ 65 mm static pressure, water spray nozzles & piping network, cellulose cooling pads 7 mm flute, stainless steel 14/16 SWG water take with anti corrosive coating, intake louvre with bird screen , fan outlet damper, 50 mm thick washable pre- filter 10 micron, G.I eliminators, double skin panels, blower motor with drive, inspection window etc.  capacity of the water tank to be specified	vender to confirm & specify the capacity		
3.2	<b>AIR WASHER PANEL</b>			
	double skin panels shall be 40 mm thick, made of Min 22 SWG Pre- plasticized and pre - painted with pvc Guard, gss sheet on outside and Min 22 swg inside with polyurethane fome insulation insulation of density not less than 38 kg/cu.m injected in between injection machine these panels shell be bolted from inside screwed from outside on the framework with rubber gasket in between to the make joints airtight etc (G.I Sheet make:-Sail /Tata/jindal/ispac/JSW only)	vender to confirm & specify the make		
3.3	<b>Centrifugal Blower &amp; Motor</b>			
	AMCA Certified double centrifugal blower 30 HP 3 Phase electric motor through belt with adjustable motor frame , belt guard. Belts shell be of the oil resistant type. the number of belts shell be not less than two etc. ( Blower Make;- AMCA CERTIFIED) (Make Of Motor- SIEMENS, GE, BHARAT BIJLEE, KIRLOSKER ONLY)	vender to confirm & specify the make		
3.4	<b>Centrifugal Blower Housing</b>			



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	Housing shall be of 14/16 swg. M.S/G.I sheet in welded construction , 1.2 mm galvanised weir mesh inlet guard.. (G.I Sheet make:-Sail /Tata/jindal/ispata/JSW only)	vender to confirm & specify the make		
3.5	<b>Pre-filter 10 micron</b>			
	Supply installation testing of cleanable metallic viscous type pre filter made out of aluminium wire mesh 50mm thick, s <b>Make:- Reliance, Refcon, Aerotech, Sycon)</b>	vender to confirm & specify the make		
3.5	<b>WATER SPRAY PUMP</b>			
	Supply installation testing and commissioning of water spray 3.0 HP centrifugal pump one main and one standby ( <b>Make:- Kirloskar,Siemens,Bhel)</b>	vender to confirm		
3.6	<b>WATER SPRAY PIPE, VALVE, FITTING</b>			
	water spray piping with connected to the 3.0 HP pumps one main and one standby pipe lines, fittings with butterfly, y-strainer, nrv, float vale, gauge, complete with wilding, nipple, socket, elbow, bend, flanges, etc. primer, animal paint etc. complete work as per site requirement. ( <b>Make: Castle,sir, H guru, fiebig)</b>	vender to confirm & specify the make		
3.7	<b>WATER SPRAY M.S. PIPING</b>			
	water spray pump and drain pipe m.s. 65 mm B, class piping to be connected with one main and one standby pump, butterfly, y-strainer, nrv, float vale, gauge, complete with wilding, cutting,neppal, socket, elbow, bend etc. primer, animal paint complete work as per site requirement ( <b>Make:- JSW,Jindal,Tata Sail)</b>	vender to confirm & specify the make		
3.8	<b>GI DUCTING</b>			
	air washer Ducts made out of G.I.sheets FOR SUPPLY AIR Complete job as per detailed drawings including suspension from RCC ceiling with MS hangers, MS angle steel rawl flanges, fasteners, etc.Option to inter connect the ducting of 2/3 blowers as per choice in case of failure of any blower. (G.I Sheet make:-Sail /Tata/jindal/ispata/JSW only) & gauge 18,20 ,22, 24 only	vender to confirm & specify the make		
3.9	<b>Supply installation testing of Grilles :</b>			
	Adjustable blade type ms Powder coated Supply air grilles. M.S Volume Control Dampers for Supply Duct. ( <b>Make:- Ravistar, survex,Tristar,Carryaire only)</b>	vender to confirm & specify the make		
3.10	<b>Electrical Power cable for Air washer Motor</b>			
	Supply installation, testing and termination of electrical power cable for water spray pump pvc insulated pve sheathed steel armoured multicore AL. conductor of size 4 core X 10 mm with 8.0 SWG. G.I wire as per requirement. ( <b>Make:- Finolex, Incab, Havells only )</b>	vender to confirm & specify the make		
3.11	<b>Electrical Power cable for water spray pump</b>			
	Supply installation, testing and termination of electrical power cable for water spray pump pvc insulated pve sheathed steel armoured multicore AL. conductor of size 4 core X 10 mm with 8.0 SWG. G.I wire as per requirement. ( <b>Make;- finolex, incab, Havells only)</b>	vender to confirm & specify the make		
3.12	<b>Electrical Panel.</b>			

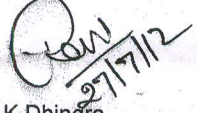
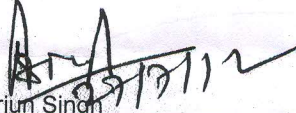
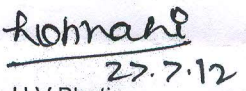
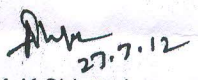
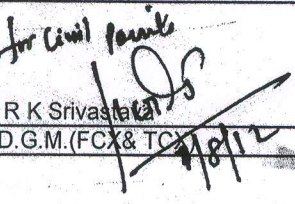
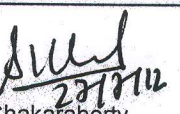



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	Supply Installation of electrical panel made out of 14/16 SWG CRCA sheet, instrumentation section of the following INCOMING: 1 No. 200 Ampere MCCB, Bus bars, 3 nos. indication Lampe, volt & ampere metering device with 30 HP Air washer motor, 2 X 3 HP pump motor starter, relay and control device etc. as per requirement of system. (Make:- L & T / SIEMENS/ GE only )	vender to confirm & specify the make		
<b>4</b>	<b>CIVIL WORK</b>			
	All masonry work room or shed, construction of foundation for equipment will be in the scope of bhel.supplier has to provide complete civil drawing well in time before delivery.(15 days after the date of p.o.)	vender to confirm		
<b>5</b>	<b>ELECTRICAL/WATER SUPPLY</b>			
	Electrical & water supply will be provide by bhel at the possible nearest point	vender to confirm		
<b>6</b>	<b>PACKING:</b>			
	All components shall be suitably packed so that the material reaches BHEL without any damage/loss in transit.	vender to confirm		
<b>7.0</b>	<b>MISCELLANEOUS :</b>			
i	One no 30 HP 3 Phase electric motor suitable for blower is to be supplied (same make, model & capacity used in blower) as a spare along with supply.	vender to confirm		
ii	Ducting work will be done according to drawing which is approved by bhel,	vender to confirm		
iii	Vender has to prove the CFM of each unit on the time of commissioning at bhel jhansi. Instrumente used for proving the cfm will be arranged by vender.	vender to confirm		
iv	All material used should be of the best of their respective kinds and should of the appropriate I.S. Specification & all workman ship should be of best quality.	vender to confirm		
v	First fill oil, grease etc. for the commissioning of the air washer shall be provided (if applicable)by the supplier.All the system in the condition of ready to use with all necessary accessories.	vender to confirm		
vi	List of bought out items should be furnished with names of makers and complete literature about the items should be supplied.	vender to confirm		
vii	Not with standing any thing the details in this specification, if any thing else is required for its functioning the same shall be specially brought and included in offer	vender to confirm		
viii	submit the offer with full detailed working drawing of system .	vender to submit		
<b>8</b>	<b>PAINTING :</b>			
	The structural steel work & frame should be given one coat of suitable primer with 25 micron of DFT (Dry film Thickness) and 48 hours of compalsory curing after painting. Final paint should be done with two coats of gray synthetic enamel paint each with a DFT of 25 microns and intermittent curing of minimum 16 hours..	vender to confirm		
<b>9</b>	<b>ERECTION AND COMMISSIONING</b>			
	The air washer is to be erected by the supplier at site with their own labour, tools and tackles, winch. The air washe is to be commissioned and tested before handing over.	vender to confirm		
<b>10</b>	<b>GUARANTEE</b>			
	Guarantee regarding workmanship, motors, material used, design and performance should be provided by the party for a period of 24 months from the date of successful commissioning of the complete instalasion..	vender to confirm		
<b>11.0</b>	<b>QUALIFYING CONDITIONS</b>			



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i	A. Only those vendor who have supplied/installed at least 05 Nos. air washer unit of same capacity or more capacity in the past five year and such air washer units presently working satisfactorily for more then one year after commssioning(from the date of opening of tender) should quote. The following information is to be submitted by the Vendor about the institute/ companies where similar air washer have been supplied. This is required from all the vendors for qualification of their offer.	vender to submit		
ii	The following information is to be submitted by the vendor about the company/intitution where same capacity or more capacity air washe have been supplied. This is required from all the vendor for qualification of there offer.	vender to submit		
iii	Name & postal address,phone, FAX no. , email address and designation of the contact person of the customer / company along with Purchase Order no. and Purchase Order (Copy of Purchase Order should be furnished).	vender to submit		
iv	Performance certificate from the customers, on their letter head, regarding satisfactory performance of machine supplied to them.	vender to submit		
12	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.	vender to confirm		

 Y.K.Dhingra Sr.Eng(WEX)	 Arjun Singh Sr. Mgr(WEX)	 H.V.Bhatia Sr. Mgr(TRM)	 A.K.Shivpuri DGM(WEX)
 R K Srivastava D.G.M.(FC&TC)	 S.J.Chakaraborty A.G.M(WEX)		
 CHAIRMAN			