

ANNEXURE
Technical Specification for Heatless Desiccant Type Compressed Air Dryer

1	Type of dryer	Heatless Desiccant Type Compressed Air Dryer		
2	Quantity	<p>One set of complete equipment which consists of</p> <ul style="list-style-type: none"> a) Two number desiccant charge filled in Vessels b) One number pre-filter with auto drain c) One number after filter with manual drain d) One number activated carbon filter with manual drain e) Safety valve for the dryer f) Solenoid valves / diaphragm control valves for the automatic operation of the system g) Two numbers of pressure gauges (one on each desiccant charged vessel) h) One number of online air dryness indicated (color change type) i) One number control panel 		
3	Fluid handled	Air		
4	Drier specification (Rated)	At inlet	At outlet	
4 (a)	Flow rate	100 m ³ /hr	90 m ³ /hr	
4 (b)	Pressure	5 kg/cm ² to 7 kg/cm ² (g)	4.8 kg/cm ² to 6.8 kg/cm ² (g)	
4 (c)	Temperature	30 °C to 50 °C	Ambient temperature	
4 (d)	Dew point at line Pr.	Saturated at inlet temperature	-40 °C at atm.pressure	
5	Design pressure	8 kg/cm ²		
6	Desiccant Type	Activated alumina		
7	Acceptable pressure drop	0.20 kg/cm ² (Max)		
8	Line size	25 NB		
9	Mode of Dryer operation	Automatic through control panel		
10	Dimension (LxWxH)	1000mm X 1000mm X 2000mm (Max)		
11	Dryer cycle	Cycle time : 10 min		
		Drying time : 5 min		
		Regeneration time : 5 min		
12	Filter	Activated Carbon Filter	Pre Filter	After Filter
12 (a)	Type	Granular activated carbon	Ceramic candle	Polyester cloth
12 (b)	Efficiency	99.99 %	99.99 %	99.99 %
12 (c)	Particle size	< 1 PPB	5 micron	5 micron
12 (d)	Drain type	Manual	Auto	Manual
12 (e)	Quantity	One	One	One
13	Electrical power supply	Single phase, 220 Volts and 50 Hz		
14	Code and standard	<p>ASME SEC-VIII Div-I/ IS 2825 : pressure vessel design and construction, ASME B31.3 : process piping, ASME/ANSI B16.5 : For flanges dimension, ISO 7183 : For compressed air dryer testing ISO 8573-1 : For compressed air contamination and purity class IS 2825 : Code of unfired pressure vessel IS 2062 : Hot rolled medium and high tensile structural steel IS 4049 : Dish end of tank and pressure vessel IS 1239 : Steel pipe tube and tube fittings</p>		
16	Special features	The complete equipment shall be robust, durable and reliable with very less		

		maintenance.
17	Eligibility criteria	<p>Vendors who have supplied similar items to DAE / any govt. organization, shall furnish the details of similar items supplied, along with P.O. number & date, address with contact telephone number. However, qualification of vendors shall be based on the following criteria:</p> <ol style="list-style-type: none"> a) The vendor shall be an original manufacturer or authorized dealer for heatless desiccant type compressed air dryer. The offer of dealer would be considered only if valid authorization letters issued by the manufacturer and the same is submitted along with the offer. b) The vendor shall have suitable facilities for conducting tests during inspection of this equipment. Details pertaining to the availability of such facilities shall be submitted along with the offer.
18	Terms and conditions	<ol style="list-style-type: none"> 1. Before fabrication, a detailed drawing shall be provided by the supplier and it shall be approved by the department. Any minor modifications specified by the department shall be incorporated. 2. The supplier shall provide 1 set of detailed manuals covering the design, drawing, material test certificates from government approved lab, description of parts, salient features, operation and maintenance procedures of air dryer. 3. For arriving at the lowest cost, the total cost of equipment only will be considered.
19	Acceptance criteria	<p>FAT: Before delivery, the vendor shall arrange for inspection & testing of offered items at their site. During inspection & testing, the offered items shall meet all technical parameters, dimensions, workmanship, performance and standards mentioned in the technical specification. Properly calibrated tools and instruments required for the inspection, testing and measurement shall be provided by the vendor at their workshop.</p> <ol style="list-style-type: none"> 1. The finished pressure vessel shall, in presence of purchaser or his representative pass satisfactorily pneumatic and hydraulic test. 2. A visual inspection of compressed air dryer, valves and associated components will be carried out. 3. Proper cycle operation & valve operation will be checked & they shall meet the required specifications. 4. The air dryer performance test shall be carried out at the factory in presence of the department engineer/representative. Performance test shall be carried out for a period of 8 continuous hrs at the rated flow rate. The dryer unit shall deliver dry air at the specified atmospheric dew point of -40°C throughout the 8 hrs performance test. 5. All valves shall be leak tested under a test pressure of 12.5 kg/cm². 6. The compressed air dryer shall be free from any external defects. 7. Test certificates of valves and other parts shall be provided at the time of pre-dispatch inspection. 8. Material test certificate for the material used in the fabrication of vessel, pre-filter and after filter and piping shall be provided at the time of pre-dispatch inspection. <p>SAT: The vendor shall install and commission all the offered items at purchaser's site and demonstrate the performance as per technical specification.</p>

		<ol style="list-style-type: none"> 1. The air dryer shall achieve the specified dew point at rated air flow rate. 2. Proper cycle operation & valve operation will be checked & they shall meet the required specifications. 3. There shall be no leaks from the valves during the operation of compressed air dryer.
20	Installation and commissioning	<ol style="list-style-type: none"> 1. Installation and commissioning of the complete system is in vendor's scope and shall be carried out by skilled team by vendor. 2. All the installation and commissioning work shall be carried out at purchaser's site and it shall strictly comply with tender technical specification. 3. Work shall be considered completed only after the demonstration of the performance of dryer.
