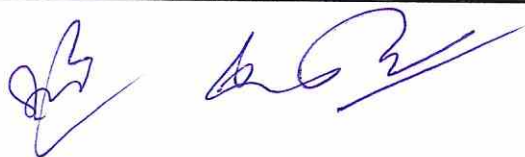


Schedule of work for HVAC system repair works for ESI Diagnostic Centre at Jeedimetla

S.No	DSR/ SSR/ MR	Items	Qty	Unit
	DSR 16.7.1	Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications. BUTTERFLY VALVE (MANUAL) with C I body SS Disc, Nitrile Rubber Seal & O- Ring PN 16 pressure rating for chilled water/hot eater circulation as specified.		
1	DSR 16.7.1.1	200mm dia	4	Each
2	DSR 16.7.1.2	150mm dia	1	Each
3	DSR 16.8	Providing and fixing in position the industrial type pressure gauges with gun metal/ brass valves complete as required.	20	Each
4	DSR 16.9	Providing & fixing in position the mercury in glass industrial type thermometers.	20	Each
	DSR 16.11.1	Supplying, fixing, testing and commissioning of following valves, gauges and strainers for condenser water circulation as per specifications. BUTTERFLY VALVE (MANUAL) with C I body SS disc nitrile sheet & O - ring & PN 16 pressure rating as specified.		
5	DSR 16.11.1.1	200mm dia.	1	Each
6	DSR 16.11.1.2	150mm dia.	6	Each
7	DSR 16.11.1.6	65mm dia.	5	Each
8	Civil DSR Vol-II 13.52.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel works	137	Sqm
9	Civil DSR Vol-II 13.91	Removing rust or dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary-repairs to scratches etc. complete.	137	Sqm



10	Civil DSR Vol-II 13.71	Lettering with black Japan paint of approved brand and manufacture. (On Cooling tower and Condenser pipelines)	100	per letter per 5cm height
11	Civil DSR Vol-II 13.61.1	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade: Two or more coats on new work. (Cooling tower external surface area)	143	Sqm
12	NDSR	Supply and installation of following components in existing 250 TR Delta Make induced draft cross flow Cooling Towers Complete with required numbers and appropriate sizes for each cooling tower as required including removing the existing fills and eliminators. A) Honeycomb virgin PVC fills B) Virgin PVC Drift eliminators C) Fill Hanger Supports, and retainer Caps D) Nuts, bolts, Washers, washer locks, tubes, E) Supporting G.I Pipe, Beams, PVC Tubes, F) Water spray nozzles/ deflectors, G) Fixing new Air inlet louvers.	2	per cooling tower
13	NDSR	Disposal of removed PVC fills, PVC drift eliminator, supports, caps, nozzles, fan assembly, filters etc., as per TGPCB/ CPCB norms. The agency shall provide documentary evidence for payment.	1	Job
	NDSR	Supplying and fixing of prefilters EU4/ MERV-8 (Washable type) having Aluminium frame with GI supporting rods and Non-Woven synthetic supported by HDPE mesh on the other side, Efficiency 90% down to 10-micron particle size, F.P.D 20 mm WG. following sizes etc as required. The existing AHU/CSU filter frame shall be made good to fit the new filters as required in complete.		
14		600mm x 600mm x 50mm 2000CFM	38	Each
15		300mm x 600mm x 50mm 1000CFM	15	Each
16		500mm x 600mm x 50mm 1615CFM	2	Each
17	NDSR	Supplying and applying of PVC louvers on air inlet side of the cooling tower with minimum 2mm thickness PVC as required including PVC frame for fixing the louvers in complete.	153	Sqft
18	NDSR	Supplying and applying of FRP resin layering/ coating on internal and external surface of the cooling tower sump as required including cleaning of cooling tower sump with chemicals.	408	Sqft

19	NDSR	Supplying, Installing, Testing and Commissioning of Suitable 3HP SQ cage induction motor, class 'S1', TEFC, IE2, rated speed 750 RPM, suitable for operation on 415Volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, with all weather protective cover, 132S frame size with Class-'F' insulation, conforming to IS-325 for cooling tower fan and balancing the blades for obtaining optimal performance etc., as required. Makes of Motors: Siemens/ ABB/ Kirloskar	4	Each
20	NDSR	Supplying, Installing, Testing and Commissioning of new aluminium hub, gear box with blade set for motor frame size: 132S and fan blade size 1400mm/35/4 including removing the old fan set and hub with the help of puller/ Hydraulic press, Drilling and refinishing the shaft, mounting brackets etc. complete as required.	4	Set
21	NDSR	supplying and applying of FRP resin coating on condenser water pipeline excluding valves as required. The pipeline shall be cleaned thoroughly using emery paper before start of FRP coating. The existing valves shall be painted with rust proof paint.	702	Sq.ft
22	NDSR	Repairing of 2x11 kW VFD panel of secondary pumps replacment of defetive part including credit/ buy back of old dismantle material and configuration of the pump panel by re-adjusting the wiring for optimal performance including removing/replacing and re-fixing the MCB, din rail channel, cables and relay etc., in the existing panel, providing cable end termination in the starter panel and configuring the VFD for automatic operation through existing starter panel etc., complete as required at site. VFD panel make Xylem 2x11kW VFD panel.	1	Job
	NDSR	Supplying and replacing of pipe flange of MS 'C' class by removing the existing rusted flange and welding of new pipe flange along with bolts, nuts, washers as required in complete and painting with rust proof paint.		
23		250mm dia	20	Each
24		200mm dia	20	Each
25		150mm dia	32	Each
26		65mm dia	6	Each

27	NDSR	Supplying, fixing, testing and commissioning of BALL FLOAT VALVE with brass body, PN 16 pressure rating for supply line adequately supported as per specifications confirming to BIS code and duly ISI marked. 40mm dia.	4	Each
	NDSR	Supplying and replacing the retainer rings and rubber expansion joints on HVAC water pipe line system, the Retainer rings shall install behind and against the inner face of each flange, all holes and dimensions are provided according to the rubber expansion joint, MOC: Galvanized carbon steel, Control rods (tie rods) along with triangular control rod plate, Washers, Nuts, bolts, etc. Removing the existing rusted flange and welding of new pipe flange (including supply of flange)		
28		200mm dia	6	Set
29		150mm dia	6	Set

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