

SCOPE OF WORK

RENOVATION AND MAINTENANCE OF FIRE FIGHTING AND FIRE DETECTION & ALARM SYSTEM IN COLLEGE COMPLEX OF ACMS

S No.	Material Description	AU	Qty	Amount
1	<u>Fire Pumps and Accessories</u> Providing and fixing horizontal single/ multistage pump suitable for operation on 415 volts+-10%, 3 phase, 50 HZ+- 5% AC supply. The pumps shall be made of CI casing, bronze impeller (hard finished and dynamically balanced) and stainless steel (410) shaft with mechanical seal capable of delivering suitable capacity and connected by a flexible coupling to a totally enclosed fan cooled (TEFC) induction motor as per IEC standard. Both pump and motor mounted on common MS structural base plate and rubber neoprene lined vibration eliminators motor with all accessories complete as per specifications. (Pump shall be capable of furnishing not less than 150% of rated capacity at a head of not less than 65% of the rated head. The shut off head shall not exceed 120% of rated head).			
	<u>Sprinkler Pumps (Motor Driven)</u> Type : End suction Capacity : 2850 LPM Head : 70 M Motor RPM : 2900 HP : 60 HP	Nos	01	
2	Providing and fixing vertical inline pumps suitable for operation on 415 volt+-10%, 3 phase, 50 HZ+- 5% AC Supply. The pumps shall be made of SS (304) casing, SS (304) impeller and stainless steel (304) shafts with mechanical seal connected to a totally enclosed fan cooled (TEFC) induction motor as per IEC standard. Both pump and motor mounted on a common base plate with coupling guard suitable vibration eliminator pads of approved design including all other accessories complete as per specifications. Fire jockey Pumps Type : Vertical Capacity : 180 LPM Head : 70 M Motor RMP : 2900 HP : 12.5 - 15 HP	Nos	01	
3	Providing and fixing cast iron swing type with natural rubber flap non return valves (Flanged) conforming to IS: 5312-1984 (Part-I) of PN 1.6 pressure rating including washer, nuts bolts, 1.5 mm thick compressed asbestos gasket companion flanges as per table "E" complete in all respects.			
	100 mm / 4 inches	Nos	01	
	150 mm / 6 inches	Nos	01	
4	Providing and fixing cast iron water type butterfly valves of CI/SS (304) disc, Nitrile/ EPDM rubber lining of PN 1.6 pressure rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects	Nos		
	100 mm / 4 inches	Nos	02	
	150 mm / 6 inches	Nos	02	
5	Supply and installation of Pressure Gauge 150 mm dia of suitable range for pump sets with Ball valves, siphon, fitting like unions/ colors/ reducers etc.	Nos	02	
6.	Supply and fixing of pressure switches for main pumps, including necessary wiring upto control panel and ball valves	Nos	03	

S No.	Material Description	AU	Qty	Amount
7	Supply, lying, testing & commissioning of C class heavy duty MS pipe conforming to IS 3589/1239 for hydrant and sprinkler applications including fitting like elbows tees flanges, tapers nuts bolts, gasket etc. fixing the pipe on the wall/ ceiling with suitable clamps and including painting of two coats of Red Oxide, painting with two or more coats of synthetic enamel paint of post office red shade complete as required			
	100 mm / 4 inches	Mtr	12	
	150 mm / 6 inches	Mtr	20	
	250 mm / 10 inches	Mtr	6	
8	Providing fixing testing and installation of structural steel including 8 mm thick MS plate, ISMC, ISA, M12, 100 Long Anchor Fasteners with one coat of RED LEAD primer and two coat of Black paint	Kg	120 (Approx)	
9	Electrical Panel Fire Fighting components and accessories shall be mounted within each control panel. Incoming 1 No. of 400 Amp TPN MCCB of 25 KA Breaking capacity with heavy duty solid neutral link with on/Off indicating Lamps with 2A SP MCCB back up Bus Bars 600 Amp 25 KA TPN color coded, heat shrinkable PVC sleeved Aluminum bus bar of suitable length Meters for incoming	Nos	01	
	1 No Voltmeter of range0-500 volt, selector switch and backup 2 A Sp MCB back up	Nos	01	
	1 No Ammeter of range0-600 A, Selector switch and 3 Nos of associated CT's of ratio 600/5, CL-1 5VA	Nos	01	
	1 Set of phase indicating lamps with 2A SP MCB back-up	Nos	01	
	1 Set of audible hooter with red blinking lamp including provision for wiring up to the pressure switch.	Nos	01	
	Outgoing			
	1 Nos of 125A TPN MCCB 25 kA breaking capacity (for 1 Nos. Soft Starter Feeder – main sprinkler pump) with on/Off/Trip indication with 2A SP MCB back up. Ammeter with 250/5A CL-1, 5VA	Nos	01	
	Star/Delta starrer with 70 A Contractors with 1 No & 1 NC auxiliary contacts.	Nos	01	
	Over load relay of rating 30-50 A within built single phasing preventer. S/D Timer	Nos	01	
	Ammeter of range 0-100 A & 1 Nos of associated CT's rating 100/5A, CL-1, 5VA	Nos	01	
	1 Set of on/Off/Trip indicating lamps, Start/Stop push buttons with remote control start/stop arrangement, Auto/manual/Off selector switch.	Nos	01	
	1 No 40 A TPN MCCB of 10 KA breaking capacity for 7 HP motor starter along with the following for each feeder :- For jockey Pump for Fire Sprinkler	Nos	01	
	DOL starter with 25 A Contactors with 1 No & 1 NC auxiliary contacts.	Nos	01	
	Over load relay of rating 9-15 A within built single phasing preventer.	Nos	01	
1 No Ammeter of range 0-40A with 1 No CT, 40/5A, CL-1, 5VA	Nos	01		
10	Service and maintenance of Terrace pump and Automation	Nos	01	
11	Providing and fixing 150 mm dia installation control valve complete with all accessories i.e drain valve, pressure gauge etc.	Nos	01	
12	150 mm underground Ring line pipe repairing work (2 ft pipe, wrapping coating digging and filling).	Nos	01	
13	Making cement concrete foundation of 1:2:4 ratio duly plastered suitable for main sprinkler & jockey fire pump set including vibration isolation by providing cushy foot mount pads as necessary, foundation bolts, brackets, clamps, fixtures, grouting etc, in accordance with manufacturers design etc as per specifications complete as required	Nos	02	

Fire Alarm System

S No.	Material Description	AU	Unit	Amount
1	Reprogramming/ Software and Repairing, testing of 5 loop addressable fire alarm panel with resolution of battery backup, loop power module, wiring troubles and device power repairs in Academic Block	Nos	02	
2	Reprogramming/ Software and Repairing, testing of 1 loop addressable fire alarm panel with resolution of battery backup, loop power module, wiring troubles and device power repairs in Adm Block	Nos	01	
3	Repairing, rectification / testing and connection of repeater panel in main security room of complex to the indl building panels. So as repeat the main building panel signals in the main security room.	Nos	03	
4	Supply, installation of addressable smoke detector	Nos	40	
5	Supply, installation of addressable heat detector	Nos	10	
6	Supply, installation of addressable manual call point	Nos	10	
7	Supply, installation of addressable sounder	Nos	10	
8	Supply, installation of addressable control module	Nos	08	
9	Supply, installation of copper wiring 2x1.5mm	Mtr	100	
10	Supply, installation of 25mm PVC conduit with accessories	Mtr	50	
11	Supply, installation of 2x1.5mm armoured cable	Mtr	20	



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