Sr No	Description	Qty	Unit	Rate	Total
A	PUMP HOUSE EQUIPMENTS		I		
1.1	Supply, installation, testing & commissioning of Multi-stage Multi-outlet electric driven Hydrant Pump suitable for automatic operation consisting of the following:(Make:Kirloskar/Best and Crompton/ Mather & Platt)				
a)	Horizontal end suction centrifugal pump complete with mechanical seal and including necessary arrangement for testing of pump				
b)	Squirrel cage induction motor suitable for 415 V, 50 Hz, AC supply of suitable rating for the above pump with synchronous speed T.E.F.C. motor conforming to IP:55 and flexible coupling and coupling guard with the pump.				
c)	Common bed plate of fabricated mild steel channel or cast iron type.				
d)	Suitable reinforced cement concrete pump foundation including cushy foot mounting, foundation bolts, washers as required.				
	The pump shall be of the following specifications:				
	Discharge - 2850 lpm Head - 111 m/155 m				
	No. of stage preferred - Single / Double				
	Material of construction				
	a) Impeller - Bronze				
	b) Casing - C.I.				
	c) Shaft & Shaft Sleeve - SS-410				
	d) Bearing - Grease Lubicated				
	e) Seal & Make - Mechanical Type of pump - End suction	1	Nos		
1.2	Supply, installation, testing & commissioning of Multi-stage Multi-outlet electric driven Sprinkler Pump suitable for automatic operation consisting of the following: (Make:Kirloskar/Best and Crompton/Mather & Platt)	1	NOS		
	Horizontal end suction centrifugal pump complete with mechanical seal and including necessary arrangement for testing of pump				
	Squirrel cage induction motor suitable for 415 V, 50 Hz, AC supply of suitable rating for the above pump with synchronous speed				
	Common bed plate of fabricated mild steel channel or cast iron type.				
	Suitable reinforced cement concrete pump foundation including cushy foot mounting, foundation bolts, washers as required.				
	The pump shall be of the following specifications:				
	Discharge - 2850 lpm Head - 111m/155 m				
	No. of stage preferred - Single / Double				
	Material of construction				
	a) Impeller - Bronze				
	b) Casing - C.I.				
	c) Shaft & Shaft Sleeve - SS-410				
	d) Bearing - Grease Lubicated e) Seal & Make - Mechanical				
	e) Seal & Make - Mechanical Type of pump - End suction	1	Nos		
	Type of pump - Life section	1	1103		
1.3	Supply, installation, testing & commissioning of Multi-stage Multi-outlet electric driven Jockey Pump suitable for automatic operation consisting of the following: (Make:Kirloskar/Best and Crompton/ Mather & Platt) (sprinkler & hydrant)				
a)	Horizontal end suction centrifugal pump complete with mechanical seal and including necessary arrangement for testing of pump.				
b)	Induction motor suitable for 415 V, 50 Hz, AC supply of suitable rating for the above pump with synchronous speed T.E.F.C. motor conforming to IP:55 and flexible coupling and coupling guard with the pump.				
c)	Common bed plate of fabricated mild steel channel or cast iron type.				
d)	Suitable reinforced cement concrete pump foundation including cushy foot mounting, foundation bolts, washers as required. The pump shall be of the following specifications:				
	Discharge - 240 lpm				
	Head - 111m/155 m				
	No. of stage preferred - Single / Double				
	Mover - Electric Motor Driven			-	
	Material of construction				
	a) Impeller - Bronze b) Casing - C.I.				
	b) Casing - C.I. c) Shaft & Shaft Sleeve - SS-410				
	d) Bearing - Grease Lubicated				
	e) Seal & Make - Mechanical				
	Type of pump - End suction	2	Nos		
1.4	Supplying, installing, testing & commissioning of Multi-stage Multi-outlet Diesel Engine driven Stand-by pump suitable for automatic/manual operations consisting of the following:				
a)	Horizontal end suction centrifugal fire pump complete with proper connection to suction and delivery line, and including bypass arrangement				
a)	Fronzontal end suction centritigal fire pump complete with proper connection to suction and delivery line, and including bypass arrangement for testing of pumps. mechanical seal shall be included for stuffing box. Pump shall be capable of furnishing not less than 150% of rated capacity at a head not less than 65% of the rated head. The shut off head shall				
b)	not exceed 120% of rated head. Radiator cooled diesel engine of required BHP or as per manufacturer complete with standard accessories & suitable cooling system as				
9)	described in specifications. Common base plate for mounting pump & engine of required strength manufactured out of M.S. channels as per manufacture's		<u> </u>		
c)	Common base plate for mounting pump & engine of required strength manufactured out of M.S. channels as per manufactures recommendation with heavy duty Anti Vibration pads as per requirement. Vendors should also provide 25 mm rubber pads below mounting				

Sr No	Description	Qty	Unit	Rate	Total
d)	Flexible Coupling & coupling guard for direct coupling of engine & pump.				
e)	Suitable reinforced cement concrete pump foundations as per manufacturer design including foundation bolts, washer as required.				
f)	1 No. 3 hours capacity day oil storage tank (Approx. 300 litre) welded steel construction conforming to IS: 2522 fabricated from 3 mm thick M.S. plates. Tank shall be provided with inlet, outlet, overflow, air vent, drain connections, filling connection & magnetic level indicator				
	showing the level of fuel in the tank. Tank shall be mounted on a suitable steel structure (Painted with 2 coats of red oxide paint). Tank shall be				
g)	24 volts 180 AH lead acid battery (12 volts - 4 Nos) with boost/Trickle charger for starting the engine automatically complete as required.				
	Technical Parameter of Diesel Engine driven pump:				
	Discharge - 2850 lpm				
	Head - 111 m/ 155 m				
	Material of construction				
	a) Impeller - Bronze				
	b) Casing - C.I.				
	c) Shaft & Shaft Sleeve - SS-410				
	d) Bearing - Grease Lubicated				-
	e) Seal & Make - Mechanical				•
	Type of pump - End suction	1	Nos		
1.5	Providing and fixing air vessel for fire pumps as per following specifications:				
	Diameter - 200mm	2	Nos		
1.9	Providing, installation, testing, & commissioning of pressure switches for Hydrant, Sprinkler, Standby and Jockey pump & Booster Pump including necessary wiring upto control panel & other materials.	11	Nos		
	TOTAL OF FIRE FIGHTING PUMPS CARRIED OVER TO SUMMARY				
2.0	SUCTION AND DELIVERY PIPES AND VALVES FOR FIRE FIGHTING PUMPS				
2.1	Supplying, installation testing and commissioning of the following 'C' class GI pipe as per IS1239 with welded / flanged joints and with heavy clamps, hangers, brackets or pipe supports (all with screwed/welded joints) as required including GI pipe of shorter lengths, tapering connecting pieces, short or long bends, GI specials like sockets, union nuts, elbows, reducers, plugs, Tees etc.Complete to make the system operative as required by LFA / TAC authorities. The pipes will have to be laid and fixed on walls, ceilings, into brick walls or RCC with lead anchor fastners. The work includes making holes in brick or RCC walls, slabs/ roofs and making good the damages by bringing to the original condition				
a)	25 mm Dia	10	MTR		
b)	50 mm Dia	10	MTR		
c)	80 mm Dia	15	MTR		
d)	100 mm Dia	25	MTR		
e)	150 mm Dia	15	MTR		
g)	200 mm Dia	20	MTR		
2.2	Providing and fixing cast iron Wafer type Butterfly valve of the following size complete with bolts, nuts, washers and neoprene gaskets as per specifications. (Make:Sant /Leader /Zoloto)	20	WIII		
	DO D:	-	Nos		
a)	80 mm Dia	6			
a) b)	80 mm Dia 100 mm Dia	2	Nos		
-		_			
b)	100 mm Dia	2	Nos		
b)	100 mm Dia 150 mm Dia	2 13	Nos Nos		
b) c) d)	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated)	2 13	Nos Nos		
b) c) d) 2.3	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia	2 13 4	Nos Nos Nos		
b) c) d) 2.3	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto)	2 13 4	Nos Nos Nos		
b) c) d) 2.3 a) b)	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia	2 13 4 4 6	Nos Nos Nos Nos		
b) c) d) 2.3 a) b) c)	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia 200 mm Dia Providing and fixing Y strainer. (Make:Sant /Leader /Zoloto)	2 13 4 4 6 2	Nos Nos Nos Nos Nos Nos Nos		
b) c) d) 2.3 a) b) c) 2.4	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia 200 mm Dia	2 13 4 4 6	Nos Nos Nos Nos		
b) c) d) 2.3 a) b) c) 2.4 a)	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia 200 mm Dia Providing and fixing Y strainer. (Make:Sant /Leader /Zoloto) 200 mm Dia Providing and fixing Glycerin filled dial type pressure gauges with isolation cock and copper pipe on main header Dial diameter 100 mm	2 13 4 4 6 2	Nos Nos Nos Nos Nos		
b) c) d) 2.3 a) b) c) 2.4 a) 2.5	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia 200 mm Dia Providing and fixing Y strainer. (Make:Sant /Leader /Zoloto) 200 mm Dia Providing and fixing Glycerin filled dial type pressure gauges with isolation cock and copper pipe on main header Dial diameter 100 mm celebration 0-15 / sq. cm. (At pumps delivery pipe).(H Guru / Fiebig) Providing & fixing gun metal foot valve AS.	2 13 4 4 6 2 2	Nos Nos Nos Nos Nos Nos Nos		
b) c) d) 2.3 a) b) c) 2.4 a) 2.5	100 mm Dia 150 mm Dia 200 mm Dia (Gear Operated) Providing and fixing cast iron dual plate wafer type Non return valves. (Make:Sant /Leader /Zoloto) 80 mm Dia 150 mm Dia 150 mm Dia 200 mm Dia Providing and fixing Y strainer. (Make:Sant /Leader /Zoloto) 200 mm Dia Providing and fixing Glycerin filled dial type pressure gauges with isolation cock and copper pipe on main header Dial diameter 100 mm celebration 0-15 / sq. cm. (At pumps delivery pipe).(H Guru / Fiebig)	2 13 4 4 6 2	Nos Nos Nos Nos Nos		

Providing Fixing & Commissioning of G.T.C.* Class IS:1259 pipe with complete fittings support & pointing 150 mm Dia 160 mm Dia 15 MTR 160 mm Dia 160 mm Dia 160 mm Dia 17 Month of Providing Fixing & Commissioning of Dodds headed Hydrant valve. 160 mm Dia 17 Month of Providing Fixing & Commissioning of Dodds headed Hydrant valve. 17 Providing Fixing & Commissioning of Fixing and the read with 30 mire long X 20 mm Dia thempelastic hone pipe with adustif 160 mm Dia 17 Month of Providing Fixing & Commissioning of Classrate Involves. 18 Min Dia 18 Mi	Sr No	Description	Qty	Unit	Rate	Total
150 mm Dia	В	WET RISER				—
150 mm Dia		Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting				
Storem Das	1					
Providing Fixing & Commissioning of Double hearded Hydmut valve.						+
Providing Fixing & commissioning of first aid loae red with 30 mts long X 20 man Dia thermoplastic hose pipe with shunoff row/red reducing fixing & Commissioning of Gunnetal Air release Vulve. 2	2					+
			04	1103		1
2			64	Nos		
Same and Case Same and Cas	4					
2			2	Nos		+
Providing Fixing & Commissioning of C. I Butterfly valve	5		2	Nos		+
150 mm Dia	,		<u> </u>	1100		1
Providing Exting Commissioning of Carross hose pipe as per IS:636 15mts long	6	150 mm Dia	4	Nos		
Aluminum Branch pipe (Make - Ronak Fire) 64 Nos.						
Pipe Support Bracket (Approx) 500 Kg			_			-
Providing Fixing & Commissioning of Booster Pump 900 LPM and of 15HP						+
Providing Fixing & Commissioning of Booster Pump 900 LPM and of 15HP		Tipo oupport Diaenet (Appron)	500	ng		+
Providing Fixing & Commissioning of Booster Pump 900 LPM and of 15HP	C	BOOSTER PUMP				1
Providing Fixing & commissioning of G.I.*C" Class IS:1239 pipe with complete fitting & painting						
S0 mm Dia			1	Nos		
So mm Dia		Providing Fixing & commissioning of G.I "C" Class IS:1239 pipe with complete fitting & painting				
Providing Fixing & Commissioning of Butterfly Valve 3 Nos	2	80 mm Dia	79	МТР		+
Somm Dia			76	WITK		1
So mm Dia	3		3	Nos		1
Nos 1	4	Providing Fixing & Commissioning of Wafer type non Return valve				
Providing Fixing heavy "C" Class G.I. pipe as per IS:1239 with welded joints, Including fittings & painting. (Riser)	-		_			
Providing Fixing heavy "C" Class G.I. pipe as per IS:1239 with welded joints, Including fittings & painting. (Riser)			1	Nos		+
150 mm Dia	D	SPRINKLER SYSTEM				+
65 mm Dia		Providing Fixing heavy "C" Class G.I. pipe as per IS:1239 with welded joints, Including fittings & painting. (Riser)				
S0 mm Dia		150 mm Dia	300	MTR		+
So mm Dia	1	65 mm Dia	650	MTR		
32 mm Dia 3000 MTR 25 mm Dia 3000 MTR 26 mm Dia 3000 MTR 27 mm Dia 3000 MTR 28 mm Dia 3000 MTR 29 menter Type Sprinkler 68 C 1000 Nos 20 mm Dia 25 mm Dia 25 mm Dia 27 mm Dia 27 mm Dia 27 mm Dia 28 mm Dia 28 mm Dia 29 mm Dia 29 mm Dia 20	1					
25 mm Dia 3000 MTR			_			+
Pendent Type Sprinkler 68 C						+
Side Wall Sprinkler			_			+
Providing Fixing Butterfly Valve						1
65 mm Dia 32 Nos 7 Providing Fixing Ball Valve 25 mm Dia 32 Nos 32 Nos 33 Nos 34 Nos 35 Nos 35 Nos 36 Nos 37 Providing Fixing Union 25 mm Dia 32 Nos 38 Supports MS Steel (Approx) 700 Kg 30 Making Corecuts in beam as required for passage of sprinkler lines. 1 Lot						
Providing Fixing Ball Valve 25 mm Dia Providing Fixing Union 25 mm Dia Supports MS Steel (Approx) Making Corecuts in beam as required for passage of sprinkler lines. EXTERNAL HYDRANT SYSTEM Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting Somm Dia Providing Fixing & Commissioning of Single head Hydrant valve. Providing Fixing & Commissioning of Single head Hydrant valve. Providing Fixing & Commissioning of C.I Butterfly valve Somm Dia Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) Somm Dia Providing Fixing & Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire)			_			
Providing Fixing Union 25 mm Dia Supports MS Steel (Approx) Making Corecuts in beam as required for passage of sprinkler lines. I Lot EXTERNAL HYDRANT SYSTEM Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting 150 mm Dia Som Dia Providing Fixing & Commissioning of Single head Hydrant valve. Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia Providing Fixing & Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 10 MS 10 MTR 11 Nos 12 Nos 13 Nos 14 Nos 15 Providing fixing Commissioning of C.I Non 16 Providing fixing Commissioning of M.S. Hose Box Single Door 17 Aluminium Branch pipe (Make - Ronak Fire) 18 Nos						-
Supports MS Steel (Approx) Making Corecuts in beam as required for passage of sprinkler lines. EXTERNAL HYDRANT SYSTEM Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting 150 mm Dia 80 mm Dia 15 MTR Providing Fixing & Commissioning of Single head Hydrant valve. Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia 1 Nos Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia 1 Nos Providing Fixing & Commissioning of M.S. Hose Box Single Door 18 Nos Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 1 Nos 1 Nos						+
Making Corecuts in beam as required for passage of sprinkler lines. I EXTERNAL HYDRANT SYSTEM Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting 150 mm Dia 80 mm Dia 15 MTR Providing Fixing & Commissioning of Single head Hydrant valve. 18 Nos Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia 1 Nos Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia 1 Nos Providing Fixing & Commissioning of M.S. Hose Box Single Door 18 Nos Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 1 Lot Lot 1 Lot 1 Lot 1 Nos 1 Nos 1 Nos 1 Nos 1 Nos						+
EXTERNAL HYDRANT SYSTEM Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting 150 mm Dia 80 mm Dia 15 MTR Providing Fixing & Commissioning of Single head Hydrant valve. 18 Nos 150 mm Dia 10 Nos 150 mm Dia 11 Nos 150 mm Dia 11 Nos 150 mm Dia 11 Nos 150 mm Dia 12 Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia 11 Nos 150 mm Dia 12 Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia 150 mm Dia 17 Nos 18 Nos 19 Providing fixing Commissioning of M.S. Hose Box Single Door 18 Nos 19 Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long 10 Aluminium Branch pipe (Make - Ronak Fire) 11 Nos				_		
Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting 150 mm Dia 80 mm Dia 15 MTR 2 Providing Fixing & Commissioning of Single head Hydrant valve. 18 Nos Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia 1 Nos Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia 1 Nos Providing fixing Commissioning of M.S. Hose Box Single Door 18 Nos Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 18 Nos						
150 mm Dia 80 mm Dia 15 MTR 2 Providing Fixing & Commissioning of Single head Hydrant valve. 18 Nos Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia 1 Nos Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia 1 Nos Providing fixing Commissioning of M.S. Hose Box Single Door 150 mm Dia 1 Nos						
150 mm Dia 150 mm Dia 150 mTR 150 mm Dia 150 mTR 150 mm Dia 150 mTR 150 mm Dia 160 mm Dia		Providing Fixing & Commissioning of G.I "C" Class IS:1239 pipe with complete fittings support & painting				
Providing Fixing & Commissioning of Single head Hydrant valve. Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia Providing fixing & Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire)						
Providing Fixing & Commissioning of C.I Butterfly valve 150 mm Dia Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia Providing fixing Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 1 Nos 1 Nos 1 Nos 1 Nos			_			
150 mm Dia 1 Nos 1 Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 1 Nos 1 Nos 1 Nos 2 Providing fixing Commissioning of M.S. Hose Box Single Door 1 Nos 2 Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long 1 Nos 2 Aluminium Branch pipe (Make - Ronak Fire) 1 Nos 1 Nos 2 Nos 3 N			18	Nos		+
Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 150 mm Dia Providing fixing Commissioning of M.S. Hose Box Single Door Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) Providing Fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) Providing Fixing & Commissioning of C.I Non Return Valve(Wafer Type) 1 Nos 1 Nos 1 Nos 1 Nos	3		1	Nos		+
150 mm Dia 1 Nos 1 Nos 2 Providing fixing Commissioning of M.S. Hose Box Single Door 18 Nos 2 Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long 18 Nos 2 Aluminium Branch pipe (Make - Ronak Fire) 18 Nos 2			1	1100		1
Providing fixing Commissioning of Canvas hose pipe as per IS:636 15mtrs long Aluminium Branch pipe (Make - Ronak Fire) 18 Nos	4	150 mm Dia	1	Nos		
7 Aluminium Branch pipe (Make - Ronak Fire) 18 Nos	5	Providing fixing Commissioning of M.S. Hose Box Single Door				
						<u> </u>
Fig. Support Blacket (Approx) Z00 Kg						1
	0	ripe Support Diacket (Approx)	200	ĸg		+
						+
		•	•			