

CONSTRUCTION OF BUILDINGS FOR LABORATORIES AND ASSOCIATED FACILITIES INSTEM BANGALORE SCHEDULE OF QUANTITIES FOR GAS FLOODING SYSTEM FOR CIFF AT BASEMENT (EQUIPMENT ROOM 3 & 4)					
Sl.No.	Description	Unit	Quantity	Rate (in INR)	Amount in figure
	HFC-227ea GAS BASED FIRE SUPPRESSION SYSTEM COMPRISING OF PROVIDING ALL MATERIAL, EQUIPMENT, INSTALLATION, LABOUR, TESTING, COMMISSIONING & HANDING OVER OF THE ENTIRE SYSTEM, WITH THE FOLLOWING COMPONENTS:				
1	Providing & fixing 80 Liters Capacity Seamless Steel Cylinder Complete with Pneumatical Valve Assembly arrangement, supervisory switch connection for monitoring cylinder pressure, in compliance with Chief Controller of Explosive, Nagpur with electric & pressure operated control heads as per requirement (Master/Slave Actuation Packages) a safety burst disc, and any other accessories to make the cylinder completely operational including Flexible Actuation Hose (directed to a pressure operated control head on each cylinder valve using 1/4 inch actuation hose), container strap, structural supports etc.	Nos.	2		
2	Providing HFC-227ea Gas, factory-filled in the Gas Cylinder/ from a UL-Listed Gas Filling Station, as per the specifications and manufacturer recommendations/ specified design concentration and fill density.	Kgs.	116		
3	Providing & Fixing Discharge Nozzles designed to provide the proper flow rate and distribution of gas to total flood a hazard area : (180/360 deg. As per requirement)	Nos.	2		
4	Providing & Fixing Micro-processor based Alarm Panel (addressable panel of single loop) for required devices capacity, discharge module with minimum 80 character LCD type display & LED indication for all zones, complete with internal sounder, alarm/fault indications & standby 24 v lead acid batteries with charger. This panel needs to be compatible with the central BMS/BAS System through interface convertors.	Nos.	1		
5	Providing & Fixing Gas Release Panel with 2-Zone Fire detection and 1-Zone gas discharge module with binary switch timer for release delay and potential free contact to relay "Gas Release" signal panel. This panel needs to be compatible with the Fire Alarm Panel and shall be UL Listed.	No.	1		
6	Providing & Fixing Electronic Hooter with flashing type multi-Strobe for combined audio + visual alarms, to be wired and located as per instructions of the engineer-in-charge.	Nos.	2		

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7	Providing & Fixing Abort Switch of approved Pull-Type, as per approved location	Nos.	1		
8	Providing & Fixing Release Switch as per approved location.	Nos.	1		
9	Providing & Fixing Key-operated selector switch between the Main and Reserve Gas Banks.	Nos.	1		
10	Providing & addressable Photoelectric/ Ionization Smoke detectors complete with mounting base LED, address switch, as per requirements.	Nos.	2		
11	Providing & Fixing 1.5mm X 2 core Fire Survival Armoured cable, with Copper conductor (600/1000V) having Cross linkable Ethylene Propylene Rubber (EPR) insulation with Low Smoke Zero Halogen (LSZH) inner & outer sheath, basic design as per BS-7846:2009 / IEC 60502 Part-1:2004. Should retain Circuit Integrity @ 8500C for minimum period of 2 Hrs as per BS 8519:2010, BS 8491:2008 Cat.3 (120 mins.), BRE Global – UK Certified or approved Equivalent.	Metre	40		
12	Providing & Fixing MS pipes (Seamless piping as per ASTM 106, Grade 'B' Schedule 40) including all necessary fittings for all low side piping, and MS pipes (Seamless piping as per ASTM 106, Grade 'C' Schedule 80) for Manifold for 2 nos. Cylinders. (1 Working + 1 Standby) including all necessary fittings as per NFPA 2001 guidelines including all structural supports.	Lot.	1		
13	Providing & Fixing Interface module for communication between Gas Release Panel and specified compatible devices as per the instructions of the engineer-in-charge.	Nos.	1		
14	Making Electrical Connections to the Fire Alarm Main Panel including all necessary material and accessories as per requirements and as per instructions of the engineer-in-charge.	Job	1		
15	Providing & fixing Photo-luminiscent Gas Release caution sign boards for approved locations.	Nos	2		
16	Providing HCFC Blend E /Halotron type fire extinguisher complete with discharge nozzle/ hose for manual operation (5 Kgs Capacity)	Nos.	1		

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17	Providing & fixing M.S. structural work fabricated from standard section e.g. M.S rounds, angles, channels, plates including cutting to size,drilling,welding fixing and welding to insert plates in RCC structural members as directed by engineer-in-charge including cutting and making good the walls, ceilings and floors. (As per the Instructions of the Engineer-In-Charge)	Kg.	300		
18	Performing dump test for UPS room of Gas discharge test with nitrogen gas (HFC 227ea gas shall not be used) complete i.e. checking of the Fire detection and alarm system room integrated test (Procedure of testing shall be as per NFPA 2001)	LS			
TOTAL C/O TO SUMMARY IN RS					

Amount in words