



BHEL, BHOPAL

ANNEXURE E**NOVEC-1230 BASED FIRE DETECTION & SUPPRESSION SYSTEM FOR ITS DR SITE****1.0** The annual maintenance contract covers

- Fire Detection System installed at ITS DR Site
- Fire Suppression System installed at ITS DR Site

1.1 The fire detection and suppression system is installed at ITS DR site, Ground Floor Block 1 – Eastern Wing, BHEL Bhopal. The detection system covers server room, UPS room and two adjacent rooms. The gas based (NOVEC 1230) suppression system covers Server room and UPS room. The system comprises one NOVEC 1230 Cylinder with capacity of 120 litres maintained at 36 bar. The system has main control panel at DR site and 2 repeaters at CISF-fire control room and ITS building

1.2 Nozzles Details:

Nozzle	Room	Location
N1	Server room	Above false ceiling
N2		Main room
N3	UPS room	Above false ceiling
N4		Main room
N5	Server and UPS room	Below false flooring

1.3 Detector Details:

Detector	Details	Zone	Cross Zoning	Remarks
D1	Server Room AFC	Z1	Any 2 Zones	*AFC : Above False Ceiling *BFF : Below False Flooring
D2	Server Room	Z2		
D3				
D4	Server Room BFF	Z3		
D5	UPS Room AFC	Z4		
D6	UPS Room	Z5		
D7				
D8	UPS Room BFF	Z3		
D9	Room 1	Z6	Not in Cross- Zoning	
D10				
D11				
D12	Room 2			

Fire detection system in Server room and UPS room of IFX building is integrated with NOVEC-1230 gas based suppression system, which includes cross-zoning.

1.4 Modules Details:

Module	Details	Location
M001	Manual PULL Station	Passage
M002	Manual Release Point	UPS Room
M003	Abort Switch	UPS Room
M004	LED GAS Release Activated	UPS Room
M005	GAS Release Circuit	UPS Room
M006	AC Relay for Tripping	Server Room
M007	Control Module for Siren (CISF & ITS)	Server Room
M008	Security Module / Discharge Pressure Switch	UPS Room



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ANNEXURE B

1.5 Panel Details:

Module	Details	Location
M1	Main Control panel (Notifier HoneyWell Make)	ITS DR Site
R1	Repeater Control Panel (Notifier HoneyWell Make)	ITS Building
R2	Repeater Control Panel (Notifier HoneyWell Make)	CISF Control Room

- 1.6** Maintaining the system in proper operational condition by regular and systematic examination (once in every quarter). The scope includes repair or replacement of faulty components, Checking of detector, Manual release station, manual abort station, hooter, response indicator of fire alarm system, nozzles, pressure gauge, solenoid valve, gas release switch, and gas release panel should be carried out on quarterly basis.
- 1.7** The scope of AMC also includes the topping up of cylinder with Nitrogen if the pressure of cylinder falls below 36 bar.
- 1.8** Checking the functions of Cross Zoning
- 1.9** Checking of alarm signal to CISF/Fire control room and ITS Building.