

## Case Studies on Low Maintenance, Aerosol based Fire Suppression System

Dry Sprinkler Powder Aerosol (DSPA) Fire Suppression System is innovative & green way to suppress fires. This innovative and patented technology is the ultimate Halon replacement (BCF), providing the greatest margin of safety and sustainability on the market today and brings to you products which feature simplicity, lower installation & maintenance cost and flexibility.

When the DSPA is activated thermally or electrically, the combustion occurs and specific reaction takes place between potassium compounds and the fragments of instable molecules in a rapid succession till such time that stable potassium hydroxide is formed at which time the flame is extinguished.

### Fire Detection & Suppression System



A typical system consists of Smoke Detectors connected in cross zone to a specially designed fire suppression panel. One can connect various types of detectors for Smoke, Heat, Flame, Flammable gases etc. The Fire Suppression system monitors the status of the sensors and activates output devices like Sounder, Aerosol Suppression agent etc.

The biggest advantage of DSPA is the fact that it is environment friendly and keeps the oxygen content in the room intact. The DSPA Fire Suppression System is engineered to be safe for people, products and the environment. It is sustainable and will never be subjected to global regulations pertaining to green house gases and does not damage movable and immovable property. DSPA is maintenance free, light weight, compact and does not require any water storage. It is non-conductive, non-corrosive, is maintenance free, light weight, compact and does not require any water storage. It is much cost effective i.e. complete installation is almost 1/3<sup>rd</sup> of that of any other gaseous suppression systems.

It can be applied for A, B, C and F type fires. DSPA is manufactured in accordance with ISO 9001:2000 standards and is certified by UL/ULC, RINA, ISO, BRE, TNO, NFPA 2010.

Stored as a solid compound but expelled as an aerosol, DSPA is ideal for special hazard applications in different industries such as Information Technology, Telecommunications, Machinery compartments, Banking as well as marine facilities, museums, libraries and the military. It protects valuables and critical assets without harming any inhabitants or contents. DSPA offers an additional layer of flexibility that it can be directly mounted on the ceiling or the wall in the room that it needs to protect as opposed to being piped in from a central storage area. Thus for selective rooms and spaces, DSPA can be a more adaptable and cost effective solution. DSPA has application at many places like Internet Data Centers, Computer Server Rooms, Transformer Rooms, Electrical Motors, Alternators, Distribution Panels, Inverters, Battery Chargers, Paint Booths, Banks, Currency Chests, Film Archives, Museums, Libraries, Record Rooms etc.

#### Case Study – 1 : Application in Computer Server Room of a reputed builder.

##### Site Situation & Requirements:

1. Server room of size : (2\*3\*3) Mtr
2. Structure: RCC structure with brick walls on three sides and Aluminum sectional partition on one side.
3. Equipment to be protected: Computer Server running ERP, Messaging server, 32 Port Switches-3nos, UPS, EPABX.
4. Special Remarks: No windows, opening of 1.5ft\*6ft on partition.

##### Fire Suppression System Used:

1. Multi-criterion Smoke Detectors – Vighnaharta Make – 2nos. in cross zone
2. FSS-2DSPA – Fire Suppression Panel – Vighnaharta Make – 1no.
3. Fire Sounder – 105dB - 1no.
4. DSPA – 11-6 (Suitable upto 18Cum)

Fire Incidence Reported : Installation in July 2011. On 11<sup>th</sup> Oct 2011, due to lightening EPABX cards were damaged and smoke broke out. DSPA activated and suppressed the fire at early stage.

#### Case Study – 2 : Application in Electric Meter Room of a renowned Hospital in Mumbai

##### Site Situation & Requirements:

1. Electric Meter Room :(7\*2\*3) Mtr
2. Structure : RCC structure with brick walls on Four sides
3. Equipment to be protected: Electrical Room with Electrical Distribution Bus Bars, MCBs, ELCBs, Electric meter etc.

##### Fire Suppression System Used:

1. Multi-criterion Smoke Detectors – Vighnaharta Make – 2nos. in cross zone
2. FSS-2DSPA – Fire Suppression Panel – Vighnaharta Make – 1no.
3. Fire Sounder – 105dB - 2no.
4. DSPA – 8-2 (Suitable upto 52cum)

No fire incident reported till now.

#### Case Study – 3 : Application Protection of Point of Presence (POP) Room of a reputed Broadband Company

Site Situation & Requirements:

1. POP room of size : (3.5\*3\*5.5) Mtr
2. Structure : RCC structure with brick walls on Four sides & RCC ceiling.
3. Equipment to be protected: Broadband Switches, Server Racks, Fibre Switches, UPS, Batteries

Fire Suppression System Used:

5. Multi-criterion Smoke Detectors – Vighnaharta Make – 4 nos. in cross zone
6. FSS-2DSPA – Fire Suppression Panel – Vighnaharta Make – 1no.
7. Fire Sounder – 105dB - 2no.
8. DSPA – 8-2 – 1no. (Suitable upto 52Cum)
9. DSPA—11.5- 1no. (Suitable upto 11Cum)

No fire incident reported till now.

**Conclusion**

Aerosol based Fire Suppression Systems are convenient to install. A typical system can be installed with 6-8 hours. No maintenance is practically required because there is no piping, valves, pressurized cylinders etc. Life of typical DSPA canister is about 15 yrs and hence running cost is almost nil. DSPA is available in different sizes and capacities to suit various requirements. It is suitable for all classes of fire and hence varied applications are possible.

Contact Details :

Nitin Joshi

[nitin@vighnaharta.in](mailto:nitin@vighnaharta.in)