



GreCon Spark Detection and Explosion Prevention System

G-2.1

INTRODUCTION

The GreCon Spark Detection and Explosion Prevention System is used where the potential of spark transmission through ductwork can result in an explosion in an attached vessel. The system detects and suppresses the spark as it travels through the ductwork. This eliminates a spark from entering the vessel and acting to ignite a deflagration. When used with other forms of prevention it can lower the cost of protection system operation.

CONCEPT

Sensors are placed at opposite points along the ductwork. The sensors detect a spark and sends a signal to the control panel, which activates fast acting valves to spray water through nozzles, extinguishing the spark as it travels



down the pipe before it enters the protected vessel. This method has been critical in preventing explosions in dust collectors and other vessels.

BENEFITS

- ✓ Quick detection of an incipient fire.
- ✓ Can function many times without reconditioning or customer maintenance.
- ✓ Mitigation of fire and explosion potential.
- ✓ Lower maintenance cost for other associated explosion protection systems.
- ✓ Low cost suppressant.

- ✓ Most systems do not require reconditioning after activation.

DESCRIPTION

The sensor units Faraday housing is designed with a custom GreCon fitting to mount directly on the protected ductwork. Typical application is in areas without ambient light as the infra-red sensing units are sensitive to normal light. They are ideal for most applications where product build up is a potential as they will see the spark through most build up. The unit can withstand a normal operating temperature of 360°C (680°F).



To protect conveyors or other areas subject to ambient light, GreCon has available a sensor that responds only to the movement of invisible infrared radiation. The GreCon Control Panel can handle up to 24 independent areas.

The unit provides all supervisory and firing circuitry. It is fully programmable for shutdown, abort, alarm and deluge functions. Spark counters allow for programmable response from one to many sparks.

The GreCon water mist control system provides the release solenoid, manual shut off valve and required discharge nozzles. The system provides complete coverage with a small supply of water. A unique GreCon installation feature allows the nozzle to be installed on the ductwork without physical entry. Once a hole is made on the side of the duct the nozzle can be mounted with a special tool from outside the ductwork.

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