THE PROBLEM

Protecting surface and underground mining equipment against fires can be challenging. Virtually all of the mobile equipment used in mining operations contains large quantities of highly flammable diesel fuel, lubricating oils, and hydraulic fluids. The energized electrical equipment used in mining operations also presents an elevated fire risk.

Most mining equipment is operated around the clock under punishing conditions that stress mechanical and electrical components to the limit. Material or fluids coming in contact with hot exhaust or engine parts or an electrical fault can quickly erupt into a fast-spreading fire that can result in expensive repairs and unscheduled downtime. And most importantly, an unchecked and uncontrolled equipment fire can pose a serious threat of death or injury.

FIRETRACE VEHICLE SOLUTION

Firetrace offers a unique solution for protecting all types of vehicles and mobile assets against the risk of fires. The heart of the Firetrace system is the company's unique, pressurized detection tubing, which can be routed in and around the hazard areas of mobile and electrical mining and commercial equipment.

The heat-sensitive tubing is designed to burst when exposed to a fire's radiant heat, which automatically triggers the release of the fire extinguishing agent.

The detection tubing is immune to gas, oil, dirt, vibration and temperature extremes that can cause other fire systems to fail, yet is reliable enough to avoid false discharges. And because the detection tubing is located in the hazard area where fires begin, it can react many times faster than conventional fire detection systems.

APPLICATION EXAMPLES

- Earthmovers
- Excavators
- Crawler tractors
- Haul trucks
- Crushing machines
- Scaling machines
- Diesel tractors

ADVANTAGES:

- Fast, reliable fire detection and suppression
- Activates automatically – no operator assistance needed
- Requires no electrical power; operates pneumatically
- Does not interfere with equipment operation or maintenance
- Compact systems offer multiple configuration and design options
- Can be configured to shut down equipment and trigger alarm
- Optional ruggedized protective coatings increase cylinder durability

Firetrace Direct System

The Direct System utilizes the red detection tubing as both a fire detection device and the extinguishment delivery system. The tubing is installed in and around the fire risk areas. When a fire occurs, the tubing will burst at the point of highest heat, forming an effective discharge “nozzle”. The agent is then delivered through the tubing at the burst point, suppressing the fire quickly and thoroughly – right at the point of inception.

Firetrace Indirect System

The Indirect System utilizes the tubing as a detection only device. When the tubing ruptures, the extinguishing agent is delivered through a network of braided hose or stainless steel tubing to strategically placed nozzles within the protected enclosure. Indirect systems are available with a manual release option which allows the operator to activate the system at the first sign of trouble.

Firetrace systems are compatible with most commercially available fire suppression agents, including “clean” extinguishing agents such as Dupont™ FM-200® or 3M™ Novec™ 1230 fire protection fluid, as well as CO2, dry chemical powders, foam, and water.