



sperosens

safety through innovation

CORPORATE PROFILE





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The Sperosens group of companies is an established and respected provider of Fire Protection and Telemetry solutions to the African mining and industrial sectors.



- Sperosens was founded in 1988 and grew from the original four founding members to a total complement of some 300 employees.
- Today the company operates from eight separate facilities: the head office in Centurion with branch offices in Klerksdorp, eMalahleni (Witbank), Rustenburg, Northam, Kathu, Steelpoort and Phalaborwa. In addition, there are satellite stations at locations close to current projects or sites.
- Sperosens currently serves clients in Botswana, Eswati, DRC, Ghana, Lesotho, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe.
- Our Sperosens solutions are developed in-house, by either using own IP only, or by integrating this with standard off-the-shelf components available in the open market.
- Sperosens is an ISO 9001:2015 certified company and the business is managed in accordance with these principles.

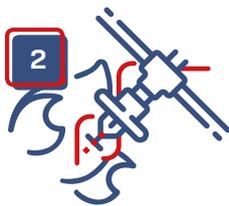
The company's products and services are categorised into three separate but linked groups:



TELEMETRY & INSTRUMENTATION

Telemetry and instrumentation solutions designed to remotely monitor safety parameters and equipment performance in underground mining environments.

IoT-based measurement systems to remotely measure and monitor a variety of parameters (including safety), as well as equipment performance, in industrial installations and large campus environments.



SPECIAL RISK FIRE PROTECTION SOLUTIONS

Fire protection solutions with a focus on the specialised risk category to detect, alarm/warn, contain and extinguish fires in underground and industrial installations.



DISTRIBUTED FIRE INFRASTRUCTURE MANAGEMENT

A technology toolkit designed to facilitate the management of distributed fire infrastructures in complex industrial environments, including continuous monitoring of high risk infrastructure.

Sperosens' market leadership stems from its proven technical abilities; from system design, through project implementations, to term service level agreements.

Sperosens lives by its slogan: ***“Safety Through Innovation”***
It’s uniquely innovative services include:



- Risk Assessments
- Fire system design (Compliance)
- Underground telemetry (environmental monitoring)
- Fire detection solutions
- Fire suppression solutions
- Fire infrastructure management solutions (Verifi)
- DTS (Distributed Temperature Sensing)
- EPCM Projects and installation services
- Support and maintenance services (SLA)

All solutions are available as Design, Supply, Installation, Management and Maintenance / Support services.

Engineering and Design

Sperosens undertakes detailed fire protection system designs for clients in line with local and international standards to ensure system compliance (NFPA/FM/SANS). We provide clients with fire protection philosophies to guide their internal risk management processes.

Our services include fire risk assessments, gap analysis and consulting services, in order to provide clients with the best possible professional guidance on fire safety.

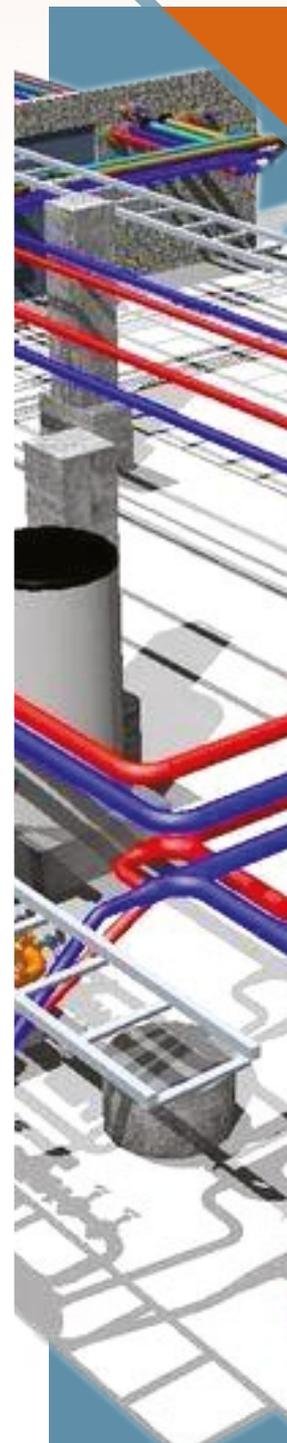
A team of highly dedicated Professional Engineers (Pr. Eng.), as well as specialists in sprinkler design, operational firefighting and computerised flow simulations, enables us to provide our clients with a full suite of the best possible professional services and experience.

We have extensive experience and a proven track record in designing complex fire protection systems for special risk applications, such as conveyor belts, diesel storage, hydraulic systems and other process plant equipment.

The design team makes use of modern computerised design and simulation tools to complement their skills and to enhance our service offering.

Supported by an expert drawing office, the design team provides our clients with all levels of draughting services applicable to fire protection designs.

Our engineering capability contributes substantially to our reputation as a market leader in fire protection design services, and our goal is to be a “one-stop shop” for our clients’ fire protection needs.



Telemetry & Instrumentation

The SL2010 telemetry solution continuously captures, stores and displays telemetry data. Information is available by remote web access and reporting can be customised to user requirements.

The SL2010 system is the market leader in underground telemetry in South Africa. Approximately 2 350 sensors are currently being monitored on 40 sites, underground, on a daily basis.

The SL2010 telemetry system provides underground data communication in the mining sector and is mostly utilised as an underground environmental monitoring and fire detection solution.

The network is based on LonWorks® technology and implemented as free topology. It is custom configurable and expandable based on specific mining layouts.



SL2010
NOTIFICATION SYSTEM
SMS
MESSENGER

The SL2010 SMS notification system can transmit any new alarm or maintenance event via SMS to pre-set cellphone numbers.

SL2010
Fire Detection • Fire Suppression • Telemetry System



Applications

- Environmental monitoring such as CO gas, CH₄, O₂, CH₄, O₂
- H₂S, air flow, air temperature, humidity and smoke
- Fire detection
- Status monitoring
i.e. ventilation door open/closed
- Monitoring of dam levels and pump status
- Substation monitoring
- Conveyor belt monitoring
- SMS notifications

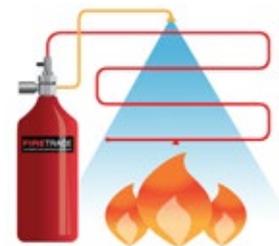
Characteristics

- Long distance communication
- Free (dynamic) topology
- Robust communication
- Wide selection of gas sensors
- Integrates to: 4-20mA, 0-1mA
- Pre-defined blasting zones and Dynamic blasting zones
- Advanced fire algorithms
- No SCADA licenses needed
- Realtime Database
- System scalability

Fire Detection Technologies

Selecting the most appropriate detection technology or tool forms an essential part of any fire protection solution. Sperosens is accredited over a wide range of products and technologies to assist clients in deploying the correct solutions.

- Asperation systems
- Detcon (gas & flame detection)
- Distributed Temperature Sensing (DTS), using optical fiber as fire detection
- Ember detection
- Gas sensors
- Heat and flame sensitive detection tubing
- IR smoke detection
- IR temperature scanning
- IR3 flame detection
- Linear heat detection
- Plummer block caps
 - Digital (switch)
 - 4-20mA (analog)
- Smoke sensors
- Temperature sensors



Heat and flame sensitive detection tubing



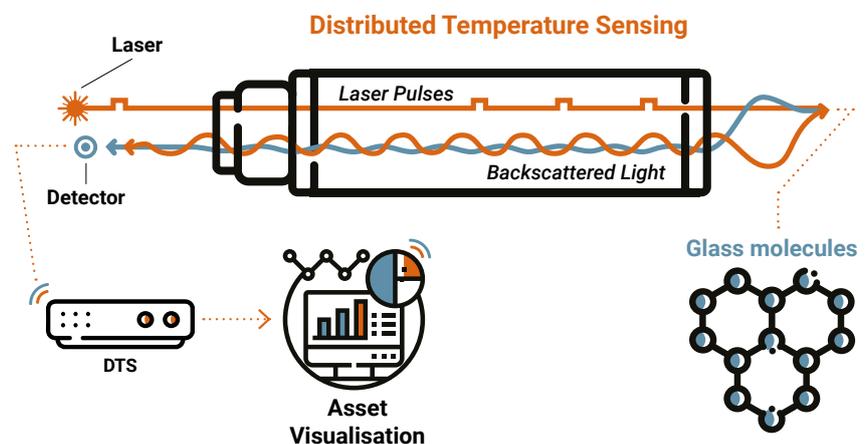
Plummer block Cap



IR Flame Detector



IR Temperature Scanner



Fire Suppression Technologies

A variety of suppression technologies are available and the selection of a suppression type is based on risk analysis and legislative requirements.

- CAF stand alone systems
- Clean agent gas systems
 - Total flooding
 - In-cabinet
- Fire pump stations (containerised or skid-mounted)
- Fixed water and foam mist systems
- Foam induction systems
- Water deluge spray systems
- Water sprinkler systems
- Vehicle systems



Fire Infrastructure Management

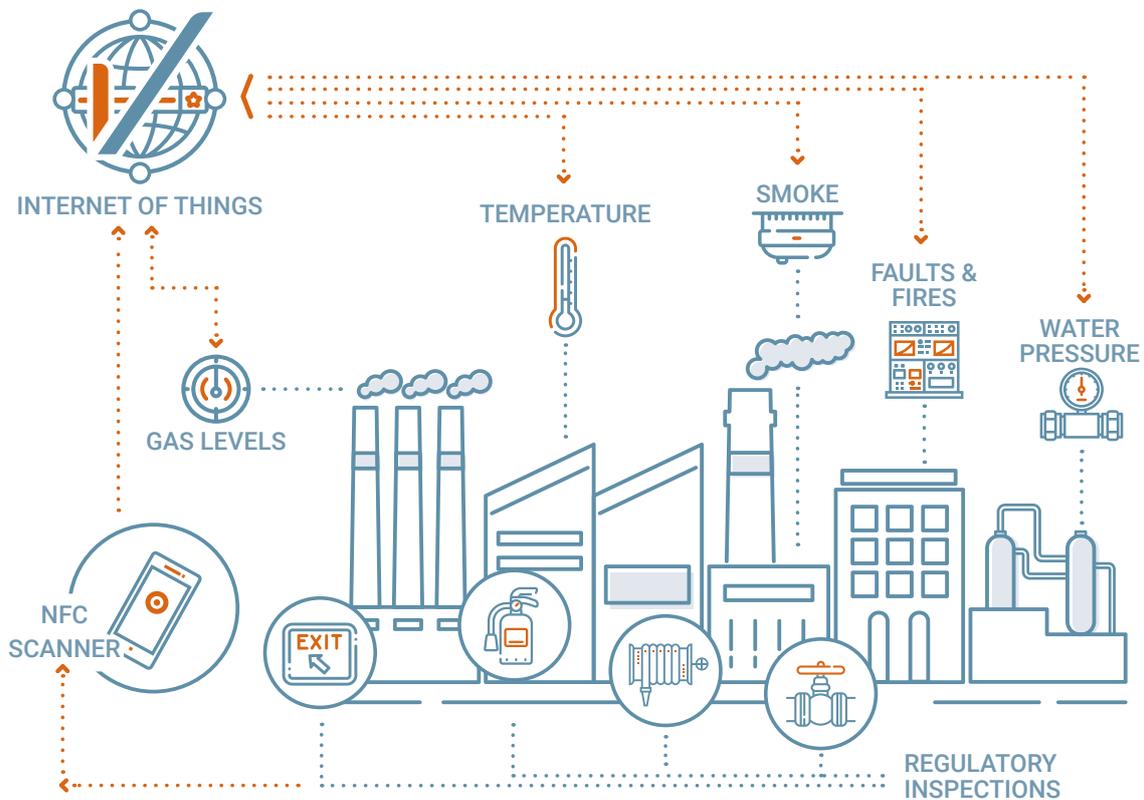


Managed fire protection infrastructure with continuous visibility and monitoring of critical variables and infrastructures.

The Verifi system is a management and technology toolkit designed to facilitate the real-time management of distributed fire infrastructures in complex industrial environments.

As a cloud-based platform it enables full visibility of all fire infrastructure related activities, as well as real-time monitoring of distributed fire infrastructures by integrating various technologies.

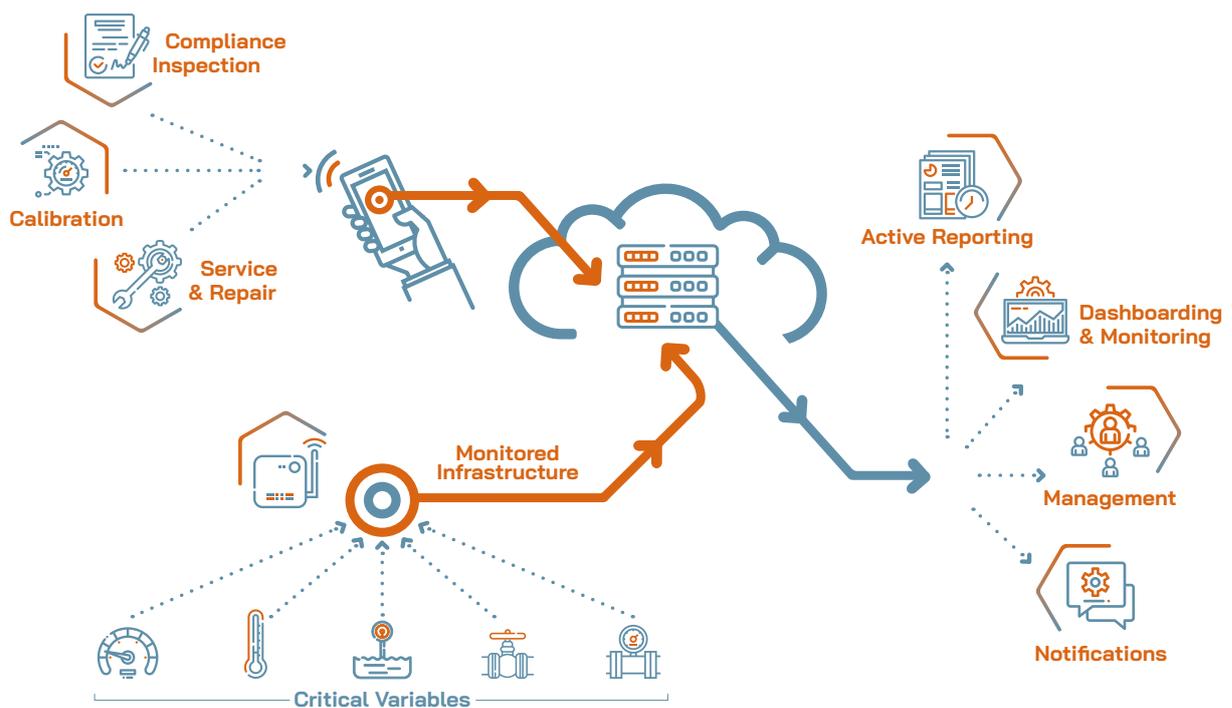
The Verifi solution addresses the customer's cost, compliance, integration and management challenges by facilitating centralised management of the complete fire protection infrastructure.



Benefits



- Manage distributed fire infrastructure from one central management system.
- Full visibility of the status, cost, compliance and performance of distributed fire protection infrastructure.
- Ability to control and measure service provider performance against a pre-defined scope.
- Perform real-time monitoring of critical fire infrastructures.
- Link the outputs from the Verifi system to existing customer systems like control rooms, call centres, email and ERP systems.
- Guaranteed ongoing compliance with legislation and external regulations while providing the audit trails as evidence of full-time compliance.
- Substantial costs savings are possible from a single vendor agreement with focus on efficiency, integrated services, standardisation and resource optimisation.



5-YEAR STATISTICS



- Sprosens currently manages **120 service level agreements** across various mining and industrial clients.



- **19 723 nozzles installed** by Sprosens to protect assets such as conveyor belts, substations, generators, transformers and fuel bays.



- The SL2010 telemetry system is installed at **40 customer sites, monitoring 2 350 sensors**, to ensure safe conditions under ground.



- Sprosens, in conjunction with MineRP and FlowCentric **won the MTN IoT (Internet of Things) awards** with the Digital Twin mine simulation solution.



- **10 596m of fire water pipe installed** to supply water to suppression systems.



- **341 735m of communication cable installed** for measuring and monitoring underground conditions using the SL2010 telemetry system.



- **330 Stand alone CAF systems** are installed to protect equipment in harsh conditions where no fire water is available.

SUPPORT AND MAINTENANCE SERVICES

Full maintenance and support services throughout the life of the product or solution by way of specific service level agreements (SLAs).



EMPLOYEE BREAKDOWN

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■ The employee complement of roughly 300 includes:



ENGINEERING TEAM



INNOVATION TEAM



ARTISANS



TECHNICIANS



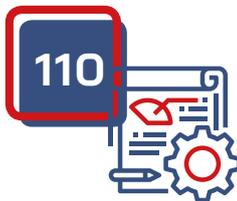
PROJECT MANAGERS & TEAM LEADERS



ACCOUNT MANAGERS



MANUFACTURING TEAM



PROJECT & SLA

CERTIFICATION AND ACCREDITATION



OUR VALUED CUSTOMERS

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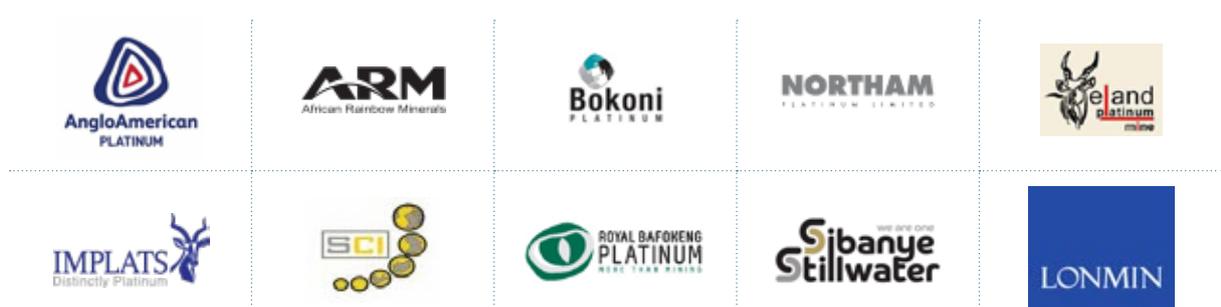
GOLD



COAL



PLATINUM



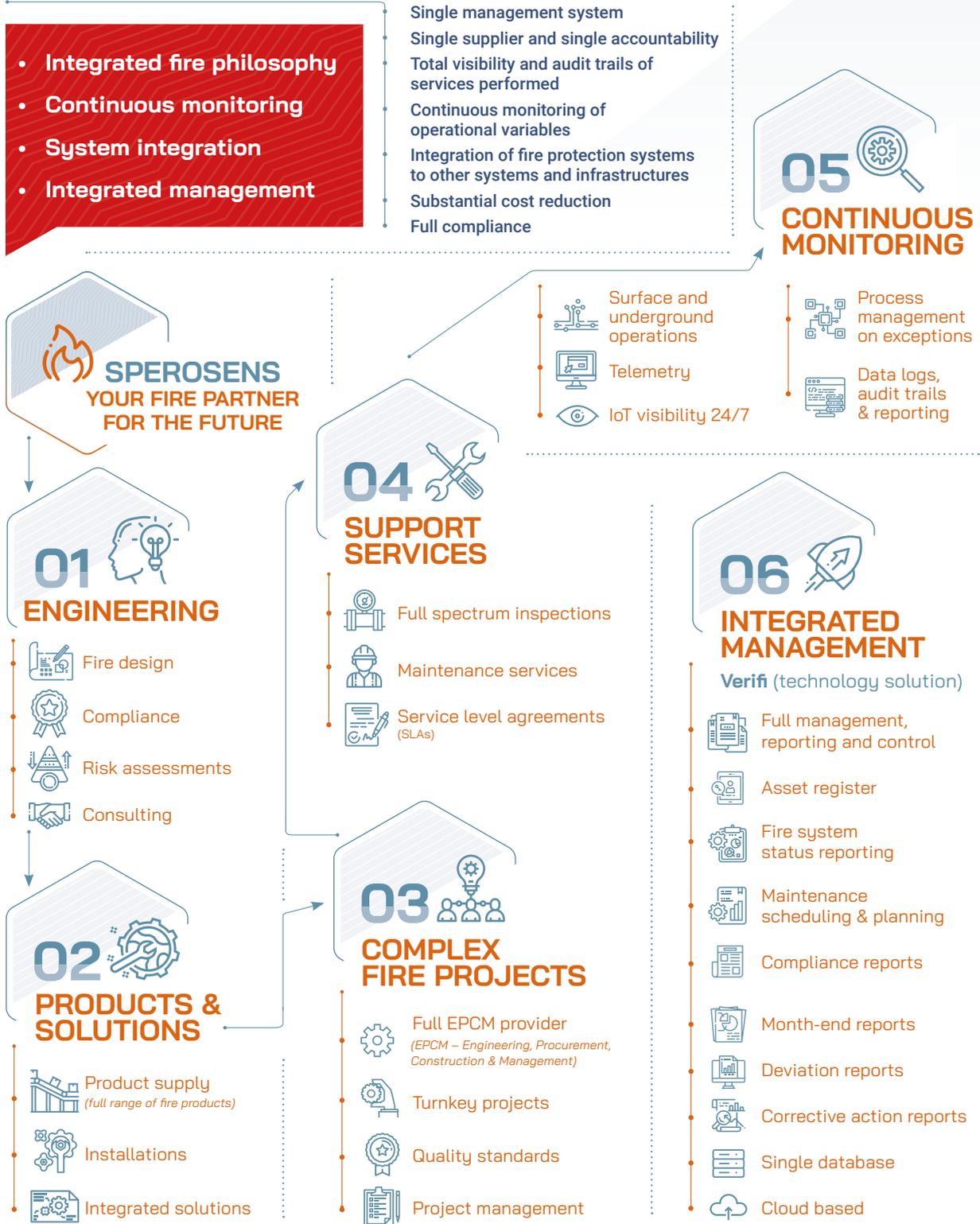
INDUSTRY

	 ArcelorMittal			
				
				
				
				
				

COPPER



THE FUTURE OF FIRE PROTECTION





Pumphouse and Ring-mains



CAF fire protection and controllers



Pump station



Fire suppression on conveyor belt



Fire suppression panel with CAF



In-cabinet detection and suppression



Off-loading CAFs



Conveyor belt protection



Fire suppression



Vehicle fire protection system



In-cabinet detection and suppression



Fire suppression Deluge valves



CAF stand alone system in mine





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