

# Fire protection

## AQ90 case study

Coal mining

### Project

UK Coal PLC, formerly RJB Mining, UK

### Fire risk analysis

Fires underground in deep coal mining operations can be very hazardous, as the environment is particularly susceptible to fires. A mixture of very combustible coal and coal dust, together with methane gas can produce very severe and dangerous situations. Even sparks and static electricity must be eliminated to ensure the safe working of men underground. Battery charging stations, and conveyor transfer points were identified as potential or known fire risks.

### Further information

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### Solution

A rugged and simple automatic solution was called for, together with a requirement for the systems to be self powered and intrinsically safe.

The AQ90 was ideal for the purpose, as it was easy to install and would discharge directly onto the hazard in the event of a fire.

A customised construction was called for as the design had to incorporate several features particular to underground use. A special fixing bracket was developed to securely attach the unit to underground roof beams. The extinguishing medium, ABC dry powder, is ideally suited for the application, as it is safe and non-toxic, and is a very effective at its job of putting fires out.