CASE STUDY

Glencore Bulga: expansion of DTS capability to double in size the fire detection system

PROJECT OVERVIEW

After a successful phase 1 project implementation in 2019, Glencore Bulga Coal decided to expand its fibre optic Distributed Temperature Sensing (DTS) fire detection system. The project includes the surface and reclaim tunnel conveyors at Bulga Coal Handling and Processing Plant (CHPP) located in Singleton, NSW.

The system provides area coverage from the run of mine stockpile area conveyors, through the CHPP and across to the Train Loadout (TLO). The project includes a total of 27 conveyors with a DTS range capability of 8 km per channel.

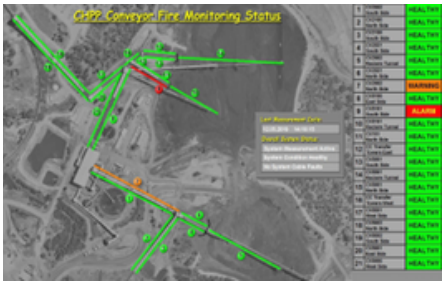
REQUIREMENTS

An internal risk review process conducted by Glencore identified the need for conveyor fire detection that would provide:

- Conveyor fire detection coverage;
- Interface not only to the fire alarm system but also fully integrated with the site SCADA system;
- Early warning of abnormal heat build-up;
- Exact localisation of the abnormal heat or fire within a metre;
- Full history of the fire initiation point, its movement, temperatures, date/time stamping for the eventual reporting and investigation;
- Option for automatic activation of fire suppression systems;
- A maintenance-free system requiring no calibration;
- A 24×7 fire detection and temperature monitoring system that increases safety for the protection of people and fixed assets.

Highlights

- The project includes the monitoring of 27 conveyors and the Train Loadout (TLO) area;
- DTS capability of 8 km per channel;
- Total fire detection coverage and compliance wherever the fibre cable is;
- Full data integration into the plant's operation system;
- Suitable for harsh environments and outdoor areas.



Mobile Devices (Citect)

Plant Wide HMI/SCADA

Fire Alarm Panels

PLC's / DCS / Controllers

THE SOLUTION

The project phase 2 was implemented to assure comprehensive conveyor monitoring to detect and prevent fire incidents, improving the overall safety for personnel, operations and the asset.

The system provides early warning of abnormal heat build-up to minimise serious consequences of equipment overheating in such a harsh environment.

Our technology is accredited for fire detection use, is immune to Electro Magnetic Interference (EMI) and requires no maintenance after installed. The comprehensive 24x7 remote monitoring allows the client to safeguard its operations in a reliable and efficient way, responding quickly in case of an emergency.

"The system provides a faster response time to any potential fire risk. It is performing well to expectation."

EDWARD KENNEDY

CHPP Projects, Glencore
Bulga Open Cut

TECHNOLOGY BENEFITS

- Real Time Data
- Early Warning
- Suitable for harsh environments
- Maintenance Free
- Cyber Security
- Easy Installation

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