The transportation of coal on any form of conveyor system has the potential to ignite, with the ultimate outcome being a fire. Coal (even in small amounts) is a very good insulator, so fire which is burning beneath the surface may not be immediately obvious. A single point temperature measurement system can detect a hot spot, but is just as often likely to miss one.

Temperature Scanning - real benefits
A scanning temperature measurement system which looks at the entire width of the conveyor at any one time is an ideal solution. It scans at a wide angle (the entire conveyor width), at high speed and with a fast response. Every hot spot can be detected as all the coal surface is viewed. The scanner is capable of detecting even small hot objects on the conveyor, with its high-speed scanned detector. The scanner outputs the hottest temperature on the conveyor directly to a plant control system or suitable customer alarm system.

Simple Installation
The system is mounted above the conveyor and is connected via a single 8-core cable to the processor unit (usually mounted in a control room). The processor powers the scanner and also provides the signal outputs. The scanner is highly robust with a range of mounting and protection accessories.

Conveyor belts are expensive and replacements can carry long lead times - maximise your belt life and plant productivity by detecting hotspots before problems occur.

Key Features & Benefits

- Fire detection using highly accurate temperature monitoring
- Monitor and protect the entire conveyor - even small hotspots
- Fast response, hottest temperature tracking
- Reduce plant operating costs - reduce damage and downtime
- Improved safety - minimise fire risk
Further Information

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Conveyor Temperature Monitor

Infrared Linescanner mounts directly over the conveyor for fast detection of hotspots and the onset of fire

System Specifications

Conveyor Monitoring system consists of:
Infrared LineScanner - with measurement range:
20 to 250 °C / 68 to 482 °F
The measuring head is the smallest process-imaging scanner available on the market, and is mounted directly viewing the conveyor. It scans at up to 1000 points per scan and 100 scans per second, the complete conveyor width (80° scan angle). It is connected to the Power Supply Unit/Signal Processor using a single 8-core cable.
For full specification details refer to Product Data Sheet ref. PDS_013

Processor/ Power Supply
The processor provides the power supply to the measuring head plus provides two independent 4-20mA temperature outputs. It processes the scanning head data and produces a peak temperature signal. This is output as a 4-20 mA signal. The processor also has available digital outputs for high temperature alarms (set by the customer).
The processor will display a trend of the peak temperature gradient along the length of the conveyor. Importantly, no additional PC or software, hardware or associated complex wiring is needed.
For full details refer to Product Data Sheet ref. S4P101E

Coal Fire Detection - Product Range

Mill Fire Detector - CO monitor for early detection and advance warning of mill fires
Conveyor Fire Detector - Early detection of hotspots/fires along the conveyor
Railcar Fire Detector - Check and detect hotspots and fires in coal railcars
IR Coal Fire Monitor - Infrared thermometer for detecting fires on the mill/bunkers
Coal Pile Fire Detector - Early detection of hotspots/fires in coal stockyards
Portable Thermal Imager - Hotspot and fire detection in bunkers/hoppers/silos and plant integrity checking

For further details on any LAND product - visit www.landinst.com

Quality Assurance

Land Instruments International’s Factory Quality Management System is ISO9001 Certified for both Sales and Service.