Coal Pile Fire Detector

Continuous Fire Detection in Coal Stockpiles

Storing coal in large piles has the inherent risk of spontaneous combustion. There are many industry guidelines to the best method for storing coal in piles. These guidelines include avoidance of spontaneous combustion with regard to pile angles, compression and surface smoothing. Even strict adherence to these guidelines (particularly with the more volatile coals) may in some circumstances not be enough. An early warning system to prevent the onset of fire remains the best and most reliable solution.

Continuous Thermographic Monitoring

Where a storage facility is large and difficult to access, a continuous and fully automatic monitoring device is the only option. A fixed thermal imaging system located at a suitable viewing point can successfully monitor over a large area, and importantly detect hot spots. A scanning pan-and-tilt unit adds even greater flexibility to cover a larger area.

Preventive Action

The fixed thermal monitoring system provides a clear visible display (on a remote PC) and alarm outputs when hot spots are detected. Alarms will trigger action by plant personnel to prevent a major onset of fire - importantly, the success of these actions can be immediately assessed by checking the real-time thermal image.

Control, Analysis and Alarm functions

The thermal imaging system can be remotely setup and controlled via a PC. Comprehensive image analysis software enables a temperature range to be set to best indicate any hotspots. Alarms can be set to trigger at specific thresholds or monitor specific areas (e.g. high risk) within the stockyard.

Key Features & Benefits

- Easy Hotspot detection using thermographic image
- Rapid alarm to initiate preventive action to avoid fire
- Large area measurement - ideal for large stockpiles and yards
- Straightforward installation and fully automatic operation
- Minimal maintenance
- Proven solution based upon years of experience

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Quality Assurance

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

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System Specifications

All systems are specifically designed to meet the size and layout of the stockyard.

System includes the following features:
Pre-configured image processing and control unit
Alarm activation when a hot spot is detected within up to 12 user defined windows
Automatic Pan and Tilt
Automatic Daytime/Nightime switching
Automatic saving of an image when in alarm condition
Warning settings to reduce instances of spurious alarms
Outputs via Digital output card, DDE, OLE

Temperature detection ranges:
0 to 250 °C
32 to 480 °F

Options
System configured to meet the requirements of the application

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