YOKOGAWA
Co-innovating tomorrow™

Power Cable Monitoring for Abnormal Overheating

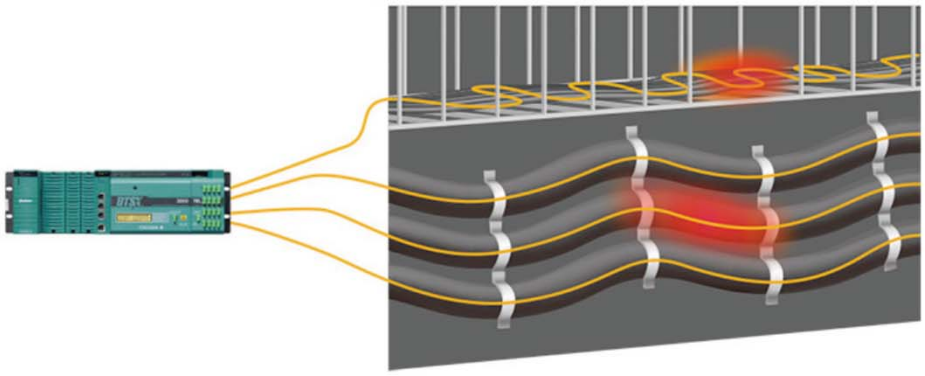
Distributed Temperature Sensor

Industry: Power, Chemical, Refining
Product: Distributed Temperature Sensor, SCADA system, PLC/RTU

Finding Danger where It's Impossible to Look

Introduction

With industrial and economic development comes increasingly large and advanced power plants and factories. Nevertheless, we find many cases where the original cables, cable tunnels that were installed during the fast-paced economic growth period of the previous half century haven't been entered by maintenance workers since. If the power infrastructure is cut off, unplanned outages are unavoidable. As deterioration looms through years of operation, accidents are inevitable unless risk avoidance measures are taken. Once an unplanned outage occurs, loss of production is only the first of considerable damages incurred, including compromised community trust and a tarnished public image. And having to infuse capital into recovery efforts may notably inhibit corporate growth. The DTSX distributed optical fiber temperature sensor is a solution for monitoring abnormal cable temperatures and cable tunnel fires. It is powerful tool for maintenance of critical power infrastructure.



What is the DTSX Distributed Temperature Optical Fiber Sensor?

The DTSX is a module that can be used as an optical fiber sensor to enable temperature monitoring over wide areas.

Customer Benefits

- ✓ Monitors 24 Hours, 365 Days a Year, Even where Workers Can't Go
- ✓ Identifies Trouble Spots in 1 m-Increments to Minimize Damage
- ✓ Semipermanent Monitoring Possible in a Single Installation

Solutions and Benefits

Monitoring 24 Hours, 365 Days a Year, Even where Workers Can't Go

Optical fiber sensors can detect abnormal heating of power lines in cable trays and high voltage power in cable tunnels. They enable blind-spot-free monitoring-24 hours a day 365 days a year-in out-of-reach places and spaces that are too narrow for people to enter. One DTSX and its software application enable centralized monitoring of the entire power plant or factory because you can extend the optical fiber sensor up to 50 km.

Identifies Trouble Spots in 1 m-increments to Minimize Damage

Since that application performs detection in 1-meter units at least every 10 seconds, it easily identifies trouble spots. You can rely on it to respond quickly in the event of an accident, keeping damage to a minimum. And as a total Yokogawa solution, you can customize the monitoring system and output monitor screens and reports that mirror the needs of the site.
Now you can visualize power infrastructure conditions that were once out of view.

Semipermanent Monitoring Possible in a Single Installation

Cable rack and cable tunnel installations only require optical fiber sensors, and no other control or power system lines are needed. Plus, optical fiber sensors require almost no maintenance. This is the ideal application for managing risk at facilities where workers aren't physically present on a daily basis.

Even Broader YOKOGAWA Solutions

In addition to the DTSX, Yokogawa offers a variety of solutions such as ones incorporating thermal cameras and thermocouples and services such as safety instrumented systems. Combining these helps you avoid risk in a more robust and comprehensive way. We will continue to pursue solutions that focus on "HSE + maintenance."

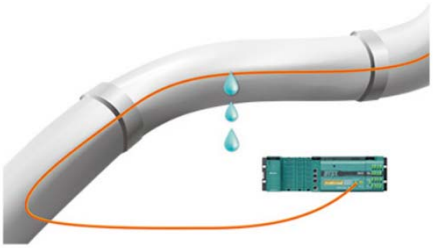
Related Products

Distributed Temperature Sensor
www.yokogawa.com/ofs

SCADA System
www.yokogawa.com/scd/

PLC/RTU
www.yokogawa.com/ncs/

Related Solutions



Leak Detection Guarantees Pipeline Safety as Your Business Grows

Risk management is crucial when expanding your business. For example, when adding or expanding long range pipelines for LNG or liquid ammonia, ethylene, sulfur, compressed gas, or other hazardous substances, it is essential to form a risk prevention plan not only for inside the facilities but also for the surrounding areas.

Oil & Gas

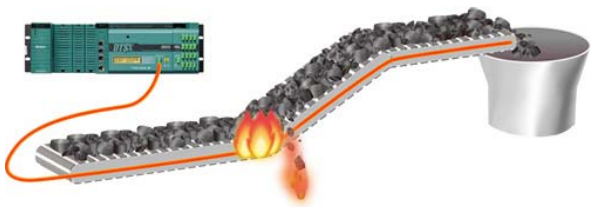
Please refer to the application note (Bulletin 39J00P62-01EN) for more details.

What the Eyes Don't See: Decreasing the Risk of Conveyor Belt Fires at Large Scale Plants

The world has seen its fair share of large-scale accidents in recent years. Despite many near-misses, unless major accidents happen some companies continue to claim that their facilities are sound. And no small number of these companies depend on others for monitoring.

Power

Please refer to the application note (Bulletin 39J00P21-01EN) for more details.



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