

A large mining crane is shown in the process of lifting a heavy, dark-colored component, possibly a bucket or a large piece of machinery. The crane's arm is extended across the frame, supported by several thick cables. The scene is set against a dramatic sky at sunset or sunrise, with warm orange and yellow light filtering through the clouds. In the background, there are some industrial structures and lights, and a person can be seen standing on the ground to the right.

# Optimizing Electrical Infrastructure in Mining

How Continuous Thermal Monitoring (CTM)  
Transformed Reliability in a 24/7 Mining Operation



## End User Background

This large-scale mining operation runs continuously, 24 hours a day, 7 days a week, supported by a highly complex electrical infrastructure. The company operates across four distinct plants: two dedicated to briquetting, one focused on silicate processing, and one mobile unit.

Their electrical infrastructure comprises hundreds of low and medium voltage switchboards, motor control centers (MCCs), and medium-voltage drives.

### Before Exertherm

**“We relied on periodic inspections and still faced fires and long downtimes.”**



**Equipment Downtime**  
spanning over 6 months  
due to electrical failures.



**Fire Incidents**  
in MCCs caused by  
undetected hotspots.



**Limited CTM**  
as only busbar connections  
were monitored.

# Why Exertherm

Previously, the operation relied on other monitoring technologies and periodic maintenance, but both approaches proved ineffective in detecting potential failures. The decision to adopt Exertherm's technology was driven by the need to proactively detect electrical hotspots and avoid future issues.



## Sensor Deployment

Exertherm's CTM sensors were installed across LV and MV switchgear and MV MCCs.



## OEM Installation

As the installations were part of a new build, all work was handled directly by the OEMs.



## Team Training

The end user's technical team received direct on-site training from CTM specialists.

**“With zero maintenance and a lifetime warranty,  
Exertherm was the right fit for us.”**



# After Exertherm

**1** Continuous thermal monitoring is now fully integrated into the site's automation system, enabling real-time visibility into electrical health.

**2** The operation has seen an improvement in system reliability, with early detection of thermal anomalies helping to prevent unplanned outages.

**3** Proactive maintenance has replaced inspections reducing manual workload and enhancing personnel safety by eliminating direct contact with hotspots.

**4** Cybersecurity is prioritized through Exertherm's hard-wired sensors, which eliminate the risk of wireless breaches.



## Looking Ahead



Plans to retrofit into existing MCCs and other switchgear.



All new equipment will come with Exertherm pre-installed.

## Beyond The Snapshot

Thermography provides valuable insights for a single moment in time.  
However, electrical systems can develop issues any day of the year.  
CTM gives you always 'ON' awareness of system health.

[Discover more about CTM](#)

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