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Case Study: TPMS – Real-Time Tyre Management Driving Sustainable Mining at Tronox Namakwa Sands, South Africa

Real-Time Tyre Management: At the Tronox Namakwa Sands operation on the West Coast of South Africa, **sustainability and operational efficiency go hand in hand**. Located at Brand-se-Baai, 385 km north of Cape Town, the mine extracts and processes heavy minerals used globally in **pigments, metals, ceramics, and foundries**. To support **proactive and sustainable mining**, Namakwa Sands is taking control of critical assets — including **OTR tyres, fuel, machine utilisation, and operational safety**. A key enabler is the **Tyre Pressure Monitoring System (TPMS)** across its earthmoving fleet.

Smarter Asset Management with Real-Time Tyre Monitoring

The TPMS delivers **real-time tyre intelligence** to the fleet:

- **Continuous tyre pressure and temperature monitoring**
- **Instant alerts for any deviation from recommended operating parameters**
- **Data-rich journey reports for performance analysis**
- **Automated fleet-wide estate reports on demand**

This empowers operators and control rooms to **respond immediately to tyre anomalies**, preventing costly failures and improving uptime.

Previously, tyre inspections were **daily manual checks**. Today, with Atlas monitoring continuously, physical checks are **reduced to once a week**, saving time and boosting efficiency.

Real-Time Tyre Management: Operational Benefits for Mining Fleets

The TPMS has transformed operations at Namakwa Sands:

- Reduced tyre damage and run-flat incidents
- Enhanced operator safety and situational awareness
- Lower machine downtime
- Reduced fuel consumption through correctly inflated tyres
- Extended tyre life and improved asset utilisation
- Reduced environmental impact through smarter resource management

Supporting Sustainable Mining Objectives

Efficient tyre management directly contributes to **sustainability targets**:

- Prolonging tyre life
- Reducing fuel usage
- Cutting operational costs
- Minimising environmental impact

At Namakwa Sands, this **data-driven approach supports Tronox's commitment to responsible resource management, operational safety, and sustainable mining practices**.

Integrated Technical Support

Successful deployment is backed by engineers and Trysome Auto Electrical Engineering.

"Supporting professionals like Trevor at Tronox Namakwa Sands highlights the real value of the Atlas Tyre Pressure Monitoring System. With real-time alerts and continuous monitoring, Trevor's team can act before tyre damage occurs a powerful example of how Atlas OTR TPMS, helps mining fleets improve safety, uptime, and tyre performance."

Working closely with the Otraco Southern Africa operational team, the solution is fully integrated, reliable, and designed to meet the demanding requirements of mining operations.

Real-Time Tyre Management: Testimonial from the Field

Trevor Nel, Site Supervisor at Tronox, Otraco Southern Africa, shares:
"Fifteen EMV machines (ADTs, OHTs and one FEL) are currently fitted with TPMS. In the past, we checked tyre pressures every day. Now, we only check them once a week. Alerts and warnings are real time, and I can communicate directly with the control room if there is a rapid drop in pressure on a specific tyre. This saves big on tyre costs because we can remove the tyre before a run-flat occurs and repair it."

Why Atlas TPMS Leads in Mining Operations

Before the TPMS, the site trialled other TPMS solutions that failed to meet reliability and operational standards.
TPMS delivers:

- Accuracy, durability, and real-time visibility in harsh OTR environments
- Automated fleet-wide reporting
- Actionable data for tyre, fuel, and equipment management
- With real-time tyre intelligence and journey reporting, Atlas continues to set the standard for OTR tyre and rim technology in mining.

To learn more about TPMS technology**,** contact us