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Track & Infrastructure

Yeltech Ltd

Yeltech and Riyadh Metro: Advancing Railway Infrastructure with Smart Monitoring Solutions

Railway networks across the globe are constantly evolving to meet increasing demands for efficiency, safety and sustainability.

A key player in this transformation is Yeltech Ltd, a company renowned for its cutting-edge remote monitoring solutions. Founded in 2004, Yeltech has successfully positioned itself as an industry leader in the development of innovative technologies for the rail and asset monitoring sectors. Through the integration of Industrial Internet of Things (IIoT) and artificial intelligence (AI), Yeltech delivers real-time data insights that enhance operational efficiency and asset management.

The Power of Smart Monitoring in Rail Infrastructure

In the railway industry, predictive maintenance and real-time monitoring have become critical components in ensuring safety and reliability. Yeltech specialises in advanced remote monitoring technologies that enable seamless and accurate data collection through both wireless and wired transmission methods. These solutions provide immediate insights that allow engineers and operators to make informed decisions, reducing risks and operational disruptions.

Yeltech's customer-centric approach has enabled the company to forge long-term partnerships built on trust, collaboration and mutual success. By understanding the specific needs of each industry, Yeltech tailors its solutions to ensure maximum impact and value for clients.

Among Yeltech's suite of railway solutions, three stand out for their effectiveness:

- Rail Temperature Monitoring (RTM) Units: These devices track rail temperatures supporting railway engineers to prevent track buckling and ensuring smooth operations, particularly in regions with extreme climate variations.
- Tilt Monitoring Devices: Designed to detect structural integrity issues, these devices monitor bridge, structures and track shifts, enabling early maintenance intervention.
- Rail Pantograph Monitoring: These systems provide real-time alerts to help avoid costly breakdowns by detecting faults early, reducing unplanned maintenance and downtime.

By integrating these technologies, railway operators can minimise downtime, optimise maintenance schedules and enhance overall safety, making railway transport more resilient and reliable.

Yeltech's Contribution on Riyadh Metro

One of Yeltech's most notable projects has been its collaboration with the Riyadh Metro, a ground-breaking public transport initiative in Saudi Arabia's capital. Officially launched in November 2024, the Riyadh Metro spans 176 kilometres across six lines, making it

the world's longest driverless train network. With 338 driverless train cars and 85 stations, the metro system accommodates up to 1.2 million passengers daily, with plans to expand its capacity to 3.6 million in the near future.

Recognising the need for a robust and reliable rail temperature monitoring system, representatives from Riyadh Metro maintenance team saw Yeltech's RTM technology as an essential addition to their operations. We are grateful and proud to take a small but important part in such a great project.

Enhancing Metro Safety with Rail Temperature Monitoring

Given Riyadh's extreme temperatures, which can fluctuate significantly between day and night, rail infrastructure is particularly susceptible to track expansion and contraction. This can lead to track buckling, posing a severe risk to metro operations. Yeltech's Rail Temperature Monitoring (RTM) units provide a reliable solution by collecting and transmitting temperature data across the metro system, allowing operators to identify potential issues before they escalate.

A key advantage of Yeltech's RTM units is their wireless and compact design, which allows for seamless installation across multiple metro lines. The system ensures that near real-time temperature readings are accessible to engineers 24/7, helping them to

implement timely corrective measures and maintain uninterrupted metro services. By deploying these RTM units, the Riyadh Metro maintenance team has significantly improved the reliability and safety of its network, mitigating the risks associated with temperature-induced track deformations.

A Strategic Partnership for the Future

Yeltech's contribution to the Riyadh Metro underscores its commitment to providing innovative technology solutions that improve urban transport infrastructure. This partnership has further solidified Yeltech's reputation as a trusted technology provider for large-scale railway projects worldwide. The success of the RTM deployment within the Riyadh Metro network demonstrates the effectiveness of predictive monitoring in enhancing operational efficiency and safety.

Looking ahead, Yeltech is dedicated to advancing its remote monitoring technologies to support the future of railway systems globally. As smart rail solutions continue to evolve, the company remains focused on delivering high-quality, cost-effective engineering solutions that help operators maximise efficiency and minimise risks. By integrating AI-driven insights and IIoT-enabled monitoring systems, Yeltech aims to drive innovation in the railway sector and support the development of next-generation rail infrastructure.

If you're looking to enhance safety, optimise asset performance, and reduce maintenance costs, Yeltech is ready to collaborate with you. Let's work together to create smarter, more resilient railway infrastructure.

Contact us today to learn more about our innovative monitoring solutions and how they can benefit your operations!

For more information visit
www.yeltech.com or email **info@yeltech.co.uk**

WANT TO REDUCE MAINTENANCE COSTS & IMPROVE SAFETY?

Imagine a world where your assets run reliably, your maintenance costs shrink, and your team stays safer—all without the constant stress of unexpected failures.

At Yeltech, we make this possible.

Our cutting-edge IoT monitoring solutions give you insights to:

- ✓ *Reduce Downtime – Detect issues before they cause costly failures*
- ✓ *Improve Safety – Monitor risks and protect your workforce*
- ✓ *Lower Maintenance Costs – Shift from reactive to predictive maintenance*
- ✓ *Boost Efficiency – Get instant data to make smarter decisions*
- ✓ *Ensure Compliance – Stay ahead with automated tracking*

PARTNER WITH US TO TRANSFORM YOUR ASSET MANAGEMENT AND MAINTENANCE STRATEGIES.

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