qontrol LMS

Ladle management system

optimize ladle operations with qontrol LMS

qontrol LMS is the ultimate ladle management solution, empowering steelmakers with real-time tracking, optimized maintenance, and enhanced safety. With modular design and seamless integration, it transforms ladle operations into a model of efficiency and reliability.

Benefits

- **Enhanced Safety:** Proactively monitors ladle conditions, detects wear early, and identifies potential risks to prevent hazards like molten steel breakouts.

- **Cost Optimization:** Maximize refractory life, optimize temperatures, and implement efficient maintenance strategies to reduce costs and downtime.

- **Operational Efficiency:** Streamline maintenance strategies and benchmark refractory performance to prevent unplanned stoppages and drive informed decision-making.

> Advanced tracking, lifecycle management, temperature modeling, and safety monitoring tailored to customer needs.

Our Software Modules

1 Identification & Tracking

Depending on the current situation in the steel plant, the following technologies can be used individually or in combination to identify ladles:

- Manually using the **qontrol LMS software** with robust terminals in the steel mill.
- Automatically using our robust and intelligent (embedded technology) camera system, **qurve**.
- Automatically at the treatment stations by means of our multimedia coupling system, **qoupler M** (i.e. automated gas coupling enhanced by the transmission of electrical signals).

Window of detection

Intelligent camera sensor

Ladle identification marker
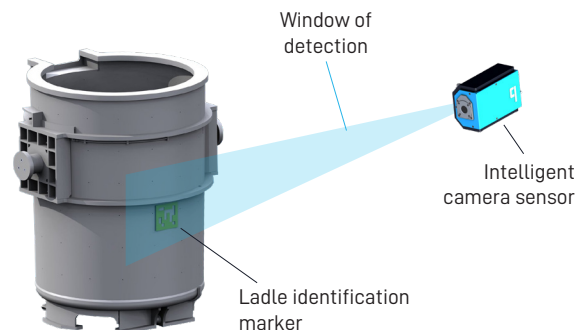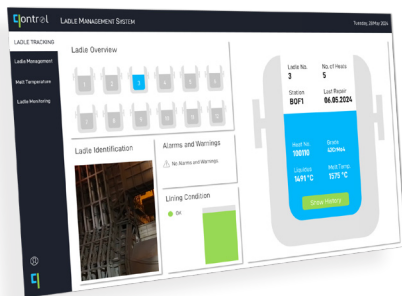
2 Life Cycle Management

This module supports the development of maintenance and production strategies by providing comprehensive records of each ladle's lifecycle. It provides a complete view of ladle history, enabling detailed analysis and continuous improvement, taking into account refractory relinings and repairs as a function of steel grade.

Effortlessly track and monitor ladles at once.

Enhance maintenance and prolong equipment lifespan.

Tailored to your Requirements

3 Steel Bath Temperature Control

Optimal temperature control is a key factor in efficient ladle management. Using process data acquisition interfaces, this module (basic modeling combined with AI models) determines the temperature of the melt in real time from tapping into the ladle to casting. This makes it easier to maintain optimal temperatures throughout the process.
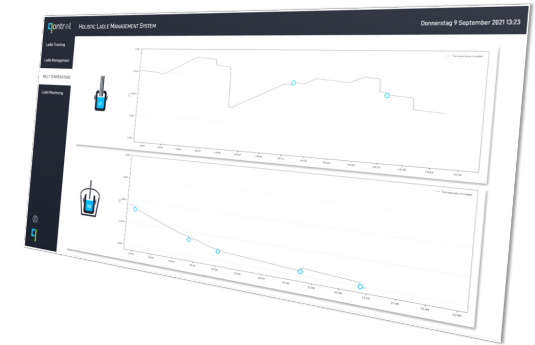
4 Prevention of Ladle Breakouts

This is done by continuously measuring the entire surface temperature of the ladle with our camera system equipped with an infrared lens. Specially developed intelligent algorithms analyze the entire surface of the pan to detect hot spots. If such hot spots are automatically detected by the system, a warning is issued and the ladle can be taken out of service in time for inspection.

Ensure optimal temperatures during your ladle operations.

Improve safety by detecting hotspots early to prevent breakouts.

System Highlights

- **Modular Software Design**
  The software solution is divided into modules, which allows it to be customized and adapted to meet each customer's specific needs.

- **Flexible Integration**
  Designed to seamlessly adapt to steel plant conditions and integrate with existing IT infrastructure, ensuring compatibility and efficient implementation.

- **Advanced Identification Technologies**
  Offers multiple options, including manual identification via touchscreens, automated camera-based recognition and/or based on our automatic gas coupling solution.

- **Comprehensive Benefits**
  Increased safety by detecting hot spots, reduced costs through optimized refractory and temperature management, and improved efficiency by streamlining ladle operations and maintenance strategies.

> 🙿 **qontrol LMS** enables steelmakers to keep track of their equipment in real time. It ensures that equipment is well maintained and improves safety.

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