

Press

London, February 19, 2025

# Primetals Technologies Innovates Coil Tracking with Al-Backed Solution

- Artificial intelligence-based system for tracking coil identification numbers installed at SSAB Hämeenlinna
- Ensures coils are processed in the correct order, increasing productivity
- Digital assistant system detects pickling defects, preventing damage to SSAB Hämeenlinna's cold rolling equipment

Primetals Technologies has recently received the final acceptance certificate (FAC) for digital assistant systems at SSAB's Hämeenlinna plant in Finland. These systems mark the first-ever implementation of Primetals Technologies' digitalization solutions for coil identification and pickling defect detection. The AI-powered systems identify surface quality issues, reducing production interruptions caused by strip breakage and other defects.

For producers in the metals industry, processing coils out of sequence or with undetected pickling defects can result in production delays and equipment damage. To address this, Primetals Technologies has developed Al-driven computer vision solutions for automated coil identification and strip surface monitoring. These assistant systems enhance operational efficiency by minimizing downtime and eliminating the risk of processing coils that do not meet end-customer specifications. The solutions prevent coil mismatches and reduce scrap, with real-time results visualized through augmented video streams.

#### **An Accurate Coil Sequence**

A key objective of the assistant systems is to identify coils at an early stage to ensure correct storage in the coil yard. A strategically placed camera detects coil and saddle numbers while the hot-rolled coils are still located on the delivery train, before storage.

The data is transmitted to a coil yard management system to streamline and optimize crane operations. As the coils are loaded onto the entry walking beam, the coil identification number is detected and cross-checked with the production schedule. If a mismatch is identified, the operator is immediately notified to correct the coil sequence, ensuring smooth and accurate processing.

#### **Continuous Optimization**

The insights gained from the assistant systems are transmitted to the automation systems for further processing, analysis, and documentation. The results are communicated to subsequent downstream processes, enabling real-time adjustments such as modifying rolling speeds or adapting cutting plans.

At SSAB Hämeenlinna, the system will be continuously optimized, as it can be trained to detect new types of coil marking and pickling defects. SSAB has expressed satisfaction with the project, noting the systems' high accuracy even when tracking fast-moving trains, using a standard camera.

### **Digital Assistants for all Production Units**

The Primetals Technologies portfolio includes a wide range of digital assistants for all production units, ensuring precise guidance and detailed support for operators and metallurgists. These assistants facilitate corrective actions based on real-time production data, detect quality deviations, and contribute to the digitalization of operational knowledge.

#### A Wide Range of Applications

SSAB Hämeenlinna was established in 1972 and employs around 1,000 people. In Hämeenlinna, SSAB manufactures cold-rolled, metal-coated, and color-coated steel in the form of coils, precision tubes, hollow sections, strip, and slit strip. The products are used across industries such as automotive, construction, and household appliances. SSAB and Primetals Technologies have cooperated on numerous projects over the years, including several automation initiatives at the tandem cold rolling mill in Hämeenlinna.



Coil ID detection at SSAB Hämeenlinna using Primetals Technologies' Al-backed assistant system.

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## **Contact for journalists:**

Björn Westin, Press Officer bjoern.westin@primetals.com Mob. +43 664 6150250

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