

Quality Tracking System for Steel Coils

Supporting the zero defect vision

Increasing the overall resource efficiency of
the steel supply chain



The purpose of Quality Tracking System

Flat steel products, such as sheets, are often delivered to customers as coils. Coils are easier to transport as several hundred metres of steel can be shipped in a relatively compact load. However, steel coils can have isolated quality issues – imperfections – at points along their length. These isolated flaws can disrupt customers’ processes as finished parts containing the imperfections may be rejected during quality control.

As early as the 1990s, steel coil users began expressing their interest in an information tracking mechanism capable of tracing these imperfections. Steel producers have worked together since then to develop a technology that can track coil information with a high degree of precision. This technology is called the Quality Tracking System.

The main function of the Quality Tracking System is that it can provide additional information about the coil without requiring changes to any quality standards.

In addition, the Quality Tracking System can also be an enabler for companies that are looking to transition to Industry 4.0.

The principles of the Quality Tracking System

Steel coils can have a length of several hundred – or even thousands – of meters. This can make it difficult to locate detected imperfections without using manual position markers.

To solve this problem, the Quality Tracking System uses unique ‘1D’ bar codes printed automatically along the coil at regular intervals - typically every meter. The quality information, when synchronised with the bar code, provides the position of a flaw. This quality information, whose content is standardised, allows the steel users to avoid that part of the coil during their process. This means a user can automatically reject a section of steel on the blanking or stamping line.



EUROFER governance of 1D barcodes

The range of 1D bar codes for steel producers (steelmakers) and the range of production lines (mills) are allocated by EUROFER. This ensures that the bar codes on the steel’s surface are unique and can be clearly identified. Steel producers planning to install the Quality Tracking System should contact EUROFER to obtain a range allocation.

Offers from steel producers

Five steel producers are currently capable of providing coils with quality tracking upon request by customers. These are ArcelorMittal, Tata Steel, thyssenkrupp Steel, voestalpine Stahl and Salzgitter Flachstahl. The steel coils can be hot-dip galvanised, electro-galvanised or uncoated. Please contact the steel producers to get more details about their offers on quality tracking.

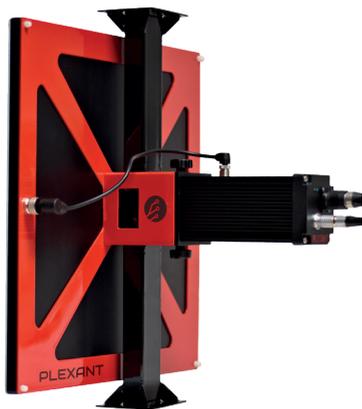
European Standard for the Quality Tracking System

The Quality Tracking System is a standardised technical solution that coil users can employ a single system on coils from all steel producers providing this service.

The publication of European Standard on Quality Tracking is expected in 2019. The EN reference is: prEN10372

Other potential applications

The Quality Tracking System can also be applied to other materials, such as aluminium coils. It can also be used to transfer more information than areas of imperfection. This can be agreed between steel supplier and steel user.



Reader of 1D barcodes from Plexant



Reader of 1D barcodes from Octum

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