



traceability in railway industry

worldwide unique identification of components and parts

picture: Shutterstock, abeadev

Transparency throughout the lifecycle of components

With the project „Automatic ID serialization and traceability of parts and components in rail vehicles“, Deutsche Bahn pursues the objective to identify and trace products throughout their lifecycle beyond companies' limitations.

Starting from 2017, chosen parts and components of relevant safety and availability requirements in rail vehicles will be marked with world-wide unique and machine-readable serial numbers. The identification of components is based on GS1 standard. In order to develop a consistent approach for the marking of components in the railway industry, Deutsche Bahn took part in the working group “Standard identification of parts and components in the rail industry” under moderation of GS1.

The unique identification of parts and components will allow stakeholders to obtain components' information from the first stage of manufacturing throughout the supply chain, operation and maintenance to the last stage of scrapping. The data can then be exchanged between parties, as well as systematically evaluated and used for component analysis during their lifecycle or process optimization. The standardized identification of parts and components is therefore the key for strengthening competitiveness of all stakeholders within the railway sector in managing risks in an increasingly complex and an ever more international supply chain.

Benefits of a unique identification of components and parts:

- Improved diagnostic, error and warranty management
- Optimization of logistic processes and management of subcontractors
- Generating insights of product probation for development
- Support for business process automation
- Foundation for smart maintenance strategies
- Enhanced plagiarism prevention for manufacturers
- Electronic and improved data exchange between the parties

Information and questions please contact:

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Unique component identification and traceability in railway sector on the basis of GS1 Standards

GS1 Germany: Global Standards. Make Business Efficient.

GS1 Germany stands for efficient inter-company processes throughout the entire value chain. Whether in the automobile industry, defense technology or in railway sector: for our customers we promote the implementation of the identification-, data carrier-, communication- and process standards systematically. Through years of trustful cooperation with Deutsche Bahn and other European railway operators, the foundation for a consistent identification based on global standards has been created. As a part of worldwide GS1 network with member organizations in 120 countries, we can guarantee that our customers are able to use the GS1 solutions across national borders.

Success story Harting

Unique Product identification with EPC/RFID-Tags

Product: MICA – train suitable computer platform that allows a simple and decentralized data processing

Application: Serialization, Tracking & Tracing, Production management, Service

GS1 Standard: EPC/RFID-Tag, serialized Global Trade Item Number (GTIN)

“The use of Radio Frequency Identification (RFID) offers many advantages for our processes. Through the application of the GS1 standards, we are not only able to meet customer needs proactively but also to demonstrate customer potential benefits.”

Peter Feldmann, *Business Development Manager, HARTING IT System Integration GmbH*



Success story HFG

Direct marking in maintenance process

Product: refurbished bearings for railway sector

Application: Serialization, Tracking & Tracing, Direct marking, Maintenance Rolling Stock

GS1 Standard: GS1 DataMatrix, serialized Global Trade Item Number (GTIN)

“The serialized identification of refurbished components presents a major challenge – but also holds enormous potentials. In particular, by making use of the GS1 Standards, we can take advantage of these potentials. We and our customers are completely satisfied.”

Frank Wachendorf, *Sales Director, HFG Transport-Technik GmbH*



Success story ContiTech

Serialized Identification with standard label

Product: Air spring system

Application: Serialization, Tracking & Tracing, customized marking of components

GS1 Standard: GS1 DataMatrix, serialized Global Trade Item Number (GTIN)

“The serialized product identification on the basis of GS1 standards is a model of success for our company. We recognize enormous procedural advantages through the use of GS1 DataMatrix and GTIN. We are well prepared for the needs of our customers and the future.”

Hendrik Neumann, *Logistic manager PMS CRE, ContiTech Luftfedersysteme GmbH*



A set of consistent application standards for the identification of equipments, infrastructure elements, parts and components in railway sector is the goal of the global working group „Standard identification of components and parts in the rail industry“ on the platform of GS1. Such standards on the basis of GS1 identification numbers and data carriers enable stakeholders to enhance safety, improve corporate-internal and cross-company processes and to comply important EU legislation at the same time. If you are interested in participating, please contact us.

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