MoComp™ – made to move!

Lightweight & bogie diagnostics – contribution to sustainable rail transport

International Mobilty days, Vienna 13th Dec 2021
Kurt STROMMER

SIEMENS

Rail vehicles all over the world are equipped with innovative and reliable components from Siemens Mobility

Pantograph

Pantographs with an high flexibility for all roof mounted applications

Traction converter

Highly efficient and compact traction inverter for all kind of applications and mountings (underfloor, roof mounted, inside)

Auxiliary power supply

Voltage source converters are used to feed three-phase auxiliary drives or to realize different kinds of onboard power supply

Traction Control unit

Traction Control Units are used to control the complete drive train.

Traction gearbox

Compact traction gearbox designed to requirement specification (e.g. light weight, noise reduced etc.)

Traction motor

Compact and highly efficient traction motor with all kind of suspensions tailored to the requirements (e.g. light weight, power density, efficiency etc.)

Brake systems

Modular and flexible brake equipment for carbody and bogie incl. electronic brake control and wheel slide protection for all railway vehicles.

Bogies & Bogie components

High-tech bogie solutions and bogie components for all railway vehicles based entirely on a modular concept, providing a high flexibility to your requirements

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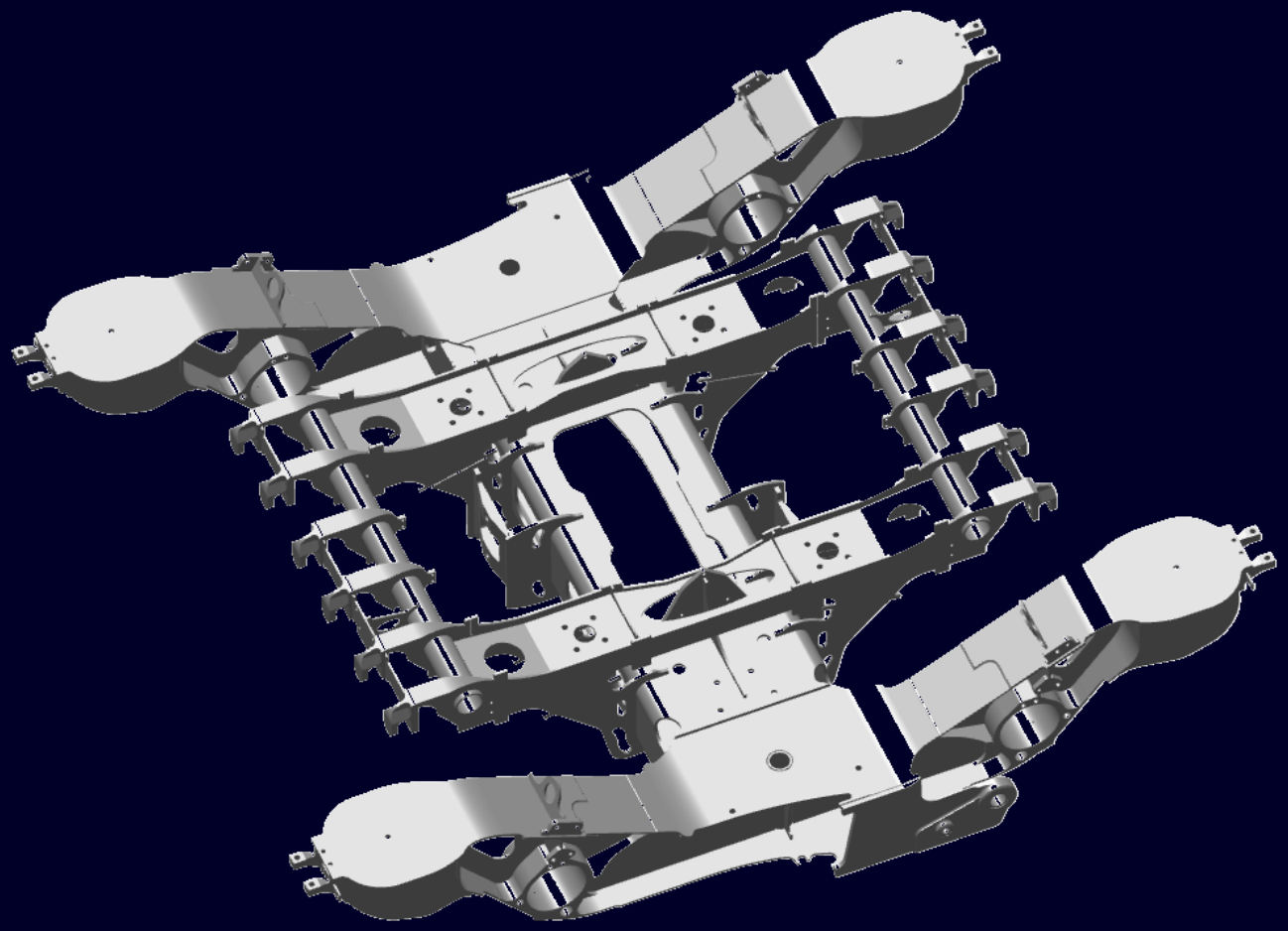

MoComp® Innovative lightweight bogie frame

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Besides energy efficiency light weight offers a range of additional advantages for the customer

Less energy consumption

Higher transport capacity at given infrastructure limits

Less damage to wheel, track and track superstructure

Lower track access charges for using the infrastructure

Depending on the market segment and the customers assessment system, 1 kg saving generates an added value of 10 – 180 € over the lifecycle of 30 – 40 years

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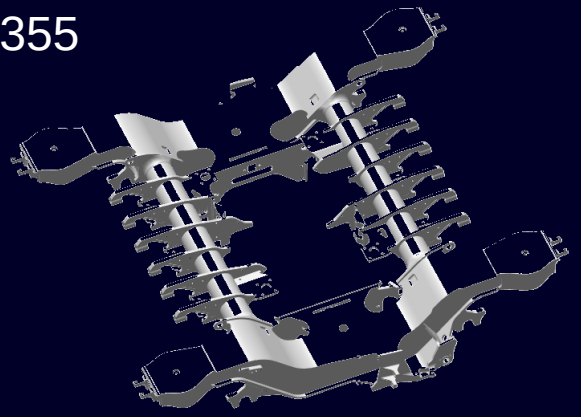
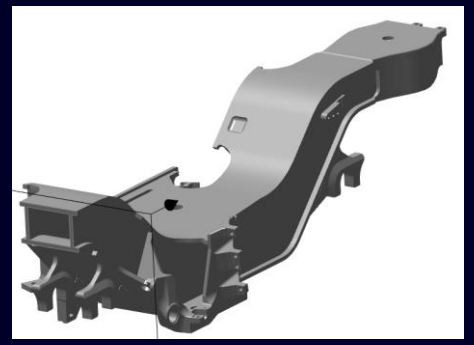
Use of new materials and new ways of design were the enablers for tremendous weight savings

SF100 frame

Steel S355

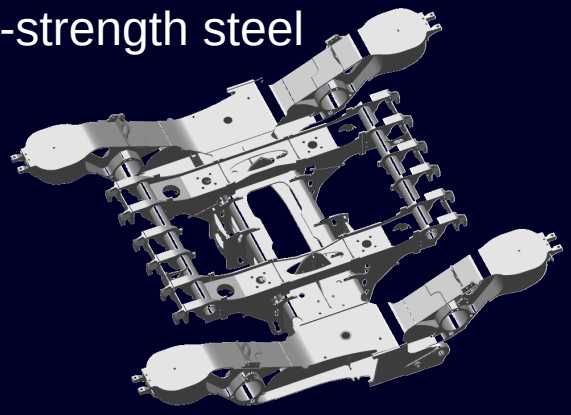


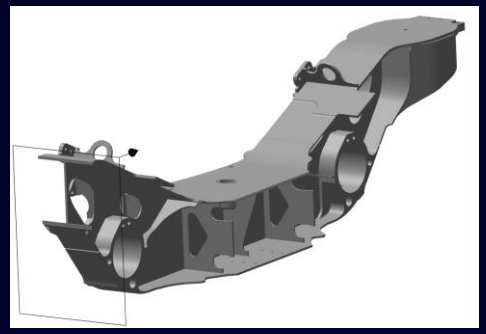


Closed box-shaped profile

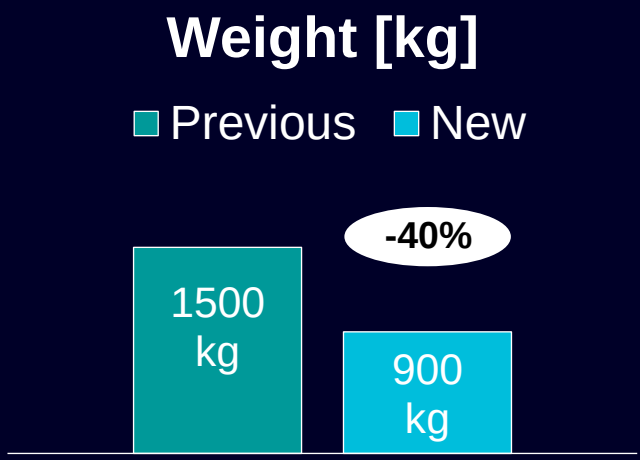
SF100L lightweight frame

Higher-strength steel





Open I-shaped profile with reduced plate thickness



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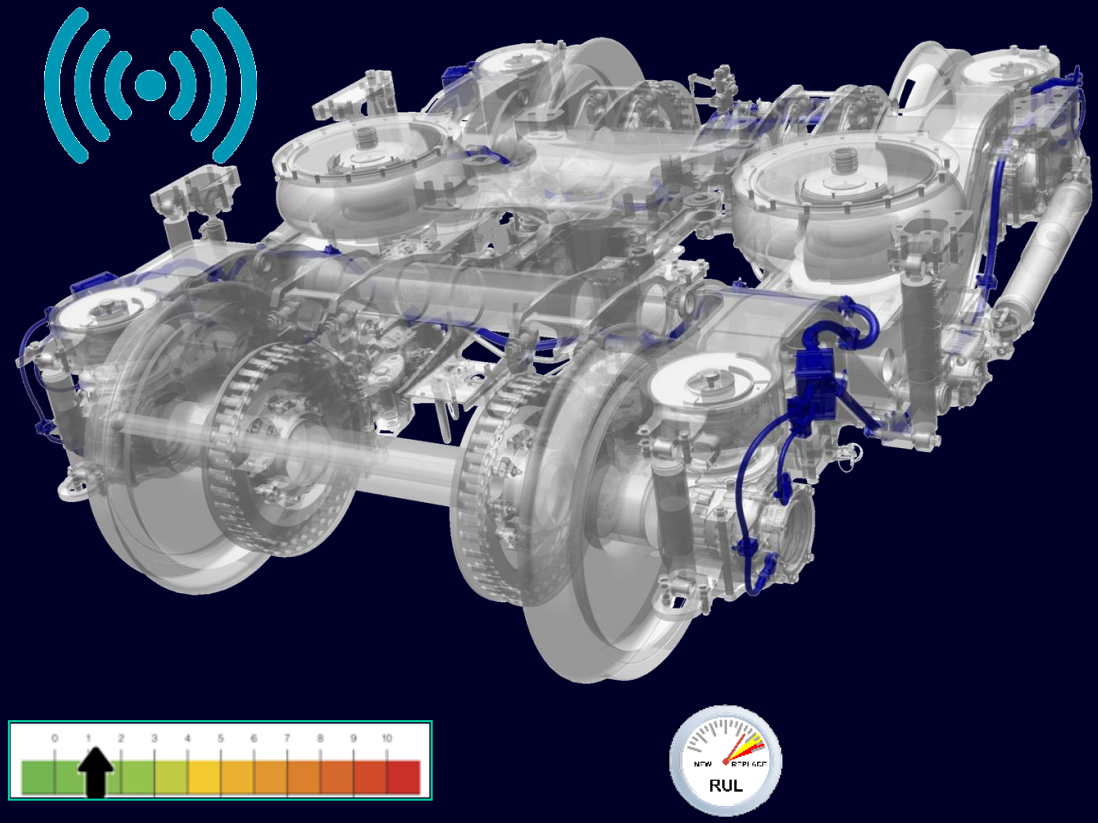

MoComp® Bogie Monitoring & Diagnostic solution

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MoComp® Monitoring & Diagnostics Solutions focuses on three main applications

MoComp® Bogie Monitoring Solution

Safety relevant

Functions actively affect train control

- Derailment Detection
- Obstacle Detection

GOAx

- Hot Box Detection
- Unstable Running Detection
- Wheel Monitoring

TSI

Metro Klang Valley **Metro Riyadh**

MoComp® Bogie Diagnostic Solution

Not safety relevant

Functions enable diagnostics of component and bogie system condition

- Wheelset
- Bearing
- Drive System
- Dampers
- Rubber-to-metal Parts
- Structural Elements

RRX - Rhein Ruhr Express

MoComp® Track Diagnostic Solution

Analysis of track condition

- Track Condition Indication
- Vehicle Track Interaction VTI (US)

Charger Lok US

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The Bogie Diagnostics Solution can diagnose all bogie components and is the key for maintenance optimization

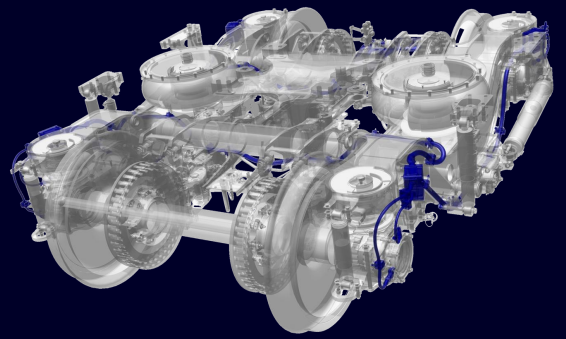
What does the Bogie Diagnostic Solution provide to the maintenance engineer?

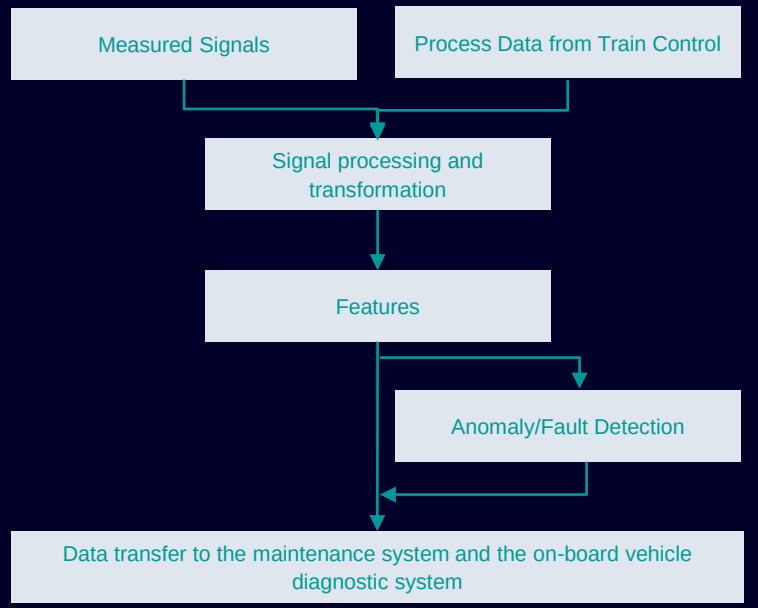
»Health States« of the components under consideration of the bogie performance → Status Information 1 … 10

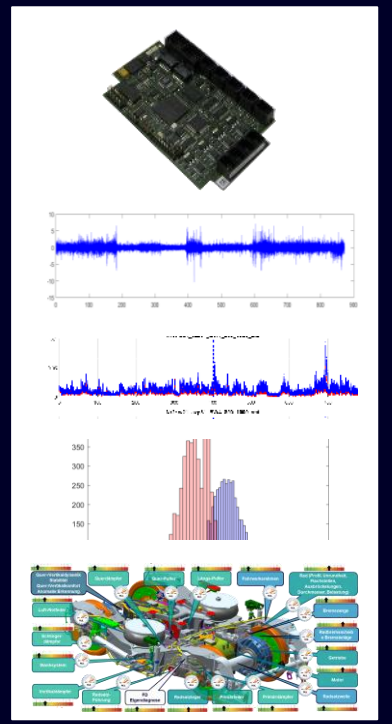
Estimated **»Remaining Useful Lifetime«** of bogie components

»Workshop Messages«
(recomendations for maintenance measures)

The bogie diagnostic solution is a sensor system for identifying the system behaviour of the bogie.







Dipl.-Ing. Kurt Strommer

Head of Product Portfolio Management and
Advance development Bogie
SMO RS CP PPM

Eggenberger Strasse 31,
8020 Graz, Austria

Phone +43 664 8855 4698

E-mail kurt.strommer@siemens.com

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