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HELMS

Hybrid **EL**ectro-**M**echanical **S**hunter

Our environmentally friendly hybridisation and modernisation solution for the Class 294

Innovation and new components:

- Power-split mechanical transmission
- 92 kWh Li-ion traction battery
- Traction converter and drive control apparatus
- Two traction motors (2 x 330 kW) and one generator

Stock components:

- Locomotive frames, bogies including adapted superstructure modules
- 1,000 kW diesel engine

Hybridisation targets:

- 20% reduction in fuel consumption
- Reduction of carbon emissions
- Reduction of particulate matter emissions
- 100% emission-free last mile

Modernisation targets:

- At least 16 years' extended service life
- Reduced maintenance costs
- Better availability

www.db-fzi.com/HELMS

An innovation project within the DB integrated rail system:

DB Fahrzeuginstandhaltung GmbH
DB Cargo AG
DB Systemtechnik GmbH

This is green.
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no. 45 Less pollution.
Greener trains.
The HELMS locomotive.

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Last updated: April 2019