

Knorr-Bremse PowerTech supply advanced electronics equipment to the Deutsche Bahn for new rail vehicle test benches

The Deutsche Bahn AG (DB) recently commissioned a rail vehicle test bench with state-of-the-art technology at their maintenance facility in Neumünster/ Germany. Automation and drive technology was developed by Fest AG in Goslar and Knorr-Bremse PowerTech supplied the frequency converters for the entire system along with critical technical project support for the fine-tuning of the design.

Deutsche Bahn deployed this new rail vehicle test bench to maintain and test passenger coaches. It is also used as a medium-voltage test bench to test complete coaches, including heating, ventilation and air conditioning (HVAC), lighting, auxiliary power converters, wiring etc.

Knorr-Bremse PowerTech converters are part of the four multi-voltage testing units, providing AC and DC supply voltages for external power supply to many different types of train. The required voltage and frequency are set for testing trains in either 3-phase or 1-phase operation. The test bench can thus be used to carry out tests and maintenance work on the trains with the components installed. Removal of the components for testing is not necessary. Also, depending on the vehicle type, each rail can be supplied differently.

The specialized power converters used on this application are part of the “Industry and Energy” power converter product line from Knorr-Bremse PowerTech. The converter series’ flexible design enables deployment in a variety of applications: from energy-efficient automation and drive solutions, to solutions for the varying forms of power generation and high dynamic special applications. The converters consist of mains and drive converters in the power range of 50 kVA to 6000 kVA and up to 12 mW in parallel. These frequency converters thereby facilitate the complete simulation of technological processes in test bench applications. This helps to lower development costs substantially and dramatically speeds up development cycle time.

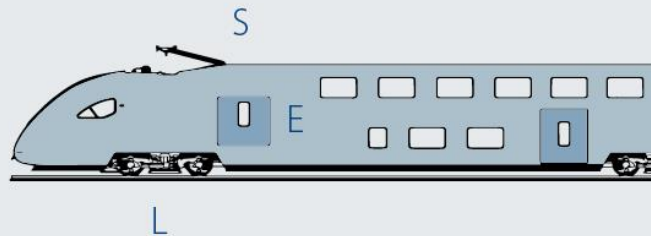


Modular designed frequency converter of Knorr-Bremse PowerTech with DC bus and active front end for test rigs applications in the railway industry.



Rail vehicle test bench of Deutsche Bahn AG – equipped with Knorr-Bremse PowerTech technology.

POWERTECH TEST RIGS FOR RAILWAY INDUSTRY



- L** Load of propulsion
- E** External AC/DC auxiliary power supply
- S** Simulation of AC- or DC catenary voltage

PowerTech frequency converters integrated in railway test rig for various tests.