

Press Release

Voith Turbo GmbH & Co. KG
Alexanderstraße 2
89522 Heidenheim, Germany
Tel. +49 7321 37-2802
Fax +49 7321 37-7110
www.voith.com

2014-07-08

Voith at InnoTrans 2014: "Connecting Forces – Driving Innovation"

Voith is presenting its latest developments at InnoTrans 2014 in hall 1.2 on stand 220, themed "Connecting Forces – Driving Innovation". In focus are innovative, reliable drive components, couplers and service concepts, whose interaction once more proves the system competency of Voith. In addition, the stand will feature lightweight solutions, among them an energy absorber and the Voith front nose of the new ICx high speed train.

Modern Service: Integrated Rolling Stock Management

While the term "Service" used to be mainly associated with repairs and spare parts, Voith now proves exactly the opposite with modern service concepts. This includes just-in-time schemes with overhauls within a precisely defined window or preventative overhauls, as well as exchange pools for transmissions and Scharfenberg couplers. Under the heading "Systems Service" Voith goes one step further. At its location in Kiel, Voith carries out major overhauls of entire vehicles. In future, the site will offer the removing and reinstalling of complete bogies within one day for example. The removed bogies are overhauled while the operator will be able to put his vehicle back into service on the following day with the serviced exchange unit.

Monitoring, documenting, informing and, if necessary, also maintaining or modernizing - the focus is on integrated rolling stock management, a task that Voith takes on with its proven competence. The all-inclusive scheme helps operators to reduce downtimes. At the same time, the overhaul periods are effectively used by Voith for upgrading drive components to the latest technical standards, repairing damaged vehicles or integrating complete new systems into the vehicle infrastructure. Such product improvements are at the heart of the modern Voith service concept and apply to components and entire systems alike. This is demonstrated at InnoTrans by the example of an exhibited start-stop automatic. The system

can be retrofitted to older vehicles, even if they are not fitted with an electronic control system. It reduces engine operating hours and thus cuts down on maintenance costs, emissions and fuel consumption. Voith not only offers the components for the system, but also its installation and approval under one roof.

Voith Turbo GmbH & Co. KG
Alexanderstraße 2
89522 Heidenheim, Germany
Tel. +49 7321 37-2802
Fax +49 7321 37-7110
www.voith.com

Fiber Reinforced Plastics: Light-Weight Solutions for More Efficiency

At this year's InnoTrans Voith presents a new energy absorber made of glass fiber reinforced plastics (GFRP), which is part of the light-weight concept Galea. Apart from its fiber composite crash tube, the absorber comprises a bearing and an anti-climber plate, both made of aluminum. The components excel in longevity, and they offer a constant energy absorption behavior even when the absorbers meet at an offset. With 70 to 95 kg, a 60% weight reduction could be achieved, compared with standard steel absorbers. For the train operator this means higher economic efficiency and a saving of resources while providing at least the same level of safety. Another example of light-weight design on the stand will be the GFRP front nose of the new German ICx high speed train.

Page 2 of 4

Adapter couplers are mainly used for towing operations of failed trains, and every train has to have at least one of them on board. The CFRP (carbon fiber reinforced plastics) adapter coupler developed by Voith is extremely compact and has a total weight of only 23 kg. Where so far two people were necessary to fit an adapter coupler on the train, this one can be carried and mounted by one person alone. First practical tests in the market were successfully concluded, now the CFRP adapter coupler can be tried out and lifted on the stand.

New Standard for Safety: SA3 Coupler with Energy Absorption

For the first time, Voith presents its own, newly developed SA3 center buffer coupler. This new version is a robust and easy to operate automatic coupler, which has been complemented with different types of draft gears and energy absorption solutions. The coupler body is available in different design variations, covering applications in both Eastern and Western Europe. The rear end of the coupler head is designed as muff coupling connection or lug solution. In combination with Voith coupler shanks and draft gears, this allows for a maximum amount of energy absorption.

The Voith SA3 coupler therefore already meets the rising safety requirements in passenger traffic, which result from the new Russian standard GOST 32410 on crash safety. Furthermore, the integration of a

mixed coupler device allows the SA3 coupler to connect just as well with vehicles fitted with drawhook and side buffers. Automatic air pipe connections are also available.

Voith Turbo GmbH & Co. KG
Alexanderstraße 2
89522 Heidenheim, Germany
Tel. +49 7321 37-2802
Fax +49 7321 37-7110
www.voith.com

Everything from One Single Source: Voith RailPack for Diesel Drives

Voith underlines its systems philosophy also with the RailPack – a PowerPack for diesel drives, which can be fitted with hydrodynamic, electric and hydromechanical drives. The version on show features the hydrodynamic S111 transmission for rail applications in the power range up to 250 kW. On the strength of its robust technology it can cope with all operating and weather conditions and requires only little maintenance. Combined with long oil change intervals this ensures continuously low operating costs.

Page 3 of 4

As a further installation option Voith shows its hydromechanical DIWARail transmission. The hydrodynamic brake significantly minimizes wear at the mechanical brakes. Due to the parallel shaft reversing transmission of the DIWARail, reversing on the gear units is no longer required. This reduces the mass of the gear unit, resulting in less wear and improved running properties. Towing trips while the engine is switched off are possible as well.



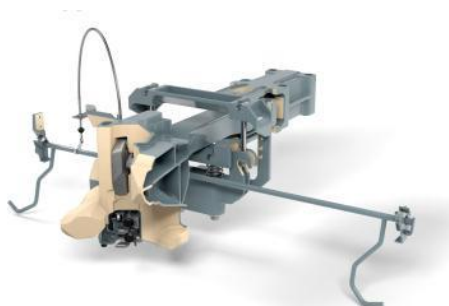
The energy absorber made of glass fiber reinforced plastics weights only one third of the standard steel absorber



Front nose of the new German ICx high speed train



The CFRP adapter coupler can be carried and mounted by one person alone



The Voith SA3 coupler with energy absorption and automatic pipe coupler

Voith Turbo GmbH & Co. KG
Alexanderstraße 2
89522 Heidenheim, Germany
Tel. +49 7321 37-2802
Fax +49 7321 37-7110
www.voith.com

Page 4 of 4



The Voith RailPack offers an ideally aligned system for every drive

Voith Turbo, a Group Division of Voith GmbH, is a specialist for intelligent drive solutions. Customers from highly diverse industries such as oil and gas, energy, mining and metal processing, ship technology, rail and commercial vehicles rely on advanced technologies from Voith Turbo.

Voith sets standards in the markets energy, oil & gas, paper, raw materials and transportation & automotive. Founded in 1867, Voith employs more than 43 000 people, generates €5.7 billion in sales, operates in about 50 countries around the world and is today one of the largest family-owned companies in Europe.

Contact:
Nadine Queiser
Internal & External Communications
Telephone: +49 7321 37 2802
Nadine.Queiser@voith.com