

Press Release

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With Voith to the Top: Variable Vehicle Head Concept Galea

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With Galea, Voith has developed a variable vehicle head concept for rail vehicles that combines low weight with low energy consumption, supreme flexibility and maximum safety standards. Against the background of rising market potentials and increasing competition in rail traffic, Voith meets all the requirements on modern, safe and competitive vehicle heads.

Rising market potential increases competition

While the developments in rail traffic are meanwhile less prominent after the strong increase in 2010 (2.2 percent), 2011 still saw 1.0 percent growth (source: InnoZ-Verkehrsmarkt Monitor 2012). For 2012, experts anticipate rising demand: "Personal income, the consistent opening of the rail markets and persistently high fuel prices continue to have a positive impact on growth in rail transport - it is expected that the demand will continue well beyond 2012," says Prof.

Dr.- Ing. Markus Hecht, Professor and head of the rail vehicle division at the Faculty for Transport and Machine Systems at Berlin Technical University.

Rising market potential also increases the competition among the operators: in passenger traffic, 21.6 percent of all train kilometers are meanwhile covered by private railway companies, so far mainly in regional traffic. On long-distance routes, DB German Railways is still unrivalled. In order to gain a share in this market, private rail companies have to make passenger traffic more attractive. The safety and efficiency of the vehicles are as relevant as ecological aspects that move more and more into the foreground. Companies therefore develop new technologies for the sustainable reduction of CO₂ emissions. These technologies include drive systems, but also multiple units and vehicle heads in lightweight construction. The latter increases energy efficiency and actively contributes to climate protection.

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This is exactly where Voith aims with the Galea vehicle head concept: the vehicle heads have been developed for maximum speeds of 200 km/h, i. e. for regional and long-distance passenger traffic. Previous steel constructions were replaced by lightweight structures, consisting mainly of fiber composite materials. This minimizes wheelset loads, as well as wear on train and rails. Fiber compounds also allow the creation of complex shapes and freeform surfaces that are essential for modern designs. Aerodynamic external contours can therefore be produced more easily and cost-effectively. Due to its variable design, the vehicle geometry of the Galea series can be individually adapted. Modular construction also allows short assembly and exchange times. Private and regional transport operators can thus retain their brand identity and distinctly differ from other competitors in the industry.

Voith Turbo, the specialist for hydrodynamic drive, coupling and braking systems for road, rail and industrial applications, as well as for ship propulsion systems, is a Group Division of Voith GmbH.

Voith sets standards in the markets energy, oil & gas, paper, raw materials and transportation & automotive. Founded in 1867, Voith employs almost 40 000 people, generates €5.6 billion in sales, operates in about 50 countries around the world and is today one of the biggest family-owned companies in Europe.

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