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Partnership is a top priority at Vossloh Rolling Stock & IMATEQ

Vossloh Rolling Stock and IMATEQ invite you to “Unleash our potential” at InnoTrans 2024.

At InnoTrans 2024, Vossloh Rolling Stock is presenting itself together with IMATEQ under the trade fair motto **“Unleash our potential”**. “From our point of view, a trade fair motto couldn't be more fitting,” says Henrik Egeter, Managing Director of Vossloh Rolling Stock, looking forward to the numerous encounters during the event. “There is a lot to discover with us”: at our usual location in the outdoor area south (stand O/330), visitors can experience environmentally friendly and future-oriented locomotives paired with Europe-wide service expertise and, for the first time, find out about a wide range of design opportunities in the medium-sized environment at Vossloh Rolling Stock and IMATEQ in the InnoTrans Campus in hall 7.2c at stand 217. At the Talent Day on 25 September 2024, between 9:30 and 10:00 a.m., we have provided information about development opportunities in technical professions.

Modula platform now with four pioneering variants

At the same time, the motto **“Unleash our potential”** also stands for the self-conception of actively shaping the future of green mobility with customers and partners. Close partnerships and an in-depth understanding of market requirements are essential for the development of successful locomotives.

The proof is in the revolutionary Modula hybrid locomotive platform, which offers customers and operators maximum adaptability and future-proofing. In addition to utilising low-emission technologies, energy sources can be flexibly combined to meet specific requirements. Designed for both shunting tasks and heavy goods transport, they offer robust and reliable performance. The consistent focus on current and future customer requirements is reflected in the fact that all four Modula variants have now been ordered by customers or an LOI has been signed. The prototypes are currently being assembled and tested; the Modula EBB will be on display as an example, which has been undergoing the type tests required for approval since April 2024, while the driving dynamics tests are very promising.

The shining highlight, however, is the Modula BFC as a joint world première by Vossloh Rolling Stock and duisport rail. Dipl.-Ing. Hans-Georg Christiansen, Managing Director

of Duisport rail, is proud of what has been achieved: “With the battery-hydrogen fuel cell locomotive, we are sending an important signal for rail as a mode of transport and in particular for rail freight transport on the further path to decarbonisation, especially in these challenging times.” Solutions for the capacity of the carbon fibre tanks, the pressure level of the system and the shock sensitivity were found in close cooperation. The experience of the parent company CRRC ZELC from several successfully realised projects with its hydrogen fuel cell technology was also groundbreaking. The hydrogen-powered Modula BFC is to be used at the new Duisburg Gateway Terminal (DGT), the largest combined transport terminal in the European hinterland, which will be operated completely climate-neutrally with the help of its own photovoltaic system and hydrogen.



Which of the four variants - EBB, EDD, BDD or BFC - represents the ideal package for the respective customer requirements can be simulated and analysed using customer data - based on future route characteristics, timetables and train weights - in order to determine a precisely coordinated variant.

New service dimension

On the service side, the Modula locomotives are equipped with an intelligent train control management system (TCMS), which collects and analyses data from more than 100 sensors. This information, which is stored in the cloud, can be used for condition-based maintenance and fleet management.

Another important step is the new control system. This has created the basis for upgrading the locomotives with new functions in the coming years. As new market requirements are on the horizon, many of these have already been taken into account in the platform. For example, a digital automatic coupling or a camera for obstacle detection can be retrofitted. A higher ATO level will also be possible. The Modula platform will be continuously developed as new technologies become available. Augmented reality functions for service operations and support are also possible.

In addition, the modular drivetrain concept means that drive sources can be replaced with new systems even after several years of operation, should the operating profile change or new developments become available, such as batteries with a higher capacity.

Second-Life battery concept

With the second-life battery concept, a recycling system for traction batteries was initiated with specialised second-life partners. This makes Vossloh Rolling Stock locomotives even more sustainable and environmentally friendly in line with the guiding principle of “Sustainability in motion”.

DE 18 SmartHybrid neu ausgerichtet

Initially, the DE 18 locomotive in the SmartHybrid version will benefit most from this. The underfloor battery enables emission-free shunting for an hour. In addition, the powerful drive system sets new standards in the railway industry. Thanks to the intelligent operating modes and the option of using environmentally friendly HVO fuel to save up to 90 % CO₂, it offers significant advantages in terms of efficiency, operating costs and environmental protection.

These aspects, among others, were decisive for the purchase of ten low-emission locomotives of this type by SPITZKE SE. Mark Fisher, CTO of SPITZKE SE, also confirms this and emphasises: “With our decision in favour of the universal locomotive, we are responding to the specific need to increase our capacities for the maintenance and revitalisation of rail-bound infrastructure. Never before has a reliable railway infrastructure been so important and the volume of challenging major projects so large as it is today. In addition to the trusting cooperation over many years and the outstanding performance values of the DE 18, the high quality of the locomotives and their flexible application options as well as the prompt delivery options were decisive factors in the decision to purchase the DE 18 from Vossloh Rolling Stock.” Roland Pauli, Managing Director of SLG SPITZKE LOGISTIK GmbH, adds: “The DE 18 Stage V locomotives, which are to be delivered from summer 2025, will be used in future by SLG SPITZKE LOGISTIK GmbH as a subsidiary of SPITZKE SE and will play a central role in domestic supply transport for construction projects of the SPITZKE Group as well as in the realisation of transport services for SLG's customers in the industry.”

While the retrofit offer for ETCS L2 is under development - approval for France, Belgium, Luxembourg and Germany is expected in 2025 - the DE 18 SmartHybrid will now also continue its successful course outside Europe.



Emission free battery operation

- Up to 1 hour continuous electric shunting operation (80-20 % SOC)



Stop-start time extension

- Up to 3 hours of complete Diesel engine stop, while supplying auxiliary consumers



Automatic charging mode

- Use of engine operation for automatic battery charging



Smart Indicator

- Clear operation mode feedback by unique colors
- Override automatic operation mode change with a simple keystroke

For more information, visit us at our trade fair booth or on the Internet
www.vl-rs.com

Contact:

Verena Jeroch
Head of Communication & Marketing
Vossloh Rolling Stock GmbH
fon: +49 (431) 3999-2613
mail: verena.jeroch@vl-rs.com

Vossloh Rolling Stock

Vossloh Rolling Stock has opened a forward-looking chapter in 2020 by moving under the umbrella of its parent company CRRZ ZELC. This strong connection lays the foundation for significantly expanding our product range and driving forward technological innovations and sustainable concepts even faster. We benefit from economies of scale in production and investments in our manufacturing and service capacities. Today, we cover the entire value chain of a locomotive - from locomotive design and engineering to platform production in a state-of-the-art manufacturing facility and customised service with all ECM functions.

As one of the leading locomotive manufacturers in Europe and a company steeped in tradition with more than 150 years of expertise in locomotive construction, Vossloh Rolling Stock is committed to sustainable mobility - through far-sighted and determined action, in constant dialogue with our customers. The

concept for success that customers from all sectors - whether state railways, lessors or industrial and private railway customers - trust is traction that is precisely tailored to their needs. Our focus has always been on highly economical, robust and user-friendly solutions for all transport tasks in shunting and trackside operations. With our technological innovations and resource-saving production and service processes, we always set industry standards. Ultimately, we are characterised by the fact that we always see cooperation with our customers and partners as business-to-human and practice it in a very personal way.