

PRESS RELEASE

VDL Bus & Coach and Team FAST build world's first formic acid-powered city bus

VDL Bus & Coach and Team FAST will collaborate on the development of the world's first city bus that runs on formic acid. Team FAST, a group of students from Eindhoven University of Technology, presented a model car that runs on formic acid in January 2016. "We have liquefied electricity," says Tim van Lohuizen of Team FAST. "And we look forward to the challenge of further developing our system for use in buses with VDL Bus & Coach." "We are constantly looking for new technologies that make it easier to extend the range of zero emission transportation. The conversion of formic acid to hydrogen is one of these promising new technologies," says Menno Kleingeld, Managing Director VDL Enabling Transport Solutions (VDL ETS). VDL ETS focuses on the strategic importance of E-Mobility and carries out all pre-development projects in the area of innovative transport solutions within VDL Groep.

Liquid electricity

Formic acid, or methanoic acid, is a chemical substance that also occurs in nature. As a chemical product it is used for various applications. Researchers at Eindhoven University of Technology have discovered a way to quickly and efficiently transform hydrogen into liquid formic acid and back again into hydrogen. Formic acid as liquid energy carrier can be stored and transported much more easily. Existing filling stations can be used for the energy supply, because a bus that runs on formic acid does not need to be recharged but rather fills up with formic acid, like filling a tank with diesel. This means no emission of harmful gases and a much greater range than what is currently common for vehicles with alternative powertrains.

VDL Citea Electric

The bus that will become the world's first formic acid-powered bus in the course of 2016 is a VDL Citea Electric with a length of 12 metres. The modular construction of the Citea range makes it possible to choose from various electric drive systems, battery packs and charging systems so the most ideal and optimal combination can be selected for every deployment area. This modular design also facilitates the necessary adaptations for driving on formic acid, without consequences for accessibility, interior layout or comfort.

Team FAST

Team FAST consists of around 25 students from Eindhoven University of Technology. This group of students is engaged in the development of technology that can use formic acid as a renewable, liquid, innovative energy carrier. The team was formed in September 2015, and just four months later, on 14 January 2016, they presented a model car powered by this new discovery. Since then, Team FAST has set to work to further develop its technology to make it suitable for large vehicles

too. Because Team FAST strives for a sustainable world and truly wants to make a contribution, the decision was taken to enter into a partnership with VDL. In this way Team FAST intends to demonstrate that formic acid is an attractive solution for sustainable mobility.

VDL Bus & Coach

The core activities of VDL Bus & Coach consist of the development, manufacturing, sales and after-sales of a wide range of buses, coaches and chassis modules, the conversion or extension of mini & midi buses and the purchase and sales of second-hand buses. Manufacturing takes place in the Netherlands and Belgium. VDL Bus & Coach places high value on quality, safety, durability, the environment, low fuel consumption, comfort and low maintenance costs. Sales of VDL Bus & Coach products take place through a worldwide network consisting of corporate-owned sales offices, importers and agents in more than 30 countries. This makes it possible to offer custom-made transport solutions. For after-sales and maintenance, the client can count on rapid, hassle-free assistance from VDL Bus & Coach employees in any of the many service locations. An extensive distribution network ensures that spare parts and accessories are delivered to the requested destination as quickly as possible. VDL Bus & Coach is one of the largest bus producers in Europe.

VDL ETS

Within VDL Groep, VDL Enabling Transport Solutions (VDL ETS) pursue a wide range of E-Mobility initiatives and maximize synergies in the world of innovative transport solutions.

VDL Groep

VDL Bus & Coach and VDL ETS are part of VDL Groep. VDL Groep, with its head office in Eindhoven (The Netherlands), is an international industrial company focused on the development, production and sales of semi-finished products, buses & coaches and other finished products and the assembly of cars. Since the founding in 1953 this family-owned company has grown to include 87 operating companies, spread over 19 countries with more than 11,000 employees and a turnover of 2.7 billion euros. The strength of VDL Groep lies in the mutual cooperation between the companies.

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