COMMERCIAL ROAD VEHICLES

Electrification on the Rise

10 Distributed Battery Systems for Fully Electric Heavy-duty Trucks
Funda Seyitoglu, Kerem Eren
[AVL Research and Engineering],
Fabian Luttenberger,
Paul Schiffbaenker [AVL]

18 “The electrification of heavy-duty traffic must be actively promoted”
Interview with Andrea Kollmorgen
[Siemens]

22 48-V Mild Hybrid System for Commercial Vehicles
Markus Lampalzer, Michael Lechner
[MAN Truck & Bus]

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Automotive companies are developing battery-powered commercial vehicles in order to fulfil the EU's CO₂ emissions standards. In urban areas, such distributor trucks and buses can already be seen in productive operation. For the long-haul domain, energy storage and insufficient charging infrastructure still represent considerable hurdles to be overcome.

The focus of current research and development activities is not only on the storage capacity of batteries, but also on the best possible integration of these heavy components. The goal is to achieve the most cost-effective product possible while simultaneously fulfilling ambitious requirements for safety, performance and lifetime. The distribution of battery systems across multiple locations in a truck could be such a solution. AVL has investigated the challenges such a solution presents.

The coronavirus strongly influences our daily lives, even determining how interviews are conducted. Normally, we meet our interview partners at their company site so that we can carry out the discussions face-to-face. This time, the interview with Andrea Kollmorgen, Head of Connected eMobility at Siemens was conducted in writing. She explains from page 18 on how the electrification of heavy duty traffic can be pushed forward.

Increasing numbers of cities are choosing hybrid technology when purchasing new buses. For example, the 48-V mild hybrid system represents potentials to reduce fuel consumption with a favorable cost-benefit ratio. MAN's city bus, Lion's City, can be equipped with a crankshaft starter-generator to become such a system. There are other advantages apart from the potential fuel savings such as zero pollutant emissions and zero engine noise at bus stops by shutting down the engine.

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