Press Release

State of health is a crucial factor in determining the value of a traction battery

Fast battery test for electric vehicles: DEKRA already serving corporate customers

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- Patented process delivers accurate results within 15 minutes
- 50 models can currently be tested – likely to reach 100 by the end of 2022
- Initial target group comprises leasing companies and large car dealerships

The expert organization DEKRA has entered the market with a new fast battery test for corporate customers in Germany. The patented process has been validated by RWTH Aachen University and also through tests with various vehicle manufacturers. As a rule, the actual test takes no more than fifteen minutes to provide an accurate value for the state of health (SoH) of a traction battery. "As the battery accounts for a large proportion of an electric vehicle's total value, the SoH of a pre-owned vehicle is a decisive valuing factor," says Ulrike Hetzel, Member of the Board of Management and Chief Technology Officer at DEKRA.

DEKRA's new fast battery test is already in corporate customer use as part of an advanced pilot project and will be rolled out further in the months to come. Initially, the service is aimed at customers in the used car management sector, such as leasing companies and major car dealerships. Private customers, for whom the issue of battery health tends to be a lower risk as they can benefit from manufacturers' warranties, will be targeted at a later stage.

The test is based on the measurement of battery characteristics during a very short test drive. "All it takes is brief acceleration for around 100 meters, during which the data is read via the on-board diagnostic interface," says Ulrike Hetzel.

The know-how is in the database and the underlying algorithm

The essential know-how, however, lies in the ability to interpret the measured values. "The process is backed up by a highly sophisticated database and an extremely complex algorithm," says the DEKRA Board Member. "The core data is determined in advance for each individual vehicle type, based on test drives under a wide range of conditions. This is followed by structuring and further complex computations, partly with the help of artificial intelligence. We call this entire

Date Stuttgart, April 28, 2022 / No. 039-A
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process ‘parameterization’. In the test, the results of the measurement are evaluated based on these type-specific parameters.”

100 vehicle types will be on the list by the end of the year

At present, the list of types for which DEKRA can offer a fast test comprises more than 50 vehicle models. They include volume models from various German and other European manufacturers (VW, Mercedes-Benz, BMW, Renault), but also, for example, Asian makes (Kia, Hyundai). “We currently cover around one third of all vehicles in Germany that are powered by batteries or hybrid engines, and we are continually parameterizing further models,” says Ulrike Hetzel. “By the end of the year, we want to have the relevant data material for another 50 vehicle types, so we’ll be covering more than half of all vehicles in Germany.”

The demand for determining the state of health of an electric vehicle traction battery is expected to grow over the next few years. Thanks to government subsidies, hundreds of thousands of vehicles with either batteries or hybrid drives are now entering the market. As soon as they change hands, the health of their batteries becomes a highly relevant factor in determining their value.

“Particularly in used car management, e.g., in lease buybacks, the accurate and fast determination of the state of health is extremely important if the overall process is to remain cost-effective,” says DEKRA CTO Hetzel. “With other methods, the whole thing usually takes at least several hours, sometimes days – including time-consuming charging and discharging cycles. So, the big advantage is that we can provide a highly reliable assessment within a very short time. No one else in the market offers such a fast method.”

Caption:

The patented DEKRA fast battery test provides a swift and reliable way to determine the state of health (SoH) of a traction battery in an electric vehicle. It is based on measuring certain parameters of the battery during a very short test drive. The actual know-how lies in a sophisticated database and a highly complex algorithm.

About DEKRA

DEKRA has been active in the field of safety for almost 100 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world’s leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group’s operating business. In 2021, DEKRA generated preliminary sales totaling almost EUR 3.5 billion. The company currently employs around 46,500 people in approximately 60 countries on all continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temporary work. The vision for the company’s 100th birthday in

2025 is that DEKRA will be the global partner for a safe, secure and sustainable world. With a platinum rating from EcoVadis, DEKRA is now in the top one percent of sustainable businesses ranked.