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Batteries on the test bench

Innovative test concept ensures more safety during evaluation of batteries and hybrid systems

With increasing storage capacity of a battery system, the analysis of life cycle, efficiency or cycle stability is subject to rising risks for persons, laboratory and test item.

Therefore, safety aspects of battery tests are playing a central role already during stage of research when developing high-performance batteries. Especially the Lithium-Ion technology, which takes up a favourite position for applications in the automotive sector due to its high energy density, carries higher safety risks. The reason is that lithium batteries store a multiple of the really usable electrical energy inside their components. This causes the permanent danger of a release of this energy when running performance tests or stress tests.

The demands on an adequate test system are correspondingly high and require a sophisticated safety and control system. Thereby, not only a continuously measuring of cell voltage and current is relevant, but also the evaluation of temperature and charge state in order to avoid a "thermal runaway" of the battery.

Based on the high standards of the industry, the FuelCon Evaluator-B test station series contains extensive safety features. This includes for example a wide range of test chambers for researches according to Hazard Level 3 up to Hazard Level 7. Inside these test chambers, several sensors such as smoke detectors or an automatic door control provide additional safety. Thus, injuries of persons or damages of the laboratory environment can be avoided. Temperature respectively climatic chambers, which are needed for developing an ideal thermal management of the batteries as well as for environmental simulations, are also provided with integrated safety equipment; including automated inert gas purge or CO₂ fire extinguish systems.

FuelCon presents its test and diagnostic systems at HANNOVER MESSE 2010, hall 27, booth J56

Picture: Evaluator-B battery test station

P R E S S R E L E A S E

FuelCon:

FuelCon is the global leading supplier of test and diagnostic systems for fuel cells, and batteries. For years, the FuelCon name is recognized for extraordinary product quality, high technical standard, dedication to customer service and innovation. With its test station series "Evaluator-LT" and "Evaluator-HT" the company manufactures test rigs for all typical fuel cell technologies like PEM, DMFC, SOFC or MCFC in a power range between a few watts up to 150kW fuel cell performance. The "Evaluator-B" enables the fully automated testing of batteries, super capacitors and energy management systems. Furthermore, FuelCon offers with the product lines TrueData and TrueXessory a various portfolio of diagnostic equipment and accessories. Aside its headquarters in Germany, FuelCon is with its subsidiary FuelCon Systems Inc. and several Representatives active in Europe, North America and Asia.

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