System Engineering for the automotive industry

Battery leak test

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Leak testing of traction battery housings and trays

Battery trays serve as protection for the energy storage system. The penetration of water into batteries and the accompanying risks of electric shock, short circuits and explosion must be avoided. At the same time the dynamic innovations in the field of drive batteries lead to a large variety of designs and often very complex constructions. Therefore, the „design-for-test“ aspect is of high significance for products and processes. The application and combination of material- and joining technologies lead to new challenges to ensure component tightness. These conditions correspond to high economical risks for manufacturers of battery trays and propulsion batteries, which we can minimize with our solutions.

Our solutions

We offer semi- and fully automatic stations for leak testing of batteries at different build levels such as frames, trays and complete battery cases (packs).

Our portfolio is complemented with

- testing procedures that meet customer requirements
- design-for-test consultancy
- pilot investigations in our proprietary laboratory
- development of customer-specific testing procedures

All these services are based on our experience in high-voltage battery projects.

Automatic test station for battery trays

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Technical information	
Requirement	Quality management in series production according to customer requirements to meet IP6K9K via equivalent testing procedures
Testing procedures	Over- and under-pressure air leak tests, based on pressure decay, pressure increase or mass flow principle
	Integral and localizing procedures with tracer gases such as helium or hydrogen
	Optical or acoustic procedures
Repeatability	Measuring system analysis capability (cg, cgk)
Cycle times	Optimized and adapted to process requirements
Documentability	Each specimen traceable via data base
Station concepts	Semi- or fully automatic
	Flexible and customer specific

Fields of application

The testing systems are geared to leak testing of

- battery frames
- battery trays
- complete battery cases (packs)

Purpose-built solutions for small series up to high volume production.

Our value proposition

- Experience-based competencies in assembly and test projects for battery trays, both as supplier and manufacturer
- Complete solutions including repair concept
- Modular concepts for the integration of future variants
- Worldwide presence to support global standards

Contact

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