

**IABG. The Future.**



## **Qualification of high-voltage storage systems**

Range of services

**iABG**

## Enabling E-Mobility

# Qualification of high-voltage storage systems

### Environmental tests

- IP protection class tests (water, dust)
- Stone impact
- Chemical load
- Salt spray (dummy)



### Strength tests

- Structural tests on complete vehicles with environmental simulation
- Vibration (dummy)
- Mechanical shock (dummy)



### Safety / misuse tests

- Impact tests
- Crush/intrusion tests
- Drop tests
- Behaviour at high altitude
- Fire resistance
- Thermal propagation
- Internal short circuit
- Overcharging / over-discharging
- Coolant leakage







## Additional services

### Simulation

- Computed qualification under shock load
- Simulation of heat transfer due to damage to individual cells (in development)
- Development of customer-specific simulation methods

### Test benches and accessories

- Development and manufacture of customised test benches
- Design and manufacture of inspection stamps and test item holders

### Use of modern measuring technology for test documentation

- 3D scanning
- Local and global deformation measurement
- Recording with high-speed cameras

### Material analysis

- Systematic failure analysis, VDI 3822-compliant
- Microstructure analysis
- Use of CT and other measurement and analysis methods

### Analysis and post-processing

- Reporting and post-mortem analysing of modules and total storage tanks
- Disposal of specimens after testing



The validation of HV storage systems is indispensable during the development process.

## How you benefit from IABG during your development process

- We accompany you during the whole development with the required environmental, safety, abuse, performance, and life cycle tests.
- We support you in design and evaluation of the storage system in your product.
- Aggregated services in simulation, failure analysis, and waste management may complete your qualification process.

In addition to customer-specific tests, IABG also performs tests in compliance with the following standards among others:

- DIN EN 60529
- ISO 20653
- UN 38.3
- UN ECE R100/2
- LV 124
- GB/T
- KMVSS





**AUTOMOTIVE**



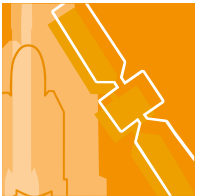
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**MOBILITY, ENERGY & ENVIRONMENT**



**AERONAUTICS**



**SPACE**



**DEFENCE & SECURITY**

## IABG. The Future.

IABG offers integrated, ground-breaking solutions in the sectors Automotive • InfoCom • Mobility, Energy & Environment • Aeronautics • Space • Defence & Security. We provide independent and competent consulting. We implement with future viability and target orientation. We operate reliably and sustainably. Our success is based on an understanding of market trends and requirements, on our staff's technological excellence and a fair relationship with our customers and business partners.

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