HIGH-SECURITY BUNKER FOR PROPROPAGATION AND ABUSE TESTS ON LARGE-SCALE BATTERIES

CTC advanced has considerably driven forward its testing capabilities for the automotive industry by providing an external test facility for propagation and abuse tests on large-scale batteries, which is almost unique in Europe. By using an external property with connection to the infrastructure of a vehicle test site, it is now possible to carry out tests, which, due to their characteristics, can only be performed in a virtually explosion-proof environment.

FACTS AND FIGURES

A major advantage of this new facility is the ability to test particularly large-scale batteries. This test environment of CTC advanced is unique in Germany.

A footprint of 240 x 180 cm and a height of 200 cm is available for the application of abuse tests. In the inner testing chamber, batteries with a total mass up to 1,000 kg can be tested.

An exhaust air system with pocket filters and activated carbon filters aspirates generated outgassing write up to 50 m³ per minute. The required safety in case of fire is ensured by an externally controlled CO₂ extinguishing system.

THE FOLLOWING TESTS CAN BE PERFORMED IN THIS NEW FACILITY:

• **Propagation**
  Trigger method: cell overcharge/cell short-circuit/ heating/nail penetration

• **Short-circuit**
  with max. 1 kV/20 kA for 10 s and a resistance of 5-80 mOhm

• **Crush Test (in preparation)**
  for test items up to a size of 200 x 160 x 60 cm and a force of max. 120 kN (according to ECE R 100/136)
FURTHER CUSTOMER SPECIFIC TESTS, SUCH AS E.G. DEGASIFICATION TESTS, CAN ALSO BE PERFORMED ON REQUEST!

There is sufficient space around the test field for the insertion and the set-up of customer-owned test equipment. CEE 16 A and CEE 32 A are available to our customers as power supply.

Please allow us to point out that we prefer the delivery of test items and customer-owned test equipment by truck with lifting platform.

It goes without saying that CTC advanced also offers the capabilities for data measurement and video recording already as know from the other CTC advanced sites:

- **High-speed data logger**
  8 channels up to 50 kS/s assignable with voltage, temperature (max. 2) and current

- **Data logger**
  40 channels up to 100 S/s assignable with voltage, temperature and current

- **Video:**
  - HD video recording with max. 25 FPS (mp4 format)
  - IR infrared video up to 30 FPS
  - HS video with up to 4000 f/sec on request

- **DC voltage supply**
  0-40 V / 340 A / 5 kW
  0-1 kV / 30 A / 10 kW (on request)
  0-20 V / 30 A

- **BMS/BUS Logging**
  4 CAN channels each up to 1 Mbaud
  2 Ethernet 10 MBit/100 MBit/1 GBit/BroadR Reach

We look forward to receiving your inquiries about our new propagation and abuse test facility.