Altech Advanced Materials AG: Altech provides update on the construction of the CERENERGY battery prototype “BatteryPack ABS60”

- Cell production for the first 60-kWh prototype completed
- Improved design of the cell electrodes leads to excellent results
- Extensive tests by the Fraunhofer Institute confirm the performance, high quality and unrestricted function of the manufactured battery cells
- Final assembly of the BatteryPack ABS60 will take place this month

Construction of the first prototype of the CERENERGY BatteryPack ABS60 is progressing according to plan. All 240 cells of the first prototype BatteryPack ABS60 have now been manufactured, assembled and put into operation at the Fraunhofer IKTS pilot plant in Hermsdorf. All cells were subjected to extensive tests by the Fraunhofer IKTS. The findings exceeded expectations.

Improved cell electrode design

During the manufacturing process of the 60-kWh CERENERGY BatteryPack ABS60 prototypes, the Altech and Fraunhofer team made several design improvements to the cells. This made it possible to increase the energy capacity of the cells and reduce the nickel content. The charging and discharging times were improved and at the same time the unit costs of the battery were lowered by reducing the amount of nickel used. During the various test cycles for all battery cells produced, each of these cells was scanned using an X-ray microtomography device. This process made it possible to visually check the homogeneous material distribution inside the battery cells after the cells had been hermetically sealed. This ensures the best possible alignment of the cell components, e.g. the electrode.

The tests also showed that most of the cells had higher energy capacities than expected. These results will be incorporated into the series design of the cells and thus lead to an optimized manufacturing process.

Cell Contact System completed

In addition to the individual battery cells, the connection system between the cells, the so-called cell contact system (CCS), was also delivered and subjected to rigorous tests, all of which were positive.

Each module contains 48 cells, which are connected to the CCS using a specially developed welding system. Once this work has been completed, the BatteryPack ABS60 with its 60-kWh capacity, consisting of five modules, can be fully assembled. This welding process is also the blueprint for the industrial production of the future modules in the planned battery plant in Schwarze Pumpe.

Once all five modules have been completed, they are transported to the Fraunhofer IKTS in Dresden. There, these battery modules are installed in the BatteryPack ABS60 and the first prototype is thus completed. This prototype enables tests and demonstrations for potential customers in order to prove individual use under customer-specific conditions.

Managing Director and CEO Iggy Tan commented on the progress: “The Altech team, together with its joint venture partner Fraunhofer and with the support of key suppliers, has made excellent progress in manufacturing the prototypes of the 60-kWh CERENERGY BatteryPacks ABS60. All components for the first BatteryPack have

already been manufactured. The BatteryPack, which is now being rapidly assembled, will then be available for tests and demonstrations for potential customers.

About the ABS60 BatteryPack

The 60-kWh battery pack from Altech consists of five 12-kWh modules, each with 48 cells, which are mounted on top of each other and sealed in a thermally insulated stainless steel housing. The battery management system is mounted on the base. In order to maintain thermal self-sufficiency, a vacuum-insulated casing protects the modules, in which the heat required by the system is retained for as long as possible. The temperatures on the outer surface do not significantly exceed the ambient temperature. Each module is designed so that they can be transported with a forklift truck and a total of 16 of these BatteryPacks can be assembled to form a GridPack with a total output of one megawatt.

Further information at: www.altechadvancedmaterials.com

Altech Advanced Materials AG

Management Board: Iggy Tan, Uwe Ahrens, Hansjörg Plaggemars
Ziegelhäuser Landstraße 3
69120 Heidelberg
E-Mail: info@altechadvancedmaterials.com
Tel: + 49 6221 649 2482
www.altechadvancedmaterials.com

Press contact
Ralf Droz / Doron Kaufmann, edicto GmbH
Tel: +49 (0) 69 905505-54
E-Mail: AltechAdvancedMaterials@edicto.de