

ALTECH STARTS PROTOTYPE PRODUCTION OF CERENERGY® BATTERY PACKS

Heidelberg, 11. May 2023.

Altech Advanced Materials AG (Altech; FRA: AMA1) has started production of two prototypes of the CERENERGY® 60 kWh (ABS60) battery pack intended for market entry. The innovative sodium-alumina solid-state battery prototypes will be manufactured at the joint venture partner Fraunhofer IKTS in Hermsdorf. Smaller prototypes with 5 and 10kWh capacity have been successfully tested for some time. The high-performance 60 kWh battery packs for industrial operation will be subjected to a cycle test under extreme conditions after completion and will then be available for testing by customers. The battery packs have a rated operating voltage of 600 volts at 100 amps (A) and are to be used primarily in the areas of energy storage of renewable energies from wind and solar power plants as well as grid storage.

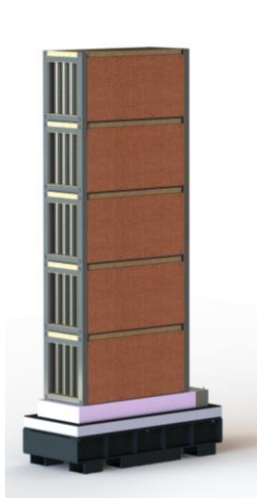


Figure 1 – Internal with cell frames



Figure 2 – Battery Pack with Cover

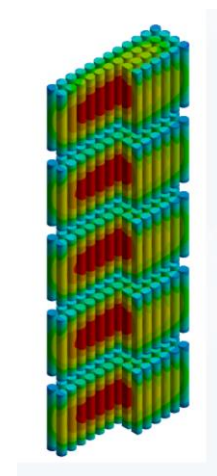


Figure 3 – Temp Simulation

The CERENERGY® Sodium Chloride Solid State (SCSS) is a breakthrough alternative to lithium-ion batteries in the market for stationary grid storage. The site for industrial production will be Schwarze Pumpe, in Saxony. The site has already been acquired and the production design is currently being prepared in a feasibility study. It is expected that the feasibility study will be completed in 2023 and that the corresponding building application can then be submitted quickly. The plant will have an annual production capacity of 100 MWh in the first stage of expansion with an initial production line. The CERENERGY® batteries are designed for a service life of more than 15 years, are fire- and explosion-proof and can also be operated worldwide under extreme climatic conditions without any loss of performance. The battery technology uses common salt and is free of lithium, cobalt, graphite and copper, completely eliminating dependence on critical third countries, highly volatile raw material prices and potential supply chain issues. All raw materials can be sourced from Europe. Corresponding agreements have already been concluded.

Altech previously unveiled the design for its 1.0 MWh GridPack (ABS1000) battery system for use in battery farms (BESS) in March 2023. The developed GridPack is equipped with 18 ABS60 60 KWh battery packs, which are equipped with a Battery Management System (BSM) and a Pack Power Management System (PMS), allowing the GridPack to be "plug and play". Because of this feature, the battery packs are easy to install and operate, and can be used in remote locations under extreme climatic conditions.

The Altech GridPacks are designed to be fully protected from all external influences such as dust and rain. This means that no additional shelters or buildings are required to house the Altech GridPack batteries, no air conditioning, which is typically found in lithium-ion battery mega-packs. Altech GridPacks are supplied in an open sea container design and can be stacked on top of each other without hesitation. This minimizes the space required for the GridPacks. In addition, Altech GridPacks are virtually maintenance-free and completely silent in operation, making them an ideal solution for residential areas, for example. These usage characteristics enable scalability and flexibility previously unheard of in the battery sector, which will significantly simplify the use of battery storage and help the technology to gain further acceptance.



Figure 4 – 1MWh GridPacks

"We have built a dynamic and fast-moving project team incorporating personnel from Altech, Fraunhofer and various leading German engineering companies and industrial contractors. The advancements made on the final designs of the 60 kWh Battery Pack in such a short time frame are outstanding. I am very pleased with the progress" said Altech Advanced Materials Managing Director Uwe Ahrens.

Background

CERENERGY® batteries offer the breakthrough industrial grid storage alternative to lithium-ion batteries. CERENERGY® batteries are fire resistant and cannot explode. This allows for indoor use as well as stackability. The batteries have a lifetime of more than 15 years and operate under all climatic conditions from minus (-) 40 °C to plus (+) 60 °C without external cooling or heating. Conventional common salt is used as the storage medium. CERENERGY® batteries are thus free of critical substances, some of which come from unsafe third countries or are mined and transported in an environmentally harmful way, such as lithium, cobalt, graphite and copper. The Altech-Fraunhofer joint venture is developing a battery plant with an annual capacity of 100-MWh (Phase 1) on Altech's property in Saxony, Germany, for use in industrial grid storage.

About Altech Advanced Materials AG

Altech Advanced Materials AG, headquartered in Heidelberg, Germany, is a holding company listed on the Regulated Market of the Frankfurt Stock Exchange (ISIN: DE000A31C3Y4). The company's goal is to participate in the market for lithium-ion batteries for electromobility through innovative and high-performance anode material based on high-purity alumina oxide (HPA) – Silumina Anodes™. Another focus is on solid-state batteries for stationary battery applications with CERENERGY®.

Further information at: www.altechadvancedmaterials.com

Altech Advanced Materials AG

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

Pressekontakt

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

