September 24, 2024

Notice of Construction of New Plant for Initial Mass Production of A-SOLiD™, Solid Electrolytes for All-Solid-State Batteries

Mitsui Mining & Smelting Co., Ltd. (President: NOU Takeshi) is pleased to announce today that we have decided to construct a new plant for the initial mass production of sulfide-based solid electrolytes, branded as A-SOLiD™*1, for all-solid-state batteries*2 which we see as one of the product categories expected for growth.

All-solid-state batteries are expected to be the next generation of storage batteries. Efforts to develop them are underway for a wide range of applications, including electric vehicles (EVs). A-SOLiD™ was created by battery material technology cultivated over many years, and the Company continues to work together with customers and market partners towards the commercialization of these brand-new batteries.

The Company introduced a test facility for mass production of solid electrolytes for all-solid-state batteries in the Ageo area of Saitama in 2019. Subsequently, we decided to increase its production capacity twice to proactively address the need of customers for the development of all-solid-state batteries. As a result, amid intensifying competition in the development of all-solid-state batteries in Japan and overseas, demand for our solid electrolytes is expected to expand further, given that they have been positioned as standard materials for use in development by several customers.

Among them, with some customers planning to initially launch EVs equipped with all-solid-state batteries in the market around 2027, there is a growing prospect that our solid electrolytes will be adopted as the key materials for battery characteristics.

In light of this, we have decided to construct a new plant for the initial mass production of solid electrolytes in the Ageo area of Saitama. Our aim is to secure an additional production capacity and develop innovative production processes.

The plant for initial mass production is scheduled to commence operation in 2027. By adopting a highly efficient production method, we expect that it will contribute to customers more significantly than ever in the

commercialization of all-solid-state batteries. In addition, we anticipate that our production capacity of solid electrolytes, including that of the mass production testing building which is currently in operation, will rise to the largest level in the world.

In accordance with Our Purpose, which states, “We promote the well-being of the world through a spirit of exploration and diverse technologies,” we are committed to creating new unique applications for the all-solid-state batteries, including EVs, in its endeavors to build a sustainable society.

[Overview of the initial mass production plant]
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Glossary

*1 All-solid-state batteries

All-solid-state batteries feature high energy density, high I/O performance, high environment resistance and other attributes, and are being developed for applications in special environments and for new power storage and electric vehicle (EV) applications. Some have already entered the practical application phase.

*2 A-SOLiD™

Our solid electrolyte a high lithium ion conductivity equivalent to that of organic electrolytes and is an argyrodite-type sulfide solid electrolyte, which is electrochemically stable. With this brand, it will contribute to the popularization of all-solid-state batteries.

(Reference)

Photo of argyrodite-type sulfide solid electrolyte (A-SOLiD™)

A-SOLiD™ is produced in this mass production testing building.