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Sumitomo Metal Mining to Start the Pilot Test for Lithium Recovery from Salt Flat

Its New Technology Has Moved to the Demonstration Stage Toward Securement of Lithium Resources

Sumitomo Metal Mining Co., Ltd. (TSE: 5713) is initiating a pilot test in the Republic of Chile in 2023 for a new technology that can recover lithium from the brine of a salt flat in Latin America. This technology is called “Direct Lithium Extraction” (DLE) and it enables more recovery of lithium requiring less time and with a lower environmental impact than conventional methods. Moving forward, the company is advancing practical implementation through pilot testing for the stable procurement of lithium, the effective utilization of metal resources, and the mitigation of environmental impact.

In this upcoming trial, the pilot plant will be installed in the Antofagasta region in the northern part of the Republic of Chile, it will utilize manganese absorbent jointly developed by Sumitomo Metal Mining and the University of Kitakyushu. When recovering lithium from a salt flat, the conventional method uses a process that dries brine with sunlight. However, in the recovery method of Sumitomo Metal Mining technology, lithium is absorbed directly onto the absorbent, eliminating the drying process. As a result, it is expected that this will shorten the recovering periods and reduce the environment impact by using less water resources and emitting less greenhouse gas. Additionally, there is a potential for recovering lithium from salt flats with high impurities, which are currently challenging for lithium extraction. This could contribute to the stable procurement of lithium resources.

Further, this trial is being implemented with engineering cooperation from JGC Corporation and with cooperation from Mitsui & Co., Ltd.

Lithium is an essential raw material to produce lithium-ion batteries, which play significant role in achieving carbon neutrality. Sumitomo Metal Mining has identified “effective use of non-ferrous metal resources” as a material issue in line with its Vision for 2030. The company will promote the practical application of new technologies to produce metal resources with lower environmental impact, accelerating our contributions to carbon neutrality.

The pilot plant for the trial