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Press Release

Sumitomo Metal Mining Co., Ltd.

Recycling of Lithium-Ion Rechargeable Batteries

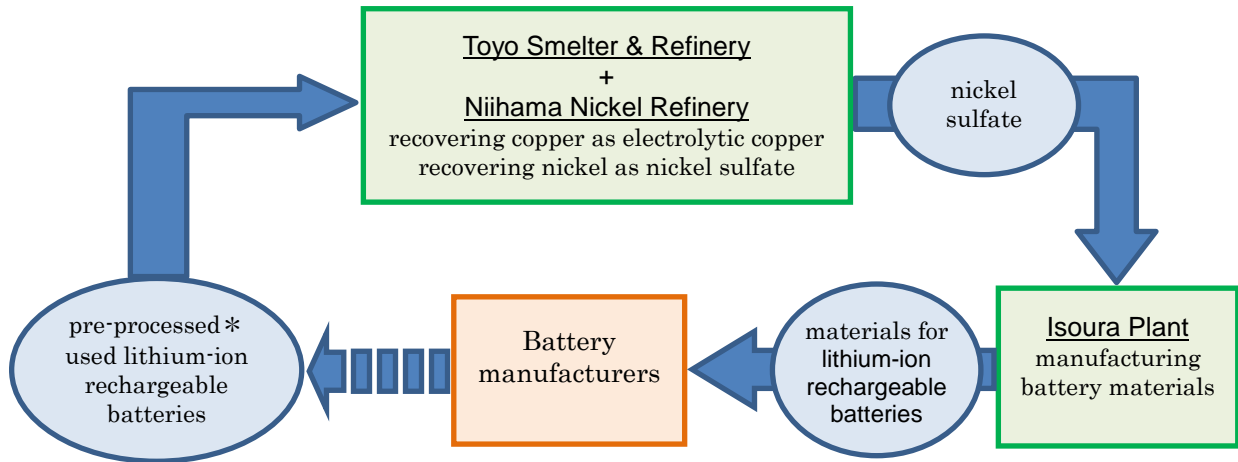
Sumitomo Metal Mining Co., Ltd. (SMM) has achieved the first practical method in Japan for recovering and recycling the copper and nickel contained in the intermediates generated from the lithium-ion rechargeable battery manufacturing process, or the copper and nickel contained in used lithium-ion rechargeable batteries that have been rendered harmless by heat treatment or other means.

Lithium-ion rechargeable batteries have less valuable metal content than nickel metal hydride batteries and yield poor profitability in recycling, making the recovery of valuables economically difficult. SMM has established a processing flow that combines the copper pyrometallurgical refining process of the Toyo Smelter & Refinery (in Saijo City, Ehime Prefecture) and the nickel hydrometallurgical refining process of the Niihama Nickel Refinery (in Niihama City, Ehime Prefecture). By accurately controlling the concentration of impurities in the raw materials, SMM has achieved the only successful recovery of copper and nickel in Japan.

The recovered nickel was processed from nickel sulfate into positive electrode material for rechargeable batteries at the Isoura Plant (in Niihama City, Ehime Prefecture), achieving Japan's first "battery to battery" recycling from waste lithium-ion rechargeable batteries.

By recycling lithium-ion rechargeable batteries, SMM expects to further advance the formation of a sustainable recycling-oriented society in Japan, while also strengthening resource recycling to address the global depletion of resources.

【reference】 flow of the recycling process



* pre-processed : to make it harmless by heat treatment or other means

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