



FEECO indirect pilot kiln used for process development



Red mud samples shown at various points of reduction

PROCESS

Bauxite residue, or "red mud" is left over from the Bayer process when alumina is extracted from bauxite ore in the production of aluminum.

Significant amounts of red mud are produced alongside each ton of aluminum, creating an industry challenge to manage the sludge in a way that is both economical and environmentally friendly.

In light of recent disasters and the anticipated growth of the aluminum market, substantial research and development aimed at beneficial reuse applications and/or resource recovery from red mud has come to the forefront of the industry.

With a global reputation for advanced thermal processing, the company came to FEECO for our expertise in [indirect kilns](#) and the testing capabilities offered in our [pilot plant](#), *The Innovation Center*.

Through testing using one of our pilot kilns, we gathered process data and a recipe for scale-up. We then used this data to engineer a custom, indirect-fired commercial-size rotary kiln around the company's patented technology for recovering iron from bauxite residue.

The indirect-fired kiln works by reducing targeted components in the red mud so that iron can be separated and recovered for sale.

PROJECT SPECS

Customer:
Proprietary

Equipment Supplied:
Indirect Kiln

Project Location:
Canada

Industry:
Minerals & Metals

Material:
Bauxite Residue, or "Red Mud"

Project Engineer:
FEECO International, Inc.