

Successful Commissioning Proof of Concept Furnace for Recovery of Critical Raw Materials

On Monday March 3rd 2025, Butter Bridge successfully commissioned their electric Proof of Concept furnace. This electric furnace (DC-Arc furnace), capable of reaching temperatures well above 1500°C, will soon be used by Butter Bridge in the Netherlands to pilot the processing of material streams containing critical raw materials (CRMs). The furnace can also be used to test green production or recycling of cement, steel, and insulation wool.

High-temperature (pyrometallurgical) processes, along with hydrometallurgical processes, are essential for the recovery of CRMs.

In addition to testing various material streams from the metal industry, further work will also be done on designing and developing an industrial facility for CRM recovery. The ultimate goal is to establish a commercial and flexible plant powered by renewable electricity. Butter Bridge continues to seek CRM-containing waste streams, investors, and relevant stakeholders.

By setting up this test facility, Butter Bridge contributes to both the Dutch and European ambitions to:

- Recover critical materials regionally, reducing dependence on these materials from other countries.
- Reduce CO2 emissions by using electricity instead of fossil energy sources and by preventing transport movements.

Butter Bridge is in discussions with Groningen Seaports about the final location for the pilot facility at the Chemport Innovation Center.

About Butter Bridge: Butter Bridge is a startup with over 100 years of experience and a global network in pyro- and hydrometallurgy. In addition to establishing a commercial CRM recycling facility, Butter Bridge offers consultancy in the raw materials industry, including green steel, green cement, electrification of high-temperature processes, recycling of residues, and optimization of smelting processes. Butter Bridge is committed to preserving and developing knowledge in the field of CRM and raw materials processing in the Netherlands.



Inside furnace with electrode



Tapping of the furnace

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