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Sustainable magnets production: Challenges and Chances for a Circular Economy

Tuesday 7 February 2023 14:00 (30 minutes)

Rare earth magnets (neodymium-iron-boron magnets), the strongest type of permanent magnets available, are widely used in the manufacture of modern technology products. They are used in electronics, wind turbines, electric motors and other fields. Unfortunately, most neodymium magnets available on the EU market come from third countries and are currently considered the most critical group of materials in the EU in terms of supply risk.

The EU-funded SUSMAGPRO and REEsilience projects aim to develop sustainable and resilient supply chains from recycled neodymium magnets and new sources with high ESG standards. This presentation will discuss the challenges and opportunities for more sustainable magnet production in Europe by providing an overview of the targeted material sources, the techniques used for separation and segregation of EOL magnets, and the manufacturing technology of sustainable magnets. The talk will also discuss the current development stages of the project pilot plants and the two university spin-offs, HyProMag Ltd. and HyProMag GmbH, and provide an outlook on the path to series production.

Presenter: BURKHARDT, Carlo (HS Pforzheim)

Session Classification: Working session on recycling (Intro)