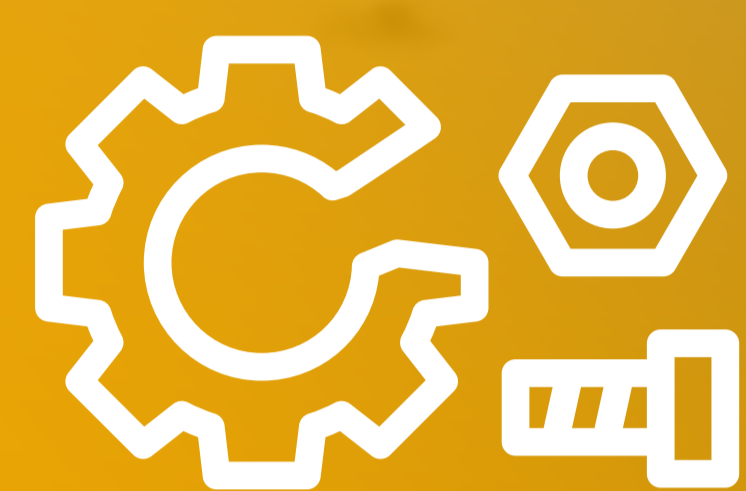


Recycling rare earth elements from end-of-life NdFeB permanent magnets more efficiently

HARMONY's mission is clear: secure critical value chains, and pave the way for a sustainable, circular economy. The project aims to achieve this by developing a comprehensive recycling process, covering everything from magnet collection and dismantling to metal recovery and magnet production.



Magnet collection and dismantling



Powder production



Magnet production

Objectives

- collection and dismantling of NdFeB magnets
- production of powder through three technologies
- recovery of REE metals by an indirect recycling process
- production of recycled magnets via several industrial processes
- validation of the produced magnets in three high impact applications

Methodology

- **direct methods**, using gas atomisation, melt spinning or selectively leached HPMS powder
- **indirect methods**, encompassing steps such as a pyrometallurgical concentration, selective leaching, solvent extraction refining and electrowinning



Pilot 1:
Collection & dismantling optimisation



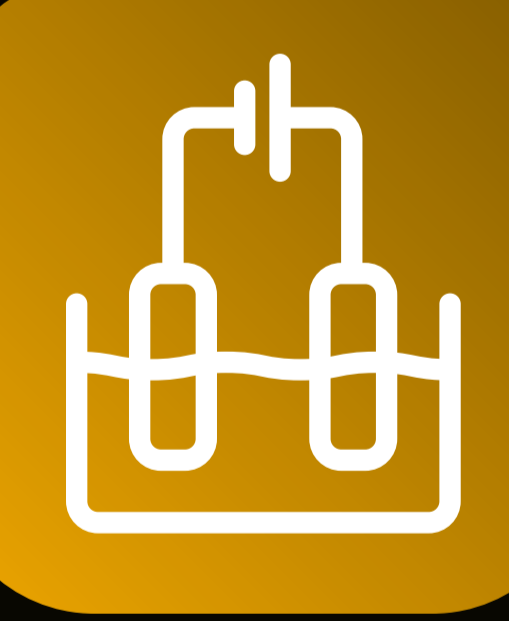
Pilot 2:
Pyrometallurgy



Pilot 3:
Selective leaching



Pilot 4:
Solvent extraction



Pilot 5:
Electrowinning



Pilot 6:
Gas atomisation



Pilot 7:
Melt spinning

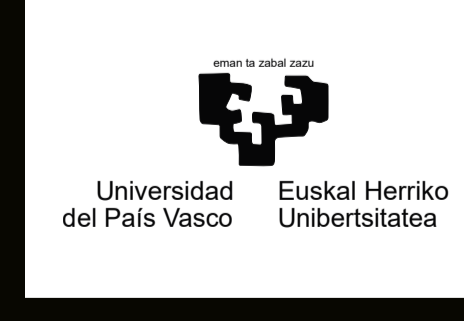


Pilot 8:
NeoLeach

Please scan for more information



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