Group - IPS
Industrial Projects Services

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CAREMAG

DEFINE | PRIMARY | FRANCE

CAREMAG
MAGNETS RECYCLING BY CARESTER

Principal project data

Recycling, CAREMAG PROJECT

Scope IPS

Basic Engineering

- 3D model
- Steel structure
- Process P&ids
- Vessels, Silos & Piping
- Civil
- Auxiliaries & Utilities
- piping & Pipe racks

The CAREMAG project aims to industrialize a process for treating and recycling magnets from end-of-life equipment, and to build a "demonstration" unit capable of recycling 2,000 tons/year of rare earth-based magnets and/or magnet production residues (swarfs, scraps). This grass-root "demonstration" unit will be the first in Europe to implement a long-loop recycling process, i.e. producing separated and pure rare earth oxides.

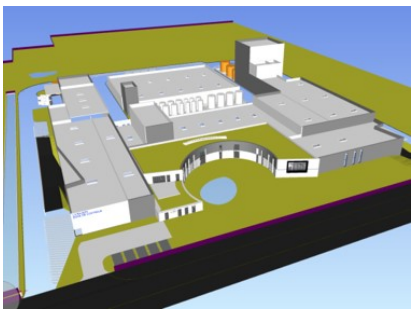
Such a project aims to:

- Secure access to rare earths outside of China and increase the independence of France and Europe,
- Reduce risks associated with the volatility of rare earth prices,
- Support the ecological transition without consuming natural resources, but by valorizing the "urban mine".

The unit will be able to process, on average, 2,000 tons/year of a mix of:

- Approximately 1,000 tons/year of NdFeB magnets from end-of-life equipment (electric motors for automobiles, bicycles, and electric scooters, wind turbines, and electrical or electronic equipment),
- Approximately 1,000 tons/year of manufacturing waste (swarfs, scraps, etc
- The project target to carry out basic engineering with CAPEX budget estimation +/- 10%. Collaboration started with the preparation phase of basic engineering in August 2022.






STOCKAGE
SALLE ELECTRIQUE
BATIMENT AN
NH4NO3
NH4HCO3
NH4OH