Magnet Separation Recycling Technologies

Currently, there is no existing technology in the U.S. for recovering rare earth (RE) elements from discarded consumer products, yet recent export restrictions make the creation of such a technology advantageous. The goal of this study was to develop efficient and cost-effective sortation processes to separate RE magnets from steel scrap, and develop a recycling technology based on acid dissolution to recover RE metals from magnets. The study also included a cost-value analysis.

This study explored:

1. efficient and cost-effective sortation processes to separate rare earth elements (RE) from steel scrap;
2. recycling technology based on acid dissolution to recover RE metals from magnets.

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