



## **The Sulfuric Acid Baking of NdFeB Magnet Scrap**

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**Summary:** A method for extracting rare earth metals from Nd<sub>2</sub>Fe<sub>14</sub>B magnet scrap

**Description:** This invention reports a method by which sulfuric acid baking allows for the selective extraction of rare earth metals from scrap Nd<sub>2</sub>Fe<sub>14</sub>B magnets. This process has the advantage of making water soluble high value rare earth metals while converting the contained iron, around 70% of the magnet's mass, into stable and insoluble iron (III) oxide, eliminating the need for separating and precipitating iron from solution. The process also has the advantage of safely disposing of metalworking fluid contained in rare earth magnet machine waste, a troublesome contaminate from technical and environmental perspective.

### **Main Advantages of this Invention**

- Makes for easy extraction of high value rare earth metals
- Iron waste easily separated
- Environmentally friendly

### **Potential Areas of Application**

- Recycling of magnets
- Separations in a mine setting

**ID number:** 15001

**Intellectual Property Status:** Provisional patent application 62/047,381 filed September 8, 2014

**Opportunity:** We are seeking an exclusive or non-exclusive licensee for implementation of this technology.

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### **For more information contact:**

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