

## Rube Goldberg Dream Machine - Metal Reclamation

Full Scale Implementation    OR     Pilot Scale/Study

### **1. Description of the project: What is the issue and how did you fix it?**

We identified potentially recoverable tramp metal in our landfill-bound foundry residuals so we built a machine from spare parts to magnetically separate and sieve it out for re-melt.

### **2. Environmental Benefits: Conservation of raw materials or energy, reduction or elimination of emissions, wastes, toxics, water discharges, etc.**

This machine helps us divert roughly 250 tons annually from the landfill to raw materials.

### **3. Other Benefits: Productivity, health and safety, employee morale, etc.**

### **4. Cost Savings: Capital cost, operating cost, ROI or other pertinent cost information.**

The capital cost is negligible since most of the machine is scavenged pieces of other machines. Annual savings is roughly \$100,000.

### **5. Applicability to other foundries and additional Comments**

If you have a solid maintenance department, this should be an achievable project.

## 6. Applicable Environmental Categories and Foundry Processes. Select all that apply.

### Environmental Categories

- Carbon (GHG) Emissions Measurement and Reduction
- Air Quality       Water Use and Discharge       Waste Management
- Beneficial Use       Stormwater       Material and Resource Conservation
- Community Engagement

### Foundry Process(es) Impacted

- Melt       Pour       Mold       Core       sand system/reclaim
- Shakeout       Heat Treat       Quench       Finishing       Shipping
- Maintenance       Pattern Shop       Casting Design
- Management Systems and Metrics
- Other, explain:

## 7. Add photos to enhance your application, if applicable.



