

"The Success of this S70 Demo is a direct result of collaborative work of Mr. Ravi, Mr. Prabhu, Mr. Ajith, Mr. Sayaji, Mr. Karthikeyan & Mr. Sabarish Mohan"



## Recycling Lead from Used Batteries

# LEAD SMELTERS

### Raw Material Collection and Addictive Mixing

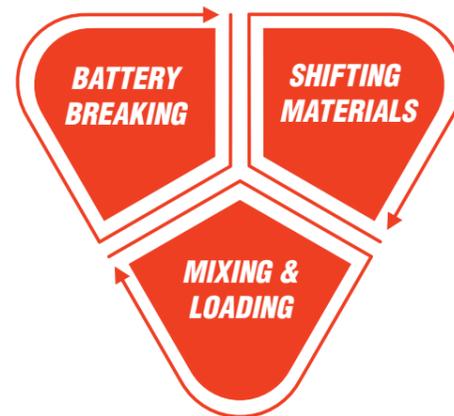
The used batteries are collected and the components are separated manually. This involves extracting the lead from inside the battery and separating it from the plastic container. The separation process is supported by a dedicated team of workers who ensure that the lead and plastic are efficiently separated for further processing.

Once the lead is separated, it is mixed with soda ash, charcoal, and rolling mill waste. These additives are essential for the subsequent melting process. The mixture is prepared and then loaded into a rotary furnace with the help of a special attachment. The attachment is designed to fit a 2-ton capacity forklift, and the loading of the attachment is completed manually by the workforce. This loading process typically takes 45 minutes



Manually Disassembling Batteries by Laborers

## JOBS INVOLVED



Loading Furnace Input Materials into Loader Buckets by Laborers

### Rotary Furnace Operation

Natural gas fuels the rotary furnace, which is preheated to 1000 degrees Celsius. Once the optimal temperature is reached, the lead mixture is processed in the furnace for 3-4 hours, allowing the lead to melt and separate from impurities. Typically, 3 charging cycles are performed, each consuming about 1100 units of gas, to achieve a total production of 10 tons of lead

### Cooling and Separation



Processed Lead

Final Product

After processing in the furnace, the material cools in a trolley container where slag forms on top and lead settles at the bottom. Once cooled, the material is broken apart, and lead is manually separated from the slag. The lead is then cut into pieces, prepared as the final product, and dispatched to battery companies for reuse. A team of six laborers handles the loading and material handling throughout the process.



A Forklift is Used for Loading Lead & Addictive Mixture into the Rotary Furnace

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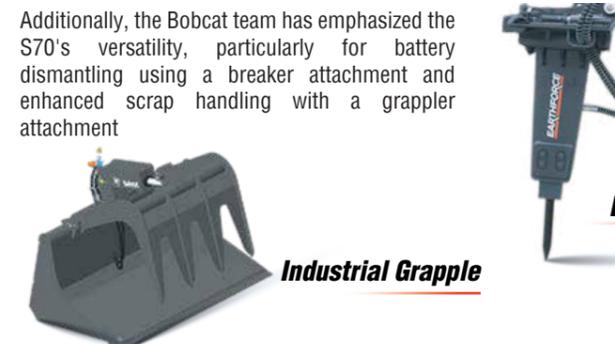
# S70 IN ACTION

### Bobcat S70 Demonstration at the Work Site

To enhance efficiency at the work site, we demonstrated the Bobcat S70. With the S70, the furnace loading time has been reduced from 45 minutes (using manpower) to 20 minutes. This significant 25-minute reduction decreases burner idle time, which previously affected heating efficiency and Increased gas costs. The demonstration showcased the S70's effectiveness in optimizing material handling and lowering operational costs.



S70 Loading dismantled batteries



Breaker

Industrial Grapple

## BENEFITS

- SAVED FURNACE LOADING TIME**
- REDUCED GAS CONSUMPTION**
- ENHANCED PRODUCTIVITY**
- REDUCED MANPOWER EFFORT**
- MORE SAFER OPERATION**
- VERSATILITY**



S70 Loading Materials to the Forklift Bucket