



**ISRI**<sup>TM</sup>

# SAFETY GUIDANCE MATERIAL

## SAFETY OPERATIONS GUIDANCE

*This safety resource was written for the scrap industry by the scrap industry and was developed to assist you in making your scrap operation a safe place for employees, customers, and visitors. This resource covers OSHA requirements that may or may not be applicable to your operation.*

### **BATTERY BREAKING**

**DEFINITION:** Process by which casings of electric storage batteries are sawed or sheared open in order to remove plates, terminals and solution.

#### **Potential Hazards:**

- Aerosolized particles
- Corrosive liquids
- Hazardous vapors
- High-velocity flying parts
- Flammable/explosive gas (hydrogen)
- Noise
- Sharp objects/edges
- Slippery walking/working surfaces

#### **Guarding/Shielding:**

- Power-driven saws, cleavers, or shears used to cut battery casings must be guarded at the point of operation in such a way as to avoid injury caused by contact with moving parts, and impact from flying debris.
- Where splash hazards exist, shielding must be in place.

#### **Protective Equipment:**

Hard hats\*

Safety goggles\*

Face Shield\*

Corrosive-resistant steel-toe/steel shank work boots\*

Corrosive-resistant work gloves\*

Respirator with acid gas cartridge

Hearing protection

*\*minimum requirements*

#### **Safety Procedures:**

- Battery breaking operations likely will trigger a number of OSHA regulations. You should familiarize yourself with the standards for lead, arsenic, antimony, arsine, stibine, and sulfuric acid.
- If located indoors, the area used for battery breaking must have forced air ventilation exhausted to a bag house or other emission control device.
- Emergency showers must be readily accessible and clearly marked in areas where splashes could occur.



- Sufficient safe clearances must be allowed between machinery and adjacent aisles or passageways.
- Permanent aisles and passageways must be clearly marked.
- Motors and other electrical equipment must be grounded.
- All walking/working surfaces must be kept clean and dry.
- Where the vertical distance between walking or working surfaces exceeds four feet (48 inches), railings or fall protection equipment must be utilized.
- Designate and enforce a safety zone, the area in which the operator of the equipment must be while the equipment is in use.
- Keep suspended loads clear of walking/working areas, power lines, obstructions, buildings, and other hazardous locations.