Scrap Metal Recycling is a $20 billion industry and recycles 120 million tons per year.

Non-Ferrous Scrap Metal Facts:

- Ferrous metals have a recovery rate as follows:
  - Recycled Aluminum: 95% less energy used
  - Recycled Steel: 56% less energy used

- Recycled metal requires less energy to produce compared to raw metal.

- Scrap metals, in general, are divided into two basic categories:
  - Ferrous scrap: Metal that contains iron
  - Nonferrous scrap: Metal that does not contain iron

- The United States provides more than 20% of the world supply of recovered copper.
- An estimated 85% to 90% of all automotive aluminum is recovered and recycled.
- The United States annually processes more than 250 billion lbs. of scrap material — the weight of more than 70 million cars.
- Used aluminum cans are recycled and back on the grocery shelf in as little as 60 days.
- In the United States, domestically recycled aluminum cans saved the energy equivalent of 17 million barrels of gasoline — enough to fuel more than one million vehicles on the road for 12 months.

- Estimates project that there could be more than 1,500 waste or recycling fire incidents occurring in the U.S. each year.

- Heavy scrap metal recycling equipment, with high electrical requirements and hydraulic fluids under very high pressures, can be hazardous.
- Sparks, flames and arcs from damaged electric, grinding, cutting and friction can ignite flammable materials.
- Large piles of oil coated scrap metal can spontaneously ignite when pressure is generated.

- NFPA Chapter 14 • NFPA 96
- Equipment Costs:
  - Baler: $35,000
  - Mobile Grappler: $250,000
  - Shredder: $100,000+

- Non-Ferrous Scrap Metal Facts:
  - Lead, Copper, Zinc, Nickel, Stainless Steel, Alloy Steel, Reinforcement Steel

- Recycling 1 ton of aluminum conserves 4 metric tons of bauxite ore, 2,500 lbs. of iron ore.
- Recycling 1 ton of steel conserves: 120 lbs. of limestone, 1,400 lbs. of coal.

- Recycled Copper: 90% less energy used
- Recycled Steel: 56% less energy used

- Diversion of materials from landfills

- Myths: It’s a metal recycler…metal doesn’t burn
- Truth: Many flammable commodities are present and create a high potential for fire hazard such as: plastics, wood, tires, wire, oils, grease, lubricants, hydraulic and possibly undisclosed hazardous materials.

- Equipment Maintenance and Safety:
  - Inspect electrical system annually
  - Preventive maintenance
  - Create formal housekeeping program, especially in equipment areas
  - Inspect hydraulic system
  - Prevent equipment from being damaged

- Use proper protective equipment and clothing.
- Establish Preventive Maintenance Program for all equipment
- Provide employee training for all equipment/processes
- Train employees to inspect metal prior to shredding to remove potential hazards

- In at least 282 fires occurred at waste and recycling facilities between March 2016 and February 2017, as reported by Construction & Demolition Recycling.
- 41% of the reported fires occurred at waste transfer facilities and 27% occurred at metal recycling facilities.
- The states with the most incidents were California, New York, New Jersey, Virginia and Michigan.
- Estimates project that there could be more than 1,500 waste or recycling fire incidents occurring in the U.S. each year.

- Safety and health training
- Board and employee training
- Conduct training program annually

- References:
  - 1 http://www.omnisource.com/metals_recycling/
  - 2 https://www.thebalance.com/combustion-hazards-to-consider-when-recycling-scrap-metal-2877964
  - 3 http://www.isri.org/