

CONTAMINATING ITEMS

IN SCRAP DELIVERIES

Environmental, Health and Safety Considerations

Safety

All scrap shall exclude:

- 1) pressurised, closed or insufficiently open containers of all origins which could cause explosions. Containers shall be considered as insufficiently open where the cut container is still able to trap material i.e. water, oil, etc;
- 2) dangerous material, flammable or explosive, fire-arms (whole or in part), munitions, dirt or pollutants which may contain or emit substances dangerous to human health or to the environment or to the metal melting process;

All grades shall be checked, within the limitations of accessibility and in strict compliance with appropriate detection equipment for radioactivity, to identify:

- material presenting radioactivity in excess of the ambient level of radioactivity
- radioactive material in sealed containers even if no significant exterior radioactivity is detectable due to shielding or due to the position of the sealed source in the scrap delivery.

Cleanliness

All metal scrap grades shall be free of all but negligible amounts of other metal contaminants. All scrap shall be free of non-metallic materials such as earth, insulation, excessive iron oxide in any form, except for nominal amounts of surface rust arising from outside storage of prepared scrap under normal atmospheric conditions.

All grades shall be free of all but negligible amounts of combustible non-metallic materials, including, but not limited to rubber, plastic, fabric, wood, oil, lubricants and other chemical or organic substances.

All scrap shall be free of pieces which are non-conductors of electricity such as tyres, pipes filled with cement, wood or concrete.

All grades shall be free of waste or of by-products arising from steel melting, heating, surface conditioning (including scarfing) grinding, sawing, welding and torch cutting operations, such as slag, mill scale, baghouse dust, grinder dust, and sludge.

Some Residual, other Metallic Elements and Non-metallic Items

Copper

All ferrous grades shall be free of visible metallic copper which means free of copper-wound electric motors, sheets and copper coated materials, bearing shells, winding, and radiator cores.

All ferrous grades shall be free of all but negligible amounts of wire, insulated wire and cable tubing, and other copper, brass items mixed with, attached to, or coating ferrous scrap.

All ferrous grades shall be free of material with high dissolved copper content such as rebars and merchant bars which will be grouped in the high residual grades.



Lead

All ferrous grades shall be free of lead in any forms such as batteries, solder, wheel weights, terne plate, cable ends, bearings, bearing shells etc.



Lead Acid Batteries

- Lead acid batteries poses a threat to both the environment and personal health.
- If lead finds its way into the metal melting process, it can easily contaminate the slag, end products and will escape into the atmosphere.
- Collect and transport used lead acid batteries to a recycling facility where the batteries will be crushed and drained of the sulphuric acid. The lead is then separated and recycled.

Asbestos

- Asbestos poses a very serious threat to both the environment and personal health.
- Contact authorities to ensure safe disposal.
- If asbestos finds its way into the metal melting process, it can easily be sucked into the off-gas systems and fibres can escape into the atmosphere with serious consequences.



Tin

All ferrous grades shall be free of tin in any form such as tin cans, tin coated materials etc. as well as bronze elements such as rings, bearing shells etc.



Rubber Tyres

Rubber trapped in ferrous scrap causes excessive fumes during the melting process. This causes environmental pollution and health and fire risks.



Concrete Pieces

Liquid might be trapped in the concrete which could cause the concrete to explode in a metal melting furnace.



Closed Gearboxes

Closed gearboxes are also sealed containers which could cause explosions in metal melting furnaces.



Oil Contaminated Scrap

Oil contaminated scrap causes an extreme risk of injury to overhead crane drivers due to the combustion of oil outside the metal melting furnace.

