MOLTEN ALUMINUM – FURNACE

Heavy equipment utilizing different gases as a fuel source to heat metal alloys to high temperatures.

Hazards Involved/Arise

- High temperature environment – heat stress
- Molten metals – fire or burn hazards
- Metal fumes (aluminum and alloys) exposure
- Explosion hazard possible if moisture is introduced or trapped in the process
- Carbon Monoxide (CO) from incomplete combustion – displacement of oxygen
- Exposure to refractory materials and contaminants during repairs and maintenance

People Affected

- All workers in the area who load ingots, remove “dross” and pour/transfer molten material

Existing Controls

- Extensive training program including use of appropriate fire extinguishers and how to handle spilled materials
- Only authorized individuals are allowed in the area and this is strictly controlled only after going through an orientation
- No food or beverage containers are allowed on site
- Personal Protective Equipment (PPE) includes special heat and fire resistant clothing: jackets with long sleeves, gloves, aprons, gauntlets, and protective footwear. Full face and eye protection is also required
- Forklifts have protective glass on the front and the top of the vehicle
- CO monitors set up to ensure levels are not exceeded
- Heat stress program to evaluate exposure, compare to ACGIH or MOL standards and implement controls

For more information, contact Workplace Safety & Prevention Services
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