



25.45 Working With Molten Ferrous Metal – Key Health Facts

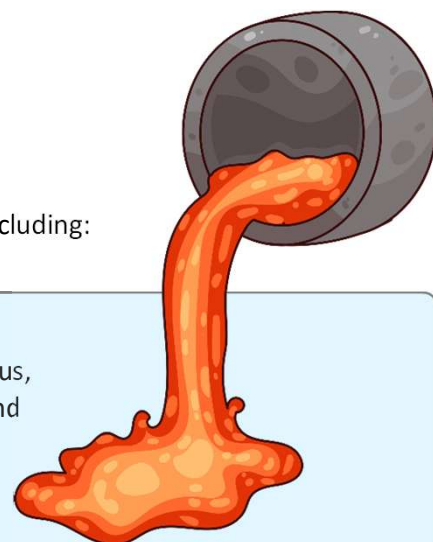
How can working with ferrous molten metals affect my health?

Working in foundries or with molten metal can expose workers to several health risks including:



Respiratory Illness

Silica dust (RCS) from sand and furnace linings can cause silicosis, a serious, irreversible lung disease. Ferrous foundry fume can cause lung cancer, and other fumes/mists can cause asthma. Formaldehyde and furane resins used in coremaking give off vapours that irritate the eyes, skin and airways and are potential respiratory sensitisers.



Cataracts

Chronic exposure to infrared radiation from furnaces and molten metal raises the risk of “glassblower’s” or heat cataract.



Dermatitis & Skin

Chemicals, solvents and metalworking fluids can cause contact dermatitis; dust dries and cracks skin; heat causes heat rash and “toasted skin syndrome”.



Hand-Arm Vibration

Vibrating tools and workpieces can cause HAV Syndrome or Vibration-induced Carpal Tunnel Syndrome — painful, disabling disorders of the vessels, nerves and joints.



Noise-Induced Hearing Loss

Sound levels can reach up to 117dB in areas like Knockouts and Fettleing — as loud as a siren. Without hearing protection this can cause permanent hearing loss and tinnitus.



Musculoskeletal (MSK) Injury

Manual handling is a common cause of injury at work. MSK disorders (limb pain, joint problems strain injuries) account for almost 1/4 of all injuries in molten metal industries.



Electromagnetic Fields

Induction furnaces generate strong EMFs that may interfere with pacemakers and hearing aids, and can cause dizziness, visual disturbance or local tissue heating.



Workplace Exposure Limits

Dust, fume, noise and vibration have maximum exposure limits set by the HSE. Your employer must monitor and control your exposure and, where controls aren't enough, provide suitable PPE for you to use and care for.



Health Surveillance

Where residual risk remains after controls, your employer should arrange health surveillance — skin, respiratory, hearing and HAVS checks — to confirm controls work and catch problems early.