

Welding Operations

Welding is a multi-risk operation to both operatives and others in the vicinity that must be strictly controlled.

Main Points:

- Only trained operatives can undertake welding operations.
- Welding operations will always require the wearing of suitable personal protective equipment.
- Fire is an ever-present risk when welding and suitable precautions must be taken.

Discussion Points:

- Don't start unless you have a hot work permit for the works.
- Infra red rays, visible light rays and ultra violet radiation are hazardous to the eyes and skin. Wear suitable skin and eye protection .
- The eye protection standard for arc welding is BS EN 169 and 170; for gas welding BS EN 169 and 171. This will be marked on the goggles/helmet/screen – check.
- Consider the risks to other employees and provide suitable protection/procedures such as confining welding to specific areas, use of welding screens, etc.
- Wear suitable clothing that covers bare skin and is flame resistant.
- Welding and cutting produces fumes and gases that can harm the respiratory system (some fumes from lead or toxic-coated materials can also affect the rest of the body). Wear filtered respirators for low volume work. Permanent welding locations should have local exhaust ventilation fitted.
- Have CO₂ or dry powder fire extinguishers at hand, check areas where welding operations have been undertaken at least 30 minutes after work has been completed for any residual fire risks.
- Compressed gas cylinders pose a fire and explosive risk.
- Ensure only the minimum number of cylinders are stored on site as are required. Ensure they are stored upright, ensure flash back arrestors are fitted at cylinder gauge ends and non-return valves at inlets to the blowpipe, and ensure valves are closed prior to moving.
- The primary risk from electric arc welding is electric shock – check insulation, earthing, equipment condition and protective devices.

Gloves and masks protect the user
- safe systems of work protect everyone

Questions:

- 1 What are the risks in welding?
- 2 What controls are needed?
- 3 What do you need before you start welding?

Further Information:- CIP Manual, Section 11