SAFE WORK PRACTICE – WELDING (MIG)

PURPOSE

To provide a sense of the hazards involved in MIG welding applications and to facilitate doing so in a manner that minimizes risk of worker injury or damage to equipment and the environment.

PREREQUISITES

- Only authorized personnel - adequately qualified, trained and with enough experience - shall be permitted to MIG weld.
- MIG welding equipment is to be used and maintained in compliance with manufacturer guidelines and meet CSA standards.

POTENTIAL HAZARDS

- Cuts & lacerations
- UV radiation to skin & eyes
- Electricity & electric shock
- Toxic fumes
- Burns due to hot, molten materials
- Fire
- Flying sparks

BEFORE USE:

- Ensure the MIG welder has a suitable safe work area and is positioned on level surface.
- Keep the area clean & free of grease, oils & flammables, ensure that sparks or molten metal will not fall on workers or combustible materials.
- Ensure others are protected from any UV flash. Protect other people from arc burns by using a shield or setting up a welding screen, if possible, or warn them to wear adequate eye protection. Always be aware of your surroundings and all personnel in the work area, ensure screens are in place prior to starting task.
- Ensure the area is well ventilated.

DIRECTIVES:

- Wear proper eye and face protection when welding. When burning or welding, approved goggles or hoods must be worn with the suitable filter lenses. Sunglasses or tinted safety glasses are not acceptable.
- When welding above shoulder height, ears shall be protected from the entry of slag and sparks.
- Ensure the machine is correctly set up for current, voltage, wire feed and shielding gas flow rate.
- Ensure the ground makes firm contact to provide a good electrical contact. Make welding machine ground connections directly to the ground when possible. When connecting to a metal structure, ensure there is no risk of a fire starting at some distant point.
- Ensure the workpiece has been prepared to be free of any paint, oxides or other surface finishes ensuring a good electrical contact. Remove all foreign substances from welding surface. It is critical that the welding area is clear for proper weld penetration.
- Match the wire on spool to the type of metal being welded.
- Never leave the MIG welder running unattended.
- Regularly inspect the welding gun, tip and shield for damage.

- Lay out fire blankets when working on grating to contain sparks. Barricade a sufficient area below task if welding will occur above other workers.
- Avoid setting up in wet conditions because water is a conductor.
- Locate fire extinguishers at task area.
- Secure gas cylinders from tipping and store in an upright position.
- Always attach protective cap to top of cylinders when moving them.
- Lay out cables/hoses so they do not create a tripping hazard. Organize your work area.
- Examine hoses for wear and cracks. Inspect components for any loose connections.
- Check for leaks by spraying hoses/connections with a soap/water mixture. Bubbles will appear at areas that leak.
- Do not handle metal pieces even with gloves after welding. Metal retains heat for some time. Use pliers to move welded pieces.
- When welding is finished or interrupted, turn off the shielding gas at the regulator, turn off the machine and secure the handpiece safely.
- Clean up work area when task is complete.
- Shut off gas cylinder and replace cap.