

Safety Checklist for Welding & Related Thermal Processes

References: Code of Safe Working Practices for Merchant Seafarers (COSWP, UK), OCIMF SIRE 2.0, RIGHTSHIP RISQ 2.0

Do not operate equipment for welding or related thermal processes unless you are thoroughly familiar with the process, equipment, and the rules and regulations; including the proper use of accessories, e.g. fire extinguishers. Preparation for hot-work onboard should include, but not be limited to the points below to ensure safe operation.

Suggested UNITOR PPE for Welding

Face & Eye Protection:



Autodark 820 Freshair Complete 779034



Autodark 2020 Welding Shield 779062



Safety Helmet with Face Shield 619114



Weld Goggles with Lift-Front 175273



Safety Grinding Goggles 653410

Protective Clothing:



Leather jacket, Large for welding 510438
Leather jacket, Extra large for welding 510446



Leather apron for welding 510420



Leather trousers with belt 633016



Arm protector 184184
Leather Cuffs Pair 175935



Leather spats 510453

Accessories:



Welding Curtain with Hooks 633065



Welding Spatter Blanket 1 x 10m 646067



FumeClean-230 Weld. Fume Extractor 735878



Ensure good housekeeping practices

- Remove all flammable materials, liquids and gases from surroundings and tidy up the workplace.
- Use welding curtains or blankets to protect others from sparks and radiation from the arc.



Use the appropriate Personal Protective Equipment (PPE)

- Wear proper long-sleeved boiler/leather suit with safety shoes and use appropriate head, eye, and face protection (helmet, shield, goggles) with the correct shade of filter glasses.
- Use an appropriate respirator or fume extraction unit to avoid inhaling fumes and dust from the welding process.*

*Welding Fume Safety

The International Agency for Research on Cancer (IARC) under WHO has classified welding fumes and UV radiation from welding as Group 1 carcinogens, the agency's designation for agents that carry sufficient evidence of carcinogenicity in humans (2017). In May 2019, MCA UK issued HSE Safety Alert: Change in Enforcement for Mild Steel Welding Fume Bulletin No: STSU1 2019 and updated The Code of Safe Working Practice for Seafarers (COSWP) 2019.



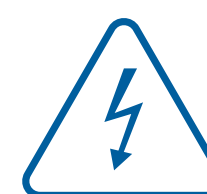
Maintain safe welding procedures

- Ensure that all relevant checklists, certificates and permits for hot work have been issued before welding.
- Post a warning sign when welding is in progress.
- When outside of workshop, assistant must accompany welder.
- When inside a confined space, assistant must be located outside within view of the welder.
- Ensure proper ventilation and availability of firefighting equipment.
- Switch off the welding machine and gas supply when not in use and remove the stick electrode from the electrode holder and store them properly.
- Do not leave the workplace unattended and conduct regular interval inspections to eliminate risk of fire remains.



Safe handling of all gas cylinders onboard during use and transportation

- Secure and store gas cylinders upright in storage rooms above deck. Gas cylinders must be fitted with valve caps and use appropriate cylinder trolleys to transport cylinders.
- Never use:
 - propane as fuel gas for shipboard welding or cutting.
 - alloys containing more than 65% copper or 45% silver in connection with acetylene.
 - oil, grease, or any flammable materials in connection with welding and cutting.
- Acetylene and oxygen gas regulators and torch end for long lengths of gas hoses must be fitted with flashback arrestors.
- Inspect, test and record critical gas equipment annually and replace every five years.
- All hoses and gas connections must be free from leaks and damages and use approved type hose clamps.
- Ensure correct colour coding for gas hoses (red for acetylene, blue for oxygen, black for shielding gases and filtered air).
- Never use acetylene or oxygen to blow dust away from yourself or the workplace.



Prevent electrical hazards

- Use only approved and compliant welding power sources (max 25 VAC or max 70 VDC). Using a Voltage Reduction Device (VRD) to reduce electric shock or electrocution risks is recommended.
- Never touch electrically live parts (e.g. welding electrode holder) without being properly insulated.
- Torches and electrode holders must be fully insulated and in good condition and work lead connection (return) must be clamped as close as possible to workpiece.
- Do not perform welding in 'wet' conditions and always insulate yourself from the work and ground.