

Welding In A Confined Space

Name:		Date:	
Job Description:		Location:	

Performance Metrics

	✓	✗	•
Gas cylinders and electric welding power sources are located outside the confined space and all cables entering the area are properly insulated and all gas hoses are leak free.			
Welding torches are lit outside the confined space.			
Low voltage welding machine used. Voltage reduction devices are fitted to any electric welding machine. Such a device automatically limits the voltage to less than 25 volts and only applies the full Open Circuit Voltage (OCV) when the electrode is struck.			
Confined spaces are tested for an explosive atmosphere each time before taking a lighted torch into the space or commencing welding task.			
Confined spaces are continuously ventilated during welding to ensure fumes and gases do not exceed safe exposure limits work and to prevent accumulation of flammable vapours in the work area. A ventilation fan is set up to remove air from the confined space with a suction point located close to, and above the welding to remove fumes.			
Internal combustion engines are not operating in the vicinity of a confined space.			
Flashback arrestors are fitted at the blow pipe and to the oxygen and fuel gas regulators. For long lengths of hose, arresters are fitted on both the torch and the regulator.			
When not in use, all torches and other gas or oxygen supplied equipment are shut off and removed from the space. Fuel gas and oxygen supply are shut-off outside the space when the welder leaves the workplace for any reason.			
Welders using electric welding are insulated from the workpiece and grounded by dry insulation. Where practicable they stand, lay or sit on non-conducting material while carrying out welding.			
The atmospheres in confined spaces is continuously monitored with a gas meter during welding to ensure fumes and gases do not exceed safe exposure limits or 10% of lower explosive limit (LEL).			
All welding / cutting hoses and electrical leads are suspended above the ground of the confined space to prevent damage from falling objects.			

Supervisor Task Requirements

Check work areas are well ventilated to prevent accumulation of flammable vapours in the space.			
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Established



Improvement Opportunity



Not Applicable

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Operator / Maintainer Requirements

Ventilate work areas to prevent accumulation of flammable vapours in the space.			
Check electrical welding equipment including power switches, terminals, connections, cables and insulation are not damaged or in poor condition prior to use. Don't use welding equipment with damaged insulation on the welding cables, plugs, clamps or torch / electrode holder.			
Check gas welding equipment cylinder fittings, hoses and connections are not damaged or in poor condition prior to use.			
Ensure flashback arrestors are fitted at the blow pipe and to the oxygen and fuel gas regulators. For long lengths of hose, fit arresters on both the torch and the regulator.			
Drain and purge equipment, such as gas hoses, and shut the gas off at the cylinder valve immediately after use.			
Use non-conducting material while carrying out electric welding to insulate from the metal of the enclosure that may become part of the welding circuit. Ensuring no direct contact with wet or conductive surfaces. Avoid physical contact with surrounding metalwork whilst welding. Use a wooden pallet or rubber floor mat that is large enough to offer protection if required to kneel or lie down to complete the task.			
Continuously monitor the confined space atmosphere with a gas meter during welding to ensure fumes and gases do not exceed safe exposure limits or 10% of LEL.			
Continuously ventilate during welding to ensure fumes and gases do not exceed safe exposure limits or 10% of LEL. If welding ventilation fan is set up to remove air from confined space the suction point must be located close to and above welding to remove fumes. Exhaust must be directed away from personnel and where it cannot be recirculated into the space.			
Light welding torches outside the confined space.			
Test the confined space for an explosive atmosphere each time before taking a lighted torch into the confined space or striking an arc.			
Keep firefighting equipment near welding area.			
Sentry has available and wears arc-flash eye protection when arc-flash is visible from their location.			

Comments/Actions

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Established



Improvement Opportunity



Not Applicable