

<b>Operation/Activity:</b> Welding (Arc, Mig, Tig)
<b>Location:</b>

**Persons at Risk (tick appropriate boxes)**

<b>Employee</b>	<input checked="" type="checkbox"/>	<b>Pregnant Women</b>	<input type="checkbox"/>
<b>Visitor</b>	<input type="checkbox"/>	<b>Disabled Persons</b>	<input type="checkbox"/>
<b>General Public</b>	<input type="checkbox"/>	<b>Lone Workers</b>	<input type="checkbox"/>
<b>Young Persons</b>	<input type="checkbox"/>	<b>Others</b>	<input type="checkbox"/>

*GUIDE TO RATINGS:*

RISK SEVERITY	RISK LIKELIHOOD	RISK RATING
1 Negligible	1 Unlikely	1 - 6 Low
2 Minor	2 Possible	7 - 14 Medium
3 Significant	3 Quite Possible	15 - 25 High
4 Major	4 Likely	
5 Catastrophic	5 Very Likely	

Overall Risk Rating = Low

**Describe the hazards associated with the activity/operation.**

Hazard		Risk Rating (Existing Controls)	Summary of Assessment Overleaf (Additional Control Measures)			
			Likelihood (L)	Severity (S)	Risk (L x S)	Risk Rating
<b>H1</b>	Electric shock or electrocution	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H2</b>	Electromagnetic radiation. The type of radiation produced by electric arc and fuel gas processes is known as "non-ionizing" radiation	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H3</b>	Heat, Flames, Fire and Explosion	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H4</b>	Noise	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H5</b>	Welding and Cutting Fumes	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H6</b>	Fuel Gases - Hydrogen, Acetylene, Propane, Propylene and Methylacetylene-Propadiene (MAPD) are all fuel gases	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H7</b>	Inert Gases, Gas Mixtures and Compressed Gases	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H8</b>	Solvents	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H9</b>	Manual Handling	Medium	2	4	<b>8</b>	<b>Medium</b>
<b>H10</b>	Slips, trips and falls.	Medium	2	4	<b>8</b>	<b>Medium</b>

<b>Assessed By:</b>	<b>Date:</b>
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<b>Monitored By:</b>	<b>Date:</b>
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Hazard	Risk Control Measures <i>(Measures currently undertaken to reduce the risk)</i>	Residual Risk		
		Likelihood	Severity	Risk
<b>H1</b> Electric shock or electrocution	Information on the welding equipment to be used. Consult equipment labels and instruction manuals for electrical rating, duty cycles and capabilities. Ascertain if equipment has been properly installed by qualified electricians and maintained in good condition. Examine and inspect power switches, equipment, terminals, connections, cables, inter-connectors and insulation for condition and current carrying capacity. Examine the working area to check for potentially live structures or components and wet areas.	1	4	<b>4</b>
<b>H2</b> Electromagnetic radiation	Gather information on the welding process to be used. Consult welding process health sheets and MSDSs for what type of radiation is emitted during use. An assessment of the type and intensity of the radiation may be made from the guidance below, and appropriate risk controls can then be applied. The welder should also assess the risk of exposure to radiation from other welding or cutting activities in the vicinity.	1	4	<b>4</b>
<b>H3</b> Heat, Flames, Fire and Explosion	Observe the welding area to ascertain whether there are sources of heat, naked flames, electric arcs, flammable liquids or combustible materials in the vicinity. Gather information regarding any liquids or materials in the vicinity. Consult MSDSs for fire and explosion data on the substances. Identify other potential sources of flammable vapours or explosive dusts remote from the welding area. Identify location of firefighting equipment and escape routes. If conditions are hot and humid, an assessment should take account of how long welding is to be carried out and when breaks may be taken.	1	4	<b>4</b>

<b>H4</b> Noise	Where noise levels exceed allowable levels laid down in health and safety legislation, warning notices will be required either at the machine/process or, if excessive generally throughout a workshop, at all entrances. A workshop with such notices presents a very high risk of exposure to noise. Wearing of suitable ear protection reduces the risk of exposure to noise and damage to hearing.	1	4	<b>4</b>
<b>H5</b> Welding and Cutting Fumes	Consult the MSDS for what is in the consumable and what fume is produced during welding.	1	4	<b>4</b>
<b>H6</b> Fuel Gases	If used, Consult MSDSs for the properties and potential hazards of each gas. Examine gas cylinders and gas lines for condition and connections. It may be necessary to carry out leak testing to eliminate the risk of gas leaks from fuel gas systems. Examine gas cylinders and gas lines for flashback arrestors. If Acetylene gas is involved, check what material has been used for joining gas lines.	1	4	<b>4</b>
<b>H7</b> Inert Gases, Gas Mixtures and Compressed Gases	Gather information and identify inert gases and gas mixtures in the vicinity, even if not being used personally. Consult MSDSs for the properties and potential hazards of each gas. Examine gas cylinders and gas lines for condition and connections. It may be necessary to carry out leak testing to eliminate the risk of gas leaks from gas systems. Check regulators for type and maximum pressure.	1	4	<b>4</b>
<b>H8</b> Solvents	Identify solvents being used remote from the immediate vicinity (in degreasing tanks, for example), to assess if they pose a risk. Identify other materials that may contain solvent. Consult MSDSs for the properties and potential hazards of each material.	1	4	<b>4</b>
<b>H9</b> Manual Handling	Correct lifting procedure.	1	4	<b>4</b>
<b>H10</b> Slips, trips and falls	Good housekeeping.	1	4	<b>4</b>

