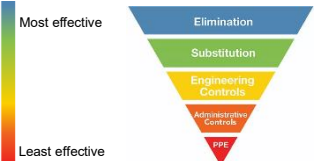


<b>Project:</b>	Workshop/Yard Operations	<b>RA No:</b>	05	<b>Review Date</b>
<b>Operation / Task:</b>	Electrical Welding	<b>Persons at risk:</b>	Welders, Bystanders	<b>31/01/2027</b>
<b>Location / Area:</b>	All Depots – fabrication bays, mobile works	<b>Public at risk:</b>	No	
<b>Monitoring Responsibility:</b>	Depot Manager, Workshop Manager, Workshop Foreman, Operatives and Supervisors, HSQE Team			

**KEY**

**S = Severity Rating**



- Negligible
- Minor Injury
- Major Injury (RIDDOR)
- Fatality
- Multiple Fatality

**L = Likelihood of Occurrence**

- Improbable
- Remote 1 – 10%
- Possible 10 – 50%
- Probable 50 – 90%
- Almost certain 90%+

**RR = Risk Rating**

Severity	5	5	10	15	20	25
4	4	8	12	16	20	25
3	3	6	9	12	15	20
2	2	4	6	8	10	15
1	1	2	3	4	5	10
		1	2	3	4	5
		Likelihood				

**R** Unacceptable risk, plan out or add further controls.  
**O** Acceptable only if no other method viable & with high level controls in place.  
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Activity	Hazards/Risks Identified	Risk Rating			Control Measures	Residual Risk			Responsibility
		S	L	RR		S	L	RR	
Welding or fabrication of components. Repair of fixed metal components	<p>Inhalation of welding fumes, welding gases, both toxic &amp; or asphyxiating from poor ventilation</p> <p>Radiated burns from ultra-violet light, infrared red light or heat</p> <p>Electric shock (<b>see also RA no. 06-Electricity</b>)</p> <p>Fire &amp; Explosion (<b>see also RA no.08- Hot works</b>)</p>	4	4	16	<ul style="list-style-type: none"> <li>Welding operations must be conducted within the designated Hot Working / Fabrication areas.</li> <li>Local Exhaust Ventilation (LEV) must be used where available during welding operations.</li> <li>LEV Extraction ducts are to be positioned as close as possible to the work piece prior to / during welding.</li> <li>For long welds, the duct may need to be repositioned to ensure efficient extraction is maintained.</li> <li>LEV equipment must be inspected prior to use by the user - damage, poor extraction, clogged filters etc. are to be reported.</li> <li>An annual inspection &amp; performance test of all LEV equipment is to be completed.</li> <li>Welding conducted outside is to be carried out in well-ventilated areas with care being taken not to expose others to fumes or ultraviolet light.</li> <li>Screens or curtains must be manufactured to BS EN 1598 - these will positively filter UV glare and the other harmful blue/white radiation.</li> <li>Mobile screens must be used for welding operations undertaken inside and outside designated areas.</li> <li>Access to welding areas must be limited.</li> <li>Signage displayed to warn others when welding is undertaken.</li> </ul>	4	2	8	<p>Depot Manager.</p> <p>Workshop Manager</p> <p>Workshop Foreman</p> <p>Welders</p> <p>HSQE Team</p>

<b>Project:</b>	Workshop/Yard Operations	<b>RA No:</b>	05	<b>Review Date</b>
<b>Operation / Task:</b>	Electrical Welding	<b>Persons at risk:</b>	Welders, Bystanders	<b>31/01/2027</b>
<b>Location / Area:</b>	All Depots – fabrication bays, mobile works	<b>Public at risk:</b>	No	
<b>Monitoring Responsibility:</b>	Depot Manager, Workshop Manager, Workshop Foreman, Operatives and Supervisors, HSQE Team			

**KEY**

**S = Severity Rating**

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4	4	8	12	16	20	
3	3	6	9	12	15	
2	2	4	6	8	10	
1	1	2	3	4	5	
		1	2	3	4	5

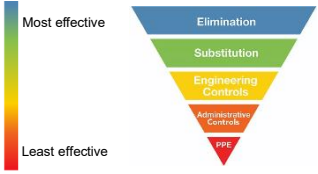
Severity

Likelihood

Activity	Hazards/Risks Identified	Risk Rating			Control Measures	Residual Risk			Responsibility
		S	L	RR		S	L	RR	
Welding or fabrication of components. Repair of fixed metal components	Electric shock ( <b>see also RA no. 06-Electricity</b> )  Fire & Explosion ( <b>see also RA no.08- Hot works</b> )  Inhalation of welding fumes, welding gases, both toxic & or asphyxiating from poor ventilation	4	4	16	<ul style="list-style-type: none"> <li>Correct PPE must be worn.</li> <li>Clothing. Operators must wear heavy-duty cotton overalls manufactured to BS EN 470-1 The clothing must cover all parts of the body, arms, neck and chest that could otherwise be exposed to direct arc radiation.</li> <li>Eye Protection. Eye protection is to be provided using full face welding helmet fitted with a suitable filter glass.</li> <li>Lenses are to be tight fitting to avoid reflection into the helmet.</li> <li>BS EN 175 (requirements for basic shielding types) must be used as a guide.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team
Welding or fabrication of components. Repair of fixed metal components	Radiated burns from ultra-violet light, infrared red light or heat.  Electric shock ( <b>see also RA no. 06-Electricity</b> )  Fire & Explosion ( <b>see also RA no.08- Hot works</b> )	4	4	16	<ul style="list-style-type: none"> <li>BS EN 169 specifies a range of permanent filter shades of gradually increasing optical density which limit exposure to radiation emitted by a different process at different currents.</li> <li>BS EN 379 defines requirements for the photosensitive variable density lenses that are now available. The overriding benefit of such reactive lenses is the welder's ability to see and position the electrode correctly before striking the arc.</li> <li>Hand Protection: Gloves will be worn at all times as hands are usually the closest part of the body to the arc and the work piece. It is therefore important that welder's gloves provide thermal insulation as well as blocking out UV and visible light frequencies.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team

<b>Project:</b>	Workshop/Yard Operations	<b>RA No:</b>	05	<b>Review Date</b>
<b>Operation / Task:</b>	Electrical Welding	<b>Persons at risk:</b>	Welders, Bystanders	<b>31/01/2027</b>
<b>Location / Area:</b>	All Depots – fabrication bays, mobile works	<b>Public at risk:</b>	No	
<b>Monitoring Responsibility:</b>	Depot Manager, Workshop Manager, Workshop Foreman, Operatives and Supervisors, HSQE Team			

**KEY**



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- Negligible
- Minor Injury
- Major Injury (RIDDOR)
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**RR = Risk Rating**

Severity	5	5	10	15	20	25
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Activity	Hazards/Risks Identified	Risk Rating			Control Measures	Residual Risk			Responsibility
		S	L	RR		S	L	RR	
Welding or fabrication of components. Repair of fixed metal components	Inhalation of welding fumes, welding gases, both toxic & or asphyxiating from poor ventilation  Radiated burns from ultra-violet light, infrared red light or heat.  Electric shock ( <b>see also RA no. 06-Electricity</b> )  Fire & Explosion ( <b>see also RA no.08- Hot works</b> )	4	4	16	<ul style="list-style-type: none"> <li>The gloves must be designed to cover hand and wrist and overlap the sleeves.</li> <li>Foot Protection: Footwear must give protection against the required level of impact &amp; resist penetration by spatter &amp; sharp objects.</li> <li>High top boots with instep &amp; toe protection are to be worn.</li> <li>Rubber soles provide added protection from electrical shock.</li> <li>Regular checking by line management undertaken to ensure compliance.</li> <li>Installation of welding equipment must be carried out by suitably qualified staff.</li> <li>Equipment must be suitable for operation and be connected / installed in accordance with the manufacturer's recommendations.</li> <li>The equipment must conform to BS 638 Part 10.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team
Welding or fabrication of components. Repair of fixed metal components	Inhalation of welding fumes, welding gases, both toxic & or asphyxiating from poor ventilation  Radiated burns from ultra-violet light, infrared red light or heat.	4	4	16	<ul style="list-style-type: none"> <li>MMA welding DC is safer than AC welding. However, if AC is used the OCV or no-load voltage must be limited, where possible, by a voltage reduction device.</li> <li>Safety critical devices must be checked periodically, and findings record.</li> <li>Spraying from all directions - an RCD must be fitted to the unit.</li> <li>Safety critical devices must be checked, and findings recorded.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team

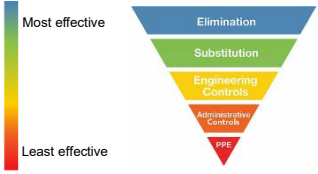
<b>Project:</b>	Workshop/Yard Operations	<b>RA No:</b>	05	<b>Review Date</b>
<b>Operation / Task:</b>	Electrical Welding	<b>Persons at risk:</b>	Welders, Bystanders	<b>31/01/2027</b>
<b>Location / Area:</b>	All Depots – fabrication bays, mobile works	<b>Public at risk:</b>	No	
<b>Monitoring Responsibility:</b>	Depot Manager, Workshop Manager, Workshop Foreman, Operatives and Supervisors, HSQE Team			

**KEY**

**S = Severity Rating**

**L = Likelihood of Occurrence**

**RR = Risk Rating**



1. Negligible	1. Improbable	5	5	10	15	20	25	<table border="0"> <tr> <td><b>R</b></td> <td>Unacceptable risk, plan out or add further controls.</td> </tr> <tr> <td><b>O</b></td> <td>Acceptable only if no other method viable &amp; with high level controls in place.</td> </tr> <tr> <td><b>Y</b></td> <td>Acceptable with suitable controls.</td> </tr> <tr> <td><b>G</b></td> <td>Acceptable, no further action required.</td> </tr> </table>	<b>R</b>	Unacceptable risk, plan out or add further controls.	<b>O</b>	Acceptable only if no other method viable & with high level controls in place.	<b>Y</b>	Acceptable with suitable controls.	<b>G</b>	Acceptable, no further action required.
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2. Minor Injury	2. Remote 1 – 10%	4	4	8	12	16	20									
3. Major Injury (RIDDOR)	3. Possible 10 – 50%	3	3	6	9	12	15									
4. Fatality	4. Probable 50 – 90%	2	2	4	6	8	10									
5. Multiple Fatality	5. Almost certain 90%+	1	1	2	3	4	5									

Likelihood

Activity	Hazards/Risks Identified	Risk Rating			Control Measures	Residual Risk			Responsibility
		S	L	RR		S	L	RR	
	<p>Electric shock (<b>see also RA no. 06-Electricity</b>)</p> <p>Fire &amp; Explosion (<b>see also RA no.08- Hot works</b>)</p>				<ul style="list-style-type: none"> <li>The operator is responsible for checking the equipment (cable, electrode holder and coupling devices) daily for damage and reporting defects.</li> <li>External connections must be clean and tight and checked each time a reconnection is made.</li> <li>Welding return clamps must be connected directly to the work piece, as close as possible to the point of welding or to the work bench on which the work piece is placed.</li> </ul>				
Welding or fabrication of components. Repair of fixed metal components	<p>Inhalation of welding fumes, welding gases, both toxic &amp; or asphyxiating from poor ventilation</p> <p>Radiated burns from ultraviolet light, infrared red light or heat</p> <p>Electric shock (<b>see also RA no. 06-Electricity</b>)</p> <p>Fire &amp; Explosion (<b>see also RA no.08- Hot works</b>)</p>	4	4	16	<ul style="list-style-type: none"> <li>In MMA welding, the electrode holder must be isolated when changing the electrode.</li> <li>Operators must not wear jewellery (especially rings) or metallic watch straps.</li> <li>Electrical supplies / feeds are to be routed to minimise the risk of trips and where appropriate installed in proprietary channels or conduits.</li> <li>For welding operations in temporary locations, barriers &amp; duck boards must be used to reduce risk of trips.</li> <li>Equipment is to be installed at a practicable height for all operational staff. All staff are to wear the correct footwear within workshop.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team

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<b>Project:</b>	Workshop/Yard Operations	<b>RA No:</b>	05	<b>Review Date</b>
<b>Operation / Task:</b>	Electrical Welding	<b>Persons at risk:</b>	Welders, Bystanders	<b>31/01/2027</b>
<b>Location / Area:</b>	All Depots – fabrication bays, mobile works	<b>Public at risk:</b>	No	
<b>Monitoring Responsibility:</b>	Depot Manager, Workshop Manager, Workshop Foreman, Operatives and Supervisors, HSQE Team			

**KEY**

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Severity

Likelihood

Activity	Hazards/Risks Identified	Risk Rating			Control Measures	Residual Risk			Responsibility
		S	L	RR		S	L	RR	
Welding or fabrication of components. Repair of fixed metal components	Inhalation of welding fumes, welding gases, both toxic & or asphyxiating from poor ventilation  Radiated burns from ultra-violet light, infrared red light or heat.  Electric shock ( <b>see also RA no. 06-Electricity</b> )  Fire & Explosion ( <b>see also RA no.08- Hot works</b> )	4	4	16	<ul style="list-style-type: none"> <li>In all cases prior to commencing welding activities combustible materials must be moved away from the welding area.</li> <li>Additional protection from flame, heat, sparks, or hot slag must be provided using metal sheeting, mineral fibre boards or fire-retardant blankets where identified.</li> <li>Welding operations required to be carried out on tanks, &amp; drums must be separately Risk Assessed and completed under a permit to work.</li> </ul>	4	2	8	Depot Manager. Workshop Manager Workshop Foreman Welders HSQE Team

**Risk Assessment Prepared By:**

Paul Lynch

**Signature:**

**Date:**

31/01/2026

**Risk Assessment Reviewed By:**

Daniela Rizvan

**Signature:**

**Date:**

31/01/2026



Owner: Head of HSQE

Version: 3

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