

## RISK ASSESSMENT FORM

STRTRA-01

Dept. Name:	Engineering Workshop	RA no*:		Rev No.*	01	Date:	
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**Work / Activity Details: Electric and Gas Welding**

**Sect.1. Risk Assessment Table**

Sub Task/Activity	Hazards Identified	RA Criteria (People/Environment/Property/Process)	Consequences	Existing Control Measures	Severity** Rating (A) of consequences	Likelihood** Rating (B) /Refer Table in	Risk Level** (A X B)	Additional Controls (if any)	Person Responsible	Agreed time frame	New Severity Rating(A1) (after additional)	New Likelihood Rating(B1) (after additional)	Residual Risk (A1 x B1)	Decision to proceed with work Y/N
<b>Electric Welding</b>	Misuse of equipment	People	Injury	Ensure staff are tried and have welding experience	2	2	4	Additional training as required			2	1	2	Y
	Electric Shock	People	Electric Shock	Inspection to be carried out prior to use. Inspection of cables and connections to be carried out	2	2	4	Any defects with equipment to be rectified prior to use	HOD	Prior to use	2	2	4	Y
	Burns	People	Burns to exposed hands face etc	PPE to be used, Gloves, Goggles etc	2	2	4				2	2	4	Y
	Burns	People	Burns form touching hot work	Wearing of welding gloves Ensure welded part cool enough prior to handling	2	2	4							Y
	Flashback from cutting/ Brazing nozzles	People	Fire	Ensure flashback arrestors are in good working condition	3	3	9	Defective arrestors to be renewed.			2	2	4	Y

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<b>Risks common to both Electric &amp; Gas Welding</b>														
Hot work	Injury	People	Injury	Ensure weldig ares is isolated and welding screens (if applicable) are erected.	2	2	4				2	2	4	Y
Hot work	Fire	Property	Damage to equipment / Property	Work location to be cleared of all flammables.	2	2	4				2	2	4	Y
				Fire extinguisher to be ready available	2	2	4				2	2	4	Y
Hot work	Working on pressure vessels	People / Property	Injury / Damage	No welding to be carried out until risk assessment is carried out.										N

- \*Numbering guidance: a. New RA No. if it is a fresh case. b. Old RA No. with new date if no change is hazards. c. Old RA No. inserting Rev. No & new date if there are additional Hazards
- \*\* Refer RA Matrix (Sect.2 Table 1,2,3, of this Form for Hazards / Consequences Evaluation (Likelihood/Severity) to People, Environment and/or Property / Commercial aspects as applicable to arrive at ratings of (A) & (B).
- \*\*\* Refer Risk Level table (Sect.2 Table 4 of this form)). .If results are either in yellow or red consider additional measures to mitigate the risk.
- ‘Contingency Plans’ to limit the impact of unplanned occurrences/ failure of control measures to be discussed and recorded in the section below.
- During review of the RA process, if scope for improvement of the documented HSE procedure for the operation/activity is identified, same should be recorded in the comments section below.

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Contingency Plans :

Comments :

All control measures to be carried out prior to use

Signed:

Reviewer's Comments:

Signed:

Name / Position / Signature

Date

### SECT 2: Risk Ranking Matrices & Risk Level Tables

TABLE 1 : - PEOPLE			(Severity of)Consequence-A				
			FAC: First Aid Case	LTI: Lost Time Incident	Hospital: Injury requiring Hospitalization or LTI >24hours	Perm Disability: Injury resulting in permanent disability	Fatality: Injury resulting in death
Likelihood Of Consequence)-B		Rating	1	2	3	4	5
	Happened several times per annum in a location/ship (Very likely)	5	5	10	15	20	25
	Happened several times per annum within the company (Likely)	4	4	8	12	16	20
	Happened within our company at least once (Unlikely)	3	3	6	9	12	15
	Heard Within the industry (Highly unlikely)	2	2	4	6	8	10
	Never heard within the industry (Almost NIL chances)	1	1	2	3	4	5

TABLE 2: PROPERTY / COMMERCIAL			(Severity of)Consequence-A				
			GBP 10. Damage to property/equipment	GBP 50. Damage to property/equipment	GBP 100. Damage to property/equipment	GBP 500. Damage to property/equipment	GBP 1000 Damage to property/equipment
Likelihood Of Consequence		Rating	1	2	3	4	5
	Happened several times per annum in a location/ship (Very likely)	5	5	10	15	20	25
	Happened several times per annum within the company (Likely)	4	4	8	12	16	20
	Happened within our company at least once (Unlikely)	3	3	6	9	12	15

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Heard Within the industry ( <b>Highly unlikely</b> )	2	2	4	6	8	10
Never heard within the industry ( <b>Almost NIL chances</b> )	1	1	2	3	4	5

TABLE 3 : RA - MATRIX FOR MOC			(Severity of) Consequence (To be defined)\#* - A				
			Negligible	Minor	Moderate	Major	Catastrophic
Likelihood Of Consequences-B		Rating	1	2	3	4	5
	Very likely	5	5	10	15	20	25
	Likely	4	4	8	12	16	20
	Unlikely	3	3	6	9	12	15
	Highly unlikely	2	2	4	6	8	10
	Almost NIL chances	1	1	2	3	4	5

Table 4: Risk Levels	Meaning	Action
1 - 7	Tolerable	Risk is acceptable and job can be undertaken. Consideration may be given for further reduction of risk if reasonably possible. However, in case value is above 4, continuous monitoring is required to ensure existing controls are maintained.
8 - 11	Moderate	Efforts are to be made to reduce the risk by placing additional controls with an aim to bring down Risk Level to Green zone.
12 - 25	Substantial	Efforts are to be made to reduce the risk to green/yellow rating by placing additional controls and taking appropriate action as defined above. However, If the final risk level is in the red zone then no job shall be undertaken. Until the final risk level is reduced so that it is no longer in the red zone the job shall not be undertaken."