Risk Assessment - Plasma Cutter

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Plasma Cutting

Department: Global
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Plasma Cutting

Gloucestershire Warwickshire Steam Railway Plc
Risk Assessment for Plasma Cutter - Global

Type	Hazard Cause	Persons Affected	Control Measures	L S T Overall	Additional Control Measures	L S T Overall	Owner/Action
Health and Safety	Infrastructure damage and injury to user or those within work area Cuts, impact or fire caused by misuse	Volunteers & Staff	1) Engineering: Barrier off work area or restrict access so that any hot materials cannot impact other associates - Effective 2) CRITICAL - Engineering: Screens should be used, secured and in place to stop others from being exposed to a risk of 'arc eye' injury or being struck by ejected particles. - Effective 3) CRITICAL - Engineering: All equipment should be inspected to check for damage before use. - Effective 4) CRITICAL - Engineering: Workpieces must be securely fixed or clamped before work starts - Effective 5) CRITICAL - Engineering: Position workpieces so that any spatter or emitted projectiles are projected away from the user wherever possible. - Effective 6) CRITICAL - Engineering: Gas and air regulators should be inspected and 'in-ticket'. - Effective 7) CRITICAL - Engineering: All mobile electrical equipment must be PAT tested and 'in-ticket'. - Effective 8) CRITICAL - Engineering: Ensure that trailing hoses and electrical cables are not a trip hazard. - Effective 9) CRITICAL - Engineering: Be aware of the production of fumes and work in a well ventilated area. - Effective 10) CRITICAL - Engineering: Decontaminate all materials before work starts (grease, dirt, oils etc.) - Effective 11) CRITICAL - Engineering: Any cutting equipment, should be stored securely and appropriately. - Effective 12) CRITICAL - Engineering: Where work is above floor level, non-combustible curtains or sheets suspended beneath the work should be used to collect sparks - Effective 13) CRITICAL - Administrative: Users should be experienced, competent and authorised to use the plasma cutter - see workshop manager for list of approved users - Effective 14) CRITICAL - Administrative: Ensure no flammables are within the work area - Effective 15) CRITICAL - Administrative: Fire extinguishers should be available 'on the job' close to the work area. - Effective 16) CRITICAL - Administrative: Lone Working is not allowed for plasma cutting - Effective 17) CRITICAL - Administrative: Minimise skin exposure, particularly wrists and lower arms - Effective 18) CRITICAL - Administrative: Warn others in the work area in advance of the work starting. - Effective 19) CRITICAL - Administrative: Arrange the workplace so as to avoid clutter and hazards. - Effective 20) CRITICAL - Administrative: Maintain a good posture when working and avoid crouching over or becoming too close to the work piece. - Effective 21) CRITICAL - Administrative: Be aware of your own limitations. - Effective 22) CRITICAL - Administrative: Work should cease and a 'fire watcher' be in place for 30 mins afterwards in case any stray sparks or other hot materials cause a fire. - Effective CONTINUES ON NEXT PAGE	2 x 3 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	1) Engineering: Consider using fume extraction systems - Effective 2) Engineering: Consider damping down the work area before and after the task is completed with water sprays or similar. - Effective 3) Engineering: Consider the use of flame blankets to reduce fire risk. - Effective 4) Engineering: Consider fiting smoke detectors and fire alarm facilities to areas where hot work is undertaken. - Effective 5) Engineering: Consider barriers around the place of operation - Effective 6) PPE: Consider wearing a safety apron to reduce impact of sparks - Effective	2 x 3 = 6 Medium - Risk to be minimised and controlled so far as is reasonably practical.	n/a
			23) CRITICAL - Administrative: Maintain good housekeeping throughout the work area. - Effective 24) CRITICAL - PPE: Fire retardant overalls, gloves/gauntlets, safety footwear and eye protection shall be worn. See below PPE additional note for eye protection grades - Effective 25) CRITICAL - PPE: Suitable eye protection shall be worn and this is determined by shade number: Light cutting: shade number 3 or 4 for up to 1" cuts; medium cuts (1-6") shade number 4 or 5; heavy cuts (>6") shade grade 5 or 6 - Effective				

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Score and Control Measure Notes. Risk is medium if trained competent users follow the control measures. Risk remains medium if extra control measures are followed							

COSHH Assessments

There are no COSHH assessments associated with this risk assessment.

Reference Documents

• Hot Work Standard - Loss Prevention Assoc. and Insurance Ind. -

Ends