



**Gloucestershire Warwickshire Steam Railway Plc**  
**Risk Assessment for Welding inside locomotive tender tanks - Steam Loco**

**Risk Assessment - Welding inside locomotive tender tanks**

Reference No: STE-45498-31

Version No: 1

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Repairs are often required inside the confined space of a tender water tank. This RA assess risks associated with that task and lists some control measures to be followed.

Department: Steam Loco  
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**Welding inside a tender tank**

Type	Hazard Cause	Persons Affected	Control Measures	L Overall	S	T	Additional Control Measures	L Overall	S	T	Owner/Action
Health and Safety	Injury to workers Various means such as asphyxiation, burns, heat stroke, explosion, poisoning, physical harm etc.	Volunteers, Staff & Contractors	1) CRITICAL - Engineering: All equipment to be taken into the work area to be checked and be in good working order. - Effective 2) CRITICAL - Engineering: Any gas equipment to be used must be checked outside of the work area for leaks. - Effective 3) CRITICAL - Engineering: An air mover must be used to assist with ventilation. - Effective 4) CRITICAL - Engineering: There must be at least two openings in the tank to allow for air flow. - Effective 5) CRITICAL - Administrative: All workers must have completed successfully the GWSR Confined Space Working training - Effective 6) CRITICAL - Administrative: The Confined Space Working procedure and risk assessment are to be followed. - Effective 7) CRITICAL - Administrative: Workers to be fit and in good health. - Effective 8) CRITICAL - Administrative: The tank must be dry before entry is allowed and work starts. - Effective 9) Administrative: Take regular breaks to avoid heat exhaustion. - Effective 10) CRITICAL - Administrative: All portable equipment must be PATS tested. - Effective 11) CRITICAL - Administrative: No other work is allowed inside the tank when welding is undertaken. - Effective 12) CRITICAL - Administrative: Only those actually working on the task are allowed inside when welding is being carried out. - Effective 13) CRITICAL - PPE: Fire fighting equipment must be to hand. Be aware of the asphyxiation risk with some types of extinguisher. - Effective 14) CRITICAL - PPE: Fire retardant overalls/clothing must be worn. - Effective 15) CRITICAL - PPE: Boots, gloves to be used when welding. - Effective 16) CRITICAL - PPE: A welding visor must be used. - Effective	2 x Medium - Risk to be minimised and controlled so far as is reasonably practical.	5 =	10	1) Engineering: Consider only using stick welding techniques to reduce chance of introducing flammable or asphyxiating gases. - Effective 2) Engineering: Cables for any equipment required should be run through a separate manway to the main access/egress manway. - Effective 3) Engineering: Consider other fixing methods for installation if welding can be avoided such as bolting. - Effective 4) Administrative: Only use 110V welding equipment if possible. - Effective 5) Administrative: Only use low voltage or battery lighting if available. - Effective 6) Administrative: Consider the impact of other work outside of the tender on this task and temporarily stop if required. - Effective 7) PPE: Those not welding but involved in the task should consider a bump cap and dust mask. - Effective	1 x Low - Risk to be monitored to ensure it remains adequately controlled to an acceptable level.	5 =	5	n/a

**Score and Control Measure Notes.**

Medium risk. Consider further potential control measures.

If the job is well planned, monitored and executed, with extra controls, the risk is low but the potential consequence is always high.

**COSHH Assessments**

There are no COSHH assessments associated with this risk assessment.

Ends