Risk Assessment - Workshop - Use of a Surface Grinder or Cutter

Reference No: GLO-44419-51
Version No: 5
Assessment Approver: Kevin Jarvis

Department: Global
Date Of Assessment: 11 August 2021
Review Due Before: 10 March 2029
Lead Assessor: Kevin Jarvis
Team: Martin Sedgwick & Steve Parker

Use of a surface grinder or cutter in a workshop environment

Gloucestershire Warwickshire Steam Railway Plc
Risk Assessment for Workshop - Use of a Surface Grinder or 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	Personal Injury Multiple causes included contact with moving parts, sharps objects, entanglement, electrical shock etc.	Volunteers & Staff	1) CRITICAL - Elimination: No loose clothes, jewellery, overly long sleeves, ties or gloves will be worn. - Effective 2) CRITICAL - Elimination: Hands must be kept clear of the rotating or moving parts. - Effective 3) CRITICAL - Engineering: A stop switch will be fitted within the reach of the user. - Effective 4) CRITICAL - Engineering: Machine guards must be fitted, clean, functional and used at all times. - Effective 5) CRITICAL - Engineering: Any fitted safety devices such as foot switches or overloads must be fitted and functional. - Effective 6) CRITICAL - Engineering: The machine will be securely fixed to the floor or other stable and unmovable surface. Those machines that are mounted on wheels must be securely fixed whilst in use to stop them from moving. - Effective 7) CRITICAL - Engineering: The wheel must be securely fixed, in good condition and guarded. - Effective 8) CRITICAL - Engineering: The machine must be switched off and power isolated and locked out where possible before any maintenance activity takes place. - Effective 9) CRITICAL - Engineering: Grinding wheels and cutting tools will be made of a suitable material for the piece being worked. - Effective 10) CRITICAL - Engineering: Rotational and cutting speeds must be set appropriately depending on the task to be carried out. - Effective 11) CRITICAL - Engineering: Sufficient space must be available around the machine to prevent any issues with those passing by. - Effective 12) CRITICAL - Engineering: Floor surfaces must be clean and dry so as not to introduce a slip hazard. - Effective 13) CRITICAL - Engineering: Grinding wheels used must be correctly rated to cover the maximum speed of the machine being used. - Effective 14) CRITICAL - Engineering: Bonded abrasive wheels should be regularly dressed to maintain cutting effectiveness. - Effective 15) CRITICAL - Engineering: The workpiece should be securely held in the tool and cutter grinder holder, on the surface grinder magnetic table additional steel strips may be required to prevent the workpiece/s from moving. - Effective 16) CRITICAL - Administrative: Only competent and authorised staff are to use the equipment. - Effective 17) CRITICAL - Administrative: The equipment will be mechanically and electrically maintained regularly and accurate records of maintenance activity will be kept. All safety features will be tested. - Effective 18) CRITICAL - Administrative: A hair net or cap will be worn by staff with long hair. - Effective 19) CRITICAL - Administrative: The machine must never be left unsupervised if energised. - Effective 20) CRITICAL - Administrative: Only the user and any trainees can be near to the machine when it is in operation. - Effective 21) CRITICAL - Administrative: Only those persons trained and competent can change machine wheels or cutting tools. - Effective CONTINUES ON NEXT PAGE	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	1) Engineering: Consider the use of a dust extraction system in situations where large amounts of dust are generated. - Effective 2) Engineering: The version of the J&S '540', in place at the GWSR, machine number 39 has no interlock between the longitudinal power feed and the hand wheel engagement. Consequently, if the handwheel is engaged when the table is under power it will spin round violently, which could cause injury. Exercise extreme caution. - Effective 3) Administrative: Where machine guards are not fitted extra care should be taken to avoid entanglement with moving parts or ejection of materials. - Effective 4) PPE: Wear ear protection if desired and always if noise surveys have indicated that ear protection is required. - Effective	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	T&RS Director - Keith Smith - Arrange for the assessment, fitting and use of appropriate guards where these are not present due to the age and/or design of the machine.

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			22) CRITICAL - Administrative: Care must be taken when touching work pieces after working due to the potential for a burn. - Effective 23) CRITICAL - Administrative: Loose tooling and other equipment or rags etc. must not be kept on the machine or allowed to obstruct the work area. - Effective 24) CRITICAL - Administrative: Grinding wheels should only be changed, balanced etc by a competent person. - Effective 25) CRITICAL - PPE: Eye protection, overalls or dust coat and steel toe-capped footwear mustd be worn. - Effective 26) CRITICAL - PPE: Surface grinding machines are prone to wheel burst. It is vital that the competent operator stands away from the wheel plane when in use. - Effective				

Score and Control Measure Notes.
Risk is medium due to potential injury.
All control measures must be followed.
The risk remains medium.

COSHH Assessments

There are no COSHH assessments associated with this risk assessment.
Ends

Appendix







Reference: UI-46091-504
Example surface grinding machine - The Jones and Shipman 1400