Risk Assessment - Workshop - Use of a Milling Machine

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Assessment Approver: Kevin Jarvis

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Lead Assessor: Kevin Jarvis
Team: Martin Sedgwick & Steve Parker

Use of a milling machine in a workshop environment

Gloucestershire Warwickshire Steam Railway Plc
Risk Assessment for Workshop - Use of a Milling Machine - 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 to be worn. - Effective 2) CRITICAL - Elimination: Hands will be keep clear rotating parts such as the chuck and workpiece on the moving machine table. - Effective 3) CRITICAL - Engineering: An 'Emergency Stop' or other stop switch should be fitted within the reach of the user. - Effective 4) CRITICAL - Engineering: Machine guards should be fitted, clean, functional and used at all times. Consider guards for the chuck, spindle mandrel, feed shafts and lead screws if not protected by the design of the machine. - Effective 5) CRITICAL - Engineering: Any fitted safety devices such as 'Impact Wands', safety wires, foot switches or overloads should be fitted and functional. - Effective 6) CRITICAL - Engineering: The machine should be securely fixed to the floor or other stable and unmovable surface. Those machines that are mounted on wheels should be securely fixed whilst in use to stop them from moving. - Effective 7) CRITICAL - Engineering: The machine must be switched off and power isolated and locked out where possible before any maintenance activity takes place. - Effective 8) CRITICAL - Engineering: Cutting fluids will be used as appropriate and maintained to remain in a suitable condition for use. - Effective 9) CRITICAL - Engineering: The work piece shall be mounted to the machine and properly secured. - Effective 10) CRITICAL - Engineering: The cutting tool must be carefully checked for security before starting the machine. - Effective 11) CRITICAL - Engineering: Chuck keys and any other tools are to be removed before starting the machine. - Effective 12) CRITICAL - Engineering: The machine must be stopped before the work piece is removed from the machine. - Effective 13) CRITICAL - Engineering: The machine must always be stopped before taking any measurements. - Effective 14) CRITICAL - Engineering: Coolant nozzles must not be adjusted when the machine is in operation. - Effective 15) CRITICAL - Administrative: Only competent and authorised staff should use the equipment. - Effective 16) CRITICAL - Administrative: The equipment should be mechanically and electrically maintained regularly and accurate records of maintenance activity should be kept. All safety features should be tested. - Effective 17) CRITICAL - Administrative: A hair net or cap shall be worn for staff with long hair. - Effective 18) CRITICAL - Administrative: The machine must never be left unsupervised if energised. - Effective 19) CRITICAL - Administrative: Swarf must not be allowed to accumulate or become entangled with the work piece. The machine is to be cleaned before and after working. - Effective 20) CRITICAL - Administrative: The standing area for the operator must be clean, free from debris and not slippery. - 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 interlocked guards - Improvable 2) Engineering: Lifting aids are to be used for positioning heavy work pieces in the machine or for changing heavy chucks or faceplates.. - Improvable 3) Engineering: If the workpiece extends beyond the end of the table it must be guarded or protected by barriers and supported as appropriate. - Improvable 4) Administrative: Be aware of the potential for swarf to be sharp and consider using gloves and a suitable implement when cleaning swarf from the machine - Effective 5) Administrative: Make sure that there is plenty of space around the machine so that persons passing do not bump into the machine operator. - Effective 6) Administrative: Where machine guards are not fitted extra care should be taken to avoid entanglement with moving parts or ejection of materials. - Improvable	2 x 4 = 8 Medium - Risk to be minimised and controlled so far as is reasonably practical.	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. Re layout m/c shop to use gantries . Geoff Goring
			21) CRITICAL - Administrative: Be aware of potential of swarf to be ejected from the machine. - Effective 22) CRITICAL - Administrative: Only the user and any trainees are to be near to the machine when it is in operation. - 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 - PPE: Eye protection, overalls or dust coat and steel toe-capped footwear to be worn. - Effective				

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Score and Control Measure Notes. Risk is medium due to potential injury. All control measures must be followed. The risk remains medium. Not all milling machines are under suitable cranes or gantries increasing handling H&S issues							

COSHH Assessments

The following COSHH assessments are applicable to this risk assessment:

• COSHH-44517-36 - Astro - Sol A

Ends

Appendix



Reference: UI-44418-453
Milling Machine 1 -



Reference: UI-44418-551
Milling Machine 2 -