

Occupational health and safety and risk assessment: Metal machining: Industrial Technology

Answers

Activity 1

Answer the following questions from the summary of the OH&S Regulation 2001. It can be viewed at:

<http://www.workcover.nsw.gov.au/Publications/LawAndPolicy/Regulations/summaryohsreg2001.htm>

1. Outline the five measures that must be taken to minimise or control risks?
 - **Substitution** of a less hazardous process, plant or substance to do the same work.
 - **Isolation** of the hazard from personnel, e.g. with physical barriers, distance, time etc.
 - **Engineering** controls, e.g. guards or automatic controls; redesigning the workplace.
 - **Administration** changes providing safer workplaces, appropriate training, instruction and supervision and systems to manage health and safety.
 - **Personal protective equipment** (PPE).
2. What are the three obligations of employers?
 - **Identify** all foreseeable hazards in the workplace.
 - **Assess** the risks those hazards pose to health and safety.
 - **Eliminate** or control those risks.

Activity 2

Identifying risks in the workshop is essential in order to control risks and avoid accidents and injuries. Complete the table below by identifying the risks associated with using the machines listed and outlining the measures needed to control and minimise those risks.

Machine	Risks	Ways to minimise the risks
Metal machining lathe	Work not secure in the chuck could fly out and cause an injury.	Secure work, use appropriate speed for the size of work. Teacher should check set up before starting.
	Loose clothing could become entangled in rotating parts.	Roll up sleeves, tuck in shirt/ties, wear apron or overalls to keep clothes tidy.
	Long hair or jewellery could become caught in moving parts.	Wear a hair net or cap, remove loose jewellery. Do not wear gloves.
	Metal shavings and swarf could cause eye damage	Wear eye protection. Grind cutting tool with a chip breaker.
	Metal shavings or swarf could cut fingers.	Do not clean up shavings with hands. Use a brush and pan.
Drill press	Work or drill bit not secure in chuck could fly out and cause an injury.	Secure work in vice. Tighten chuck. Teacher should check set up before starting.
	Loose clothing/sleeves could become entangled in moving parts.	Roll up sleeves. Wear an apron. Ensure guards are in place. Do not wear gloves.
	Fine shavings could cause eye damage.	Wear eye protection. Do not blow shavings away; use a brush.

Brobo saw	• Work not secure in vice could come loose and cause an injury.	• Ensure work is secure in the vice. Teacher should check set up.
	• No coolant can cause overheating and damage to the blade, such as blunting.	• Check coolant level and ensure pump is working.
	• Fine shavings can cause eye damage.	• Wear eye protection and clean up shavings with a brush.
	• Moving blade can cut fingers and hands.	• Ensure guards are in place and are operating correctly. Keep hands away from the blade.
Magna bend	• Finger or hand entrapment.	• Machine must be operated by one person and both hands must be used. Ensure no one is in the safety zone.