

DEPARTMENT OF MECHANICAL ENGINEERING

Name of SOP	P3 CNC Machine (Using Dremel tool made at McMaster)
Effective Date	April 15, 2004 Rev. January 21, 2008
Author	Joe Verhaeghe
Reason for SOP	Risk of eye injury Pinch points
Approved by (supervisor)	Ron Lodewyks
Date reviewed by JHSC	February 13, 2008

Definitions

Terms	
acronyms	RMM – Risk Management Manual JHSC - Joint Health and Safety Committee Chair - Chair of Mechanical Engineering EOHSS - Environmental Occupational Health & Safety Service

Requirements

<p>Applicable OSHA regulations and / or codes of practice.</p> <ol style="list-style-type: none"> 1. OSHA code. 2. McMaster University Risk Management Policies
<p>Training and competency.</p> <ol style="list-style-type: none"> 1. Training provided by technical staff in the Mechanical Engineering Department. 2. Competency is shown by the individual after training.

Description of the Task

Location and time of work	JHE-B109
Individuals and skills required	Students
Equipment and supplies required	CNC Machine (Dremel tool) CNC Machine Amplifier Dell PC
Personal protective equipment required	Protective eyeglasses
<p>Sequential steps to complete the work safely.</p> <p>CAUTION: Keep clear of moving parts. Wear eye protection</p> <ol style="list-style-type: none"> 1. Put on safety glasses. 2. Ensure “MAIN POWER” is “OFF” 3. Ensure “SPINDLE POWER” is “OFF” 4. Set “AMPS ENABLE CONTROL” switch to “DISABLE” 5. Ensure Dremel tool “SPEED” is set to 2 or 3 6. Ensure cutting tool is inserted correctly and tight 7. Ensure Dremel tool power cord is clear of any moving parts and cutting area. 8. Loosen all 3 “WORKPIECE CLAMP” thumbscrews and remove left thumbscrew. 9. Insert workpiece underneath “WORKPIECE CLAMP” 10. Tighten all 3 “WORKPIECE CLAMP” screws 11. Close access door 12. Ensure computer is turned on and is ready to run program 13. Turn “MAIN POWER” switch “ON” 14. Turn “SPINDLE POWER” switch “ON” 15. Set “AMPS ENABLE CONTROL” switch to “ENABLE” 16. Run program and proceed with cutting. 17. Repeat the procedure for sequential workpieces 	

Contingency Plan and Reporting

Accident / injury response

1. Apply first aid as required
2. Notify Mechanical Engineering technical staff immediately
3. For all injuries complete a "Injury/Incident Report" and provide a copy to the Chair and EOHSS
4. In case of critical injury call security (dail 88).
5. In case of critical injury notify EOHSS immediately, ext 24352

Spill response none

Equipment shutdowns. None

Environmental Responsibility

Waste disposal procedures

1. Use wet/dry vacumm to clean cuttings from CNC machine after vacuuming Remove the power head from vacuum to allow the water to evaporate

Building air quality

References (OHSA/ regulations, EPA and Municipal environmental regulations, McMaster University Program/ Policy, Material Data Sheets (MSDS).

1. RMM #301 Standard Operating Procedure
2. RMM #300 Safety Orientation and Training Program
3. RMM #310 Eye Protection
4. RMM #309 Laboratory safety manual

Distribution

1. Trained teaching assistant who is the lab operator
2. Technical Staff of Mechanical Engineering
3. Mechanical Engineering Chair
4. Faculty of Engineering JHSC