Western Engineering	Safe Operation Procedure
	Authorized By: Chris Vandelaar
Title: Welder - TIG	
Issue Date: May 2016 **Last Reviewed: May 2016** **Next Review Date: May 2018**	**Page Number: 1 of 2**

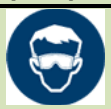
O NOT use this machine unless you have been trained in its safe use and operation. Failure to comply could result in sever electric shock and even death

Description of Work:	Using a TIG Welder

Have you received instruction on the use of this Equipment?

Do you have permission to use this equipment?

Personal Protective Equipment (PPE) Required *(Check the box for required PPE)*:

 Leather Welding Gloves	 Respirator /Dust Mask Or extraction	 Eye Protection	 Welding Mask	 CSA Approved Footwear	 No rings or jewellery	 Protective Clothing
☒	☒	☒	☒	☒	☒	☒

Potential Risks and Hazards:

- Electrocution from faulty circuit
- Inhalation of fumes and dusts
- Burns from hot material after/during welding

Safe Work Procedure Checklist:

1. Pre- Operation:

- Ensure all other students are clear of immediate work area
- Keep area clean and free of oils, greases and anything flammable
- Ensure others are not exposed to U.V. Flash. Close curtains and ensure all bystanders are wearing proper PPE
- Ensure extraction system is on and working effectively
- Ensure work area is set up safely such that cable will not be damaged and pedal cannot be accidentally, unexpectedly depressed
- Do not make adjustments while welding.
- Ensure machines have been isolated from power sources before being cleaned, adjusted, maintained or repaired.
- Inspect all cables for signs of damage. Report damage immediately to a technician
- Un-plug when not in use

2. Operation:

- Ensure the machine is correctly set up for material, current, voltage, and shielding gas flow rate.
- Ensure that other workers in this locality are protected from any UV & IR radiation flash. Always close the UV curtain to the welding bay or erect a UV screen.
- Ensure the welding work cable (earth) makes firm contact to provide a good electrical contact.
- Ensure the work piece has been prepared to be free of any paint, oxides or other surface finishes ensuring a good electrical contact.
- Take particular care to avoid accidental UV welding flash to the skin or eyes.
- Never leave the TIG welder powered on unattended
- Regularly inspect the welding torch assembly for damage.
- When welding is finished or interrupted, turn off the shielding gas at the regulator, turn off the machine and secure the handpiece safely.

3. POST-Operation:

- Close main valve on shielding gas bottle.
- Ensure welder and fume extractor are turned off and extraction trunk valve is closed
- Leave the work area and bench in safe, clean and tidy condition
- Never leave hot work unattended

4. Other Potential Hazards:

- Suffocation due to inert gas – See SOP_Compressed Inert Gas Cylinders for Welding
- Cuts, lacerations
- Electrical Shock hazard
- Burn due to hot molten materials
- Flying sparks
- UV radiation to skin and eye
- Toxic fumes
- Fire
- See SOP_ Angle grinder as this is often associated with Welding

Competent Persons (The following persons are authorised to operate, supervise and test students on the equipment/process).

Name:	Title:	Contact Details:
Chris Vandelaar	Student Shop Manager	CMLP 1301 x 80281
UMS Technicians	UMS Technicians	TEB Rm. 50 x 88836

This SOP does not necessarily cover all possible hazards associated with the machine and should be used in conjunction with other references It is designed to be used as an adjunct to teaching Safety Procedures and to act as a reminder to users prior to machine use

Date of last review: **Signature:**