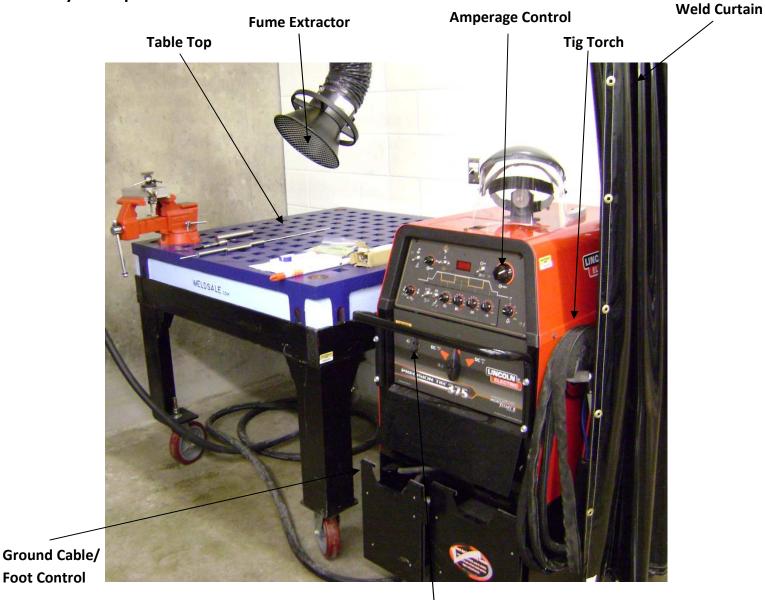
Armstrong Hall of Engineering Artisan and Fabrication Laboratories (AFL) Safety and Operational Procedure

Lincoln 375 TIG Welder



ON/OFF Switch

PPE Required: Safety Glasses, Weld Hood, Weld Jacket/Long Sleeves, and Welding Gloves

Prohibited Clothing: loose clothing, neckties, jewelry, synthetic fiber clothing (i.e. polyester or nylon), or butane lighters in pockets

Machine Access Level: Supervised Only

Materials Allowed: Metals

Operating Procedure

1. Machine Safety Inspection and Work Area Check-Out

- A. **PPE:** Make sure you are wearing the proper PPE and not wearing any equipment listed on the first page that could create a hazard.
- B. **Machine Warning Signs:** Make sure you read and follow the machine warning signs that are attached to the machine. If you have any questions, ASK!!
- C. **Work Area:** Make sure the work area is clean and the work area around the machine is free and clear of debris and personnel. Also, ensure that the area is dry before welding.

2. Work Supervision

A. This machine requires supervision by an AFL employee. A supervisor or TA will assist you in the set-up and operation of the machine. You may not operate this machine without supervision.

3. Machine Adjustment

- A. Note: The machine adjustment is usually done with the machine ON.
- B. Close the weld curtain: The weld curtain must be closed before welding.
- C. **Choose the correct diameter of tungsten:** This depends on your application. The TA will assist you with this step.
- D. Ground the part: Make sure the table and/or part are grounded. The TA will assist you with this step.
- E. **Identify the machine controls:** Identify the foot control and ON/OFF switch. The foot control will control the amperage (heat). The ON/OFF switch will turn the machine on and off.

4. Machine Operation

- A. **Check ventilation system:** The fume extractor must be on and in position when using the welder. The fumes generated in the welding process may be dangerous. Keep your head away from the fumes.
- B. Shielding gas: Turn on the shielding gas. The TA will assist you with this step.
- C. Turn the machine on: Check with the TA that it is safe to turn on the machine, and flip the switch to on.
- D. Adjust the amperage control: Once the machine is in on, adjust the amperage control depending on the type of metal you are welding. Absolutely no "GALVANIZED" Materials ALLOWED! The TA will assist you with this step.
- E. Safely weld the part: Weld the part. The TA will assist you with this step.
- F. **Turn the machine off:** When finished welding, flip the switch to off. Never touch electrically live parts or electrodes.

5. <u>Clean Up</u>

- A. **Disassemble work set-up:** Disassemble any fixturing. Return all parts to their proper location and the appearance of the welder to how it looked when you started.
- B. **Clean up the area:** Clean up all messes (for example: use a shop vacuum to clean up any additional debris), return all tools, etc. The TA will check that the area is clean before you can sign-out of the AFL.