

# MIG Welder Certification



**Student:** .....

**Trainer:** .....

**Date:** .....

Certification for: MIG Welder (Metal Shop)

## Training Check-Off List:

To be certified to use the CMS's MIG welding machines independently, the student must demonstrate an understanding of the following tool features, policies, and operational steps.

### Tool Anatomy

- Parts of the MIG Welder are properly identified
  - Pressure regulator
  - Speed selector
  - Voltage selector
  - Ground clamp
  - Gun
  - Nozzle
  - Contact Tip
  - Tip holder

### Gas Tank Safety

- Never move the gas tank without the cap on!

### Materials

What materials may not be welded with the CMS's MIG welding machines?

- Clean Carbon Steel

What materials may be welded with the CMS's MIG welding machines?

- Galvanized metals
- Aluminum
- Stainless Steel

## Pre-Operation

- Personal Protection Gear - safety glasses, welding helmet, welding gloves, welding jacket (or long sleeves!)
  - Do not wear clothing made from synthetic or synthetic blends.
- No unrestrained long hair and no flowing clothes. Closed-toed shoes are required.
- Make sure there are no puddles on the floor in welding area, particularly around machines and foot pedals.
- Make sure that the welding area is free of flammable materials.
- Adjust welding screens to make sure no bystanders can be caught by arc-flash.
- Regulator:
  - Depress torch trigger to start the gas cycle, then adjust the flow-meter or regulator (if necessary). See individual machine pages for optimal settings.
- Set the machine appropriately for the gauge of steel you will be welding, using the chart on the inside of the side panel.

## Operation

- Turn on the fume extractor and position the end of the extraction arm near your workpiece.
- Clip the wire electrode to within 1/4" of the end of the gas nozzle before starting a weld.
- Clean the gas lens and contact tip as needed.
- Replace the contact tip if you're experiencing wire feed problems and it is absolutely necessary.
- Hold the torch as appropriate to your weld position and requirements.
- Treat all work as if it is hot enough to burn you through your gloves.

## Post-Operation

- Turn off the fume extractor.
- Turn off the machine (MIG welder).
- Turn off the gas using the large valve on the cylinder.
- Disconnect the ground clamp, coil cords and store neatly.
- Return all tools.
- Clean the workbench.
- Sweep up (the floor) after yourself.

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## Lockout/Tagout Procedure

- Unplug the machine, coil the cord, and place the plug end in a safe/visible location. Fill out an “Out of Order” tag and post it on the machine. Notify the Metalshop Lead (and Desker, if on site).

### Questions

Who do you contact if you have questions about the CMS MIG welding machines?

- The CMS Metalshop Leads, at [metalshop@claremontmakerspace.org](mailto:metalshop@claremontmakerspace.org)

**Pass/Fail:** .....

**Comments:**

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**Student Signature:** ..... **Date** .....

**Certifier Signature:** ..... **Date** .....



Certifier: Please scan this QR Code to email [info@claremontmakerspace.org](mailto:info@claremontmakerspace.org), and include a list of students who have passed this test.

Then, return this form to the front desk (even if the student failed!).