

PROJECT – MIG Name

Foundation Skills

PURPOSE

In this activity you will fabricate a desk nameplate. You will be developing your MIG Welding skills and getting creative!



PREPARATION

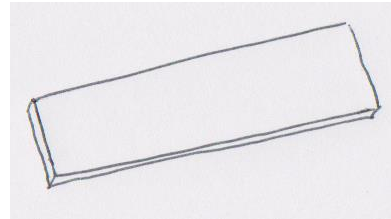
For this activity you will need the following:

- 1/4" x 2-1/2" x 12" flat steel
- MIG Welder
- Hacksaw or Horizontal Bandsaw
- Files
- Sandpaper

MATERIAL

CUT a piece of 1/4" x 2-1/2" flat bar to exactly 12" in length with a hacksaw or horizontal bandsaw

Use an Angle Grinder and a Vice-On-A-Post OUTSIDE to smoothly grind off the black oxide finish off ALL FOUR sides of the metal (you cannot weld dirt)



WELDER SETUP

SETUP the **MIG welder** properly!!!

See the CHART inside the welder for HEAT and WIRE SPEED for 1/4" (3 gauge)

Most 110V welders will be full hot, and should be plugged into a 20A outlet.

Most 220V welders will be about 75% hot.

Set the gas flow to about 20-30 cfh

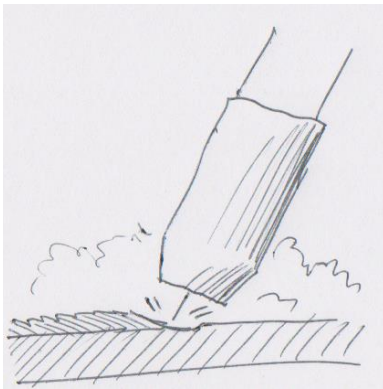


WELDING

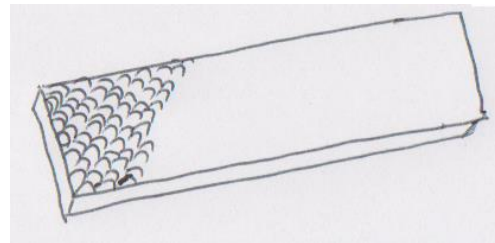
RUN beads on the metal

Stay $3/8 - 1/2$ " off the metal (Stickout)

TRY Push or DRAG technique

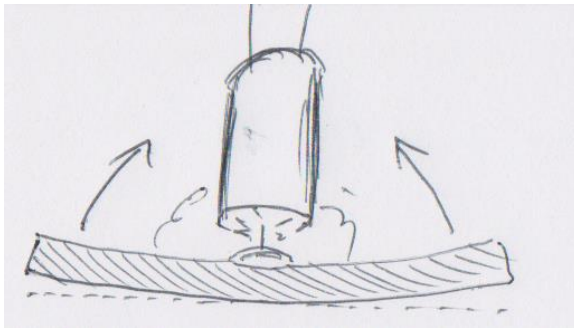


- TRY a variety of patterns (I usually use a "C" pattern, find what works for you)
- SKILL: consistent **width**, consistent **height**, consistent **ripple**
- You can do basic lines, or do some sort of cool bead pattern
- **NO ORIGINAL METAL IS TO BE VISIBLE**



NOTE: the metal **WILL distort** from the heat.

How do you think you can counteract this?

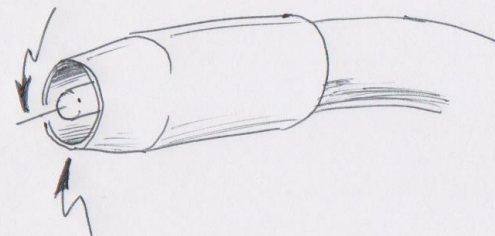


KEEP laying down bead on top of bead on top of bead until you get this

I don't care if it's an inch thick when you're done,

BUILD THE SKILL!

STICKOUT = $3/8 - 1/2$ "



CLEAN OUT THE SPATTER

You may also run beads around the outside edges if you like (you may want a lower heat setting)

When your beads start looking awesome, you are ready for the next step!

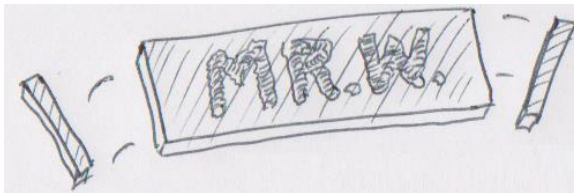
WRITE your NAME using the MIG, right over your patterns – Leave 1” space on EITHER SIDE!!!



If you screw up, lay more beads over top of it, and try again. I don't care if it's an inch-and-a-half thick when you are done – BUILD THE SKILL!

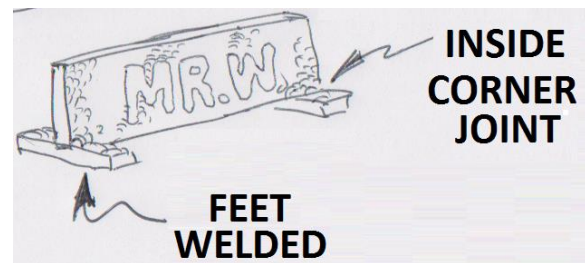
Once it is awesome...

CUT off 1” from each side and FILE and SAND the saw cuts smooth – these will become the FEET



Weld the 1” ends to the bottom as feet.

How will you deal with distortion?



File and sand the feet so it will not scratch your mother's thousand-year-old Ming-dynasty Honduran Mahogany Heirloom coffee table, and hand in for marks!

Weld beads must be adequate to be marked	
Beads on side	+1 one side or +2 both sides
Welded around perimeter	+1
Weld bead pattern	+1 lines or +2 for cool pattern
Weld name	+1 printed or +2 cursive
Feet	+1 smooth +1 doesn't rock
Thickness	+1 double the thickness or +2 triple (or more) the thickness
Total:	/10