CNC Plasma Cutter Operations Checklist

Preparing To Cut

0. Reserve time for a cutting session on www.artisansasylum.com/reservations
1. Screen off plasma cutting area with welding curtains.
2. Check slats for high spots and grind them down where appropriate.
3. Place sheet for cutting on the table.
4. Fill table to within 1/4" of top of slats with water accumulator.
5. Attach grounding clamp to either the material or the closest slat that's underneath the material.
6. Check torch consumables for damage wearing gloves, replace if necessary.
7. Turn on plasma power unit, gantry controller, height controller, and control computer.
8. Set appropriate pierce delay, pierce height, cut height, and touchdown torque on height controller.
9. Open Torchmate 4 software and connect to the gantry controller.

Plasma Cutting

1. Add lead-ins, lead-outs, arrays of parts, and offset cutting paths in Torchmate CAD (optional).
2. Import a DXF into the Torchmate 4 cutting software, setting cutting speed in the import dialog.
3. Jog the torch head to the desired zero position, and set the program coordinates to 0.
4. Ensure that all bystanders and shop users are aware and safely behind screens.
5. Enable the power unit by holding the "Cut" button on the height controller until a red light turns on.
6. Run the cut, keeping your cursor over the 'Hold' command in case something goes wrong.
7. "Safe" the power unit by holding the "Cut" button on the height controller until the light turns off.
8. Inspect the first piece for dimensional accuracy and straight edges.
9. Repeat steps 1 through 8 as necessary.

Teardown and Cleanup

1. Log total cut time rounded to the 5 minute mark on cutter log sheet.
2. Wipe down and dry all rails, gear racks, and machine components; mop floor if necessary.
3. Jog the head of the machine to the corner closest to the operator station.
4. Turn off gantry controller, height controller, and power unit.
5. Disconnect plasma cutter ground clamp and place it next to the power unit.
6. Remove the cut sheet from the table and store it in your personal space or recycle it.
7. Drain the water table into the accumulator until there's 1-1.5" of slat sticking out of the water.
8. Grind the dross off the slats in the area in which you were cutting.