

## Tool Proficiency Project: *Torchmate Plasma Cutter*

### Instructions for Lab Assistant:

#### Before You Begin This Proficiency Assessment:

- View the following links for information on Plasma cutting:
  - <http://www.lincolnelectric.com/en-us/equipment/plasma-cutters/process-and-theory/Pages/process-and-theory.aspx>
  - <http://www.lincolnelectric.com/en-us/equipment/plasma-cutters/cutting-how-tos/Pages/cutting-how-tos.aspx>
  - <http://www.lincolnelectric.com/en-us/equipment/plasma-cutters/cutting-solutions/Pages/cut-quality-problem-dross-in-carbon-steel.aspx>
- Read and understand instructions associated with the equipment

#### Supplies Required:

<b>Quantity</b>	<b>Item Description</b>
<b>1</b>	<b><i>Properly sized sheet of metal</i></b>
<b>1</b>	<b><i>File you create in Torchmate software</i></b>

#### YOUR TASKS

- Cut out a 4"x4" square with different sized shapes/holes (i.e. a star, ¼" – 1" holes, etc.)
- Choose the proper material for the job
- Cut out the part and post process if necessary

#### Proficiencies to Demonstrate:

Startup equipment: Turn on PC, plasma unit, control box, AVHC  
Test file made by using the Torchmate.edu software  
Make a tool path with all proper settings (climbing, lead in/out etc.)  
Create the .dxf needed for the cutting software  
Launch Torchmate 4 and connect to the Signal Generator  
Import .dxf  
Proper speed/feed rates set  
Jog the cutting torch to the proper area for cutting