

Date: April 24th, 2021

Location: TBD

Duration of contest: 3 Hours

CONTEST INTRODUCTION

To enable students to demonstrate their skills working with metals in the sheet metal trade

SKILLS AND KNOWLEDGE TO BE TESTED

- Sheet metal layout
- Fabrication
- Assembly
- Time management
- Critical dimensions

PROJECT DESCRIPTION

Project:

- TBD

Layout Skills

- Simple layout
- Triangulation from plan and triangulate from elevation (side view)
- Simple radial line development with parallel openings
- Square, polygon, or round rain caps

- Round elbows and offsets (non-reducing except for BE-SE)
- Any of the following rectangular fittings (all changes in size must occur on the cheeks)
 - Offsets
 - Elbows
 - Y-Branches
 - Take-off

Methods of Fastening and Joining (any one of the following)

- Rivets
 - Pop
 - Solid
- Sheet metal screws
- Nuts and bolts
- Welding
 - MIG
 - Spot (resistance)
- Grooved seams
- Single and double seams
- Lap and spot
- Hammerlock (round or rectangular)
- BE-SE slip
- Pittsburgh (Irish) lock
- Slip and drive
- Standing "T" or C.P.R.
- Elbow seam
- Wired edge

EQUIPMENT, MATERIAL, CLOTHING

Equipment and material provided by Skills Canada Yukon:

- Flat metal table for welding and grinding (1 for 4 comp)
- Face shields for grinding
- Scrap metal bin
- Brooms
- Standard hand brake

- Box and pan brake
- Blowhorn stakes
- Hollow mandrel stakes
- Rotary combination machines (burring, turning, elbow, beading)
- 2" x 36" rolls
- Hand groovers
- Pop rivet guns
- 30" x 72" work surface
- Stake holders
- 4 1/2" angle grinders c/w flexible pads and discs
- Cordless drills c/w drill bits
- Framing squares
- 18-16 gauge CR steel
- 26 gauge galvanized iron
- Pop rivets
- 16 oz. copper and/or brass

Equipment and material provided by the competitor

- Tape measure
- Markers

SAFETY REQUIREMENTS

- *Safety glasses*
- *Hearing protection*
- *CSA approved safety shoes*
- *Welding gloves*

EVALUATION CRITERIA

<i>Critical dimensions</i>	<i>/5</i>
<i>Secondary dimensions</i>	<i>/3</i>
<i>Seams, edges and fasteners</i>	<i>/5</i>
<i>Fit and form</i>	<i>/3</i>
<i>Material usage</i>	<i>/2</i>

<i>Overall appearance</i>	<i>/2</i>
<i>Total</i>	<i>/20</i>

TECHNICAL COMMITTEE INFORMATION

Choice Plumbing & Heating	Nance Giordano	nance@northwestel.net
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