

12TH PROVINCIAL SKILLS COMPETITION

2009 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



15

PLUMBING

Scope Document

Post-Secondary Level

Friday, April 3rd, United Association Local 740 Training Center – Mt. Pearl

Note : Each registered school may enter one competitor

Contest Length: 6 hrs

Purpose of the Challenge:

To assess the contestant's knowledge and skills in the installation of a plumbing system with high regard to the aspects of quality, workmanship and accuracy of work.

Skills & Knowledge to be Tested:

- Applying mathematical concepts involving parallel 60, 45, and 22 1/2 degree offsets in a piping system.
- Interpreting and applying the blueprint specifications.
- Assembling of various Pipe and Fitting systems.
Steel – Thread and Oxyacetylene gas welded.
- Copper---Hard and Soft Solder and flared joints.
- PVC Plastic Solvent Weld (one-step)
- Bending of copper pipe using mechanical benders.
(Rigid # 310, 5/8 O.D.)
- Applying safe work practices.

Safety awareness/requirements will be maintained to minimum industry standard at all times.

Clothing Requirements:

Supplied by Contestant:

Competitors must wear the appropriate clothing and personal protective equipment (PPE): CSA approved hardhat, safety boots, safety glasses (**worn at all times**), hearing protection and gloves (**for hot work**). The contestant must address the danger of long hair, jewelry, loose fitting clothing, etc.

A contestant will not be allowed to compete without the safety equipment noted in this scope.

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Equipment/Tools/Materials

Supplied by Committee:

Tripods, pipe threaders, soldering torches (Turbo), Rigid 310 5/8 O.D. tubing bender, Teflon, soldering paste and brazing materials, etc. are provided. All workstations will be supplied with the required materials.

Supplied by Contestant:

The contestant must supply his or her own hand tools, pocket calculators, and a measuring tape in millimeters (25mm wide recommended). See tool list below for a complete listing of everything the competitor must supply.

Career Related Skills Exhibited

Mathematical problem solving, safe work practices, proper use of tools, correct joinery techniques, blueprint and/or specification interpretation ability and a strong positive work ethic.

Judging/Distribution of Marks

The project will be judged on the following criteria:

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|----------------------------|-----|
| • Accuracy of Installation | 40% |
| • Quality of Workmanship | 40% |
| • Air Pressure Test 50 PSI | 10% |
| • Safe Work Practice | 10% |

Tool List:

Supplied by the Competitor:

- Pocket calculator
- Standard quality utility pliers or equivalent
- 10" or 12" metal saw with spare blades
- PVC pipe saw or equivalent
- Ridgid # 154P pipe cutters 1 1/2" to 4" plastic pipes, or equivalent
- Mini pipe cutter or equivalent
- 9' level or equivalent
- 14" pipe wrench
- 12" pipe wrench
- 8" vise grip or equivalent
- Lighter for welding torch
- Assorted adjustable wrenches (8" and 12" recommended)

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- Pipe cutters for ½” to ¾” diameter copper pipe
- Measuring tape in millimeters (25mm wide recommended)
- Assorted bits and drills (Robertson, blade and Phillips) for cordless drill
- Multi-tip screwdriver
- 16-ounce carpenter’s hammer or equivalent
- Plumb line
- Small square
- Utility knife
- Pencil

Technical Committee:

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