

PROVINCIAL SKILLS COMPETITION



SCOPE DOCUMENT	
Competition Year	2010
Competition location	UA Training Center, Mt. Pearl
Trade Number	15
Trade Name	Plumbing
Level	Post-Secondary

1. INTRODUCTION

1.1 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, proficiency of pipe joinery techniques and accuracy of work within a specified time frame.

1.2 Duration of contest.

6 hours

1.3 Skills and Knowledge to be tested.

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

2. CONTEST DESCRIPTION

2.1 List of documents produced and timeline for when competitors have access to the documents.

- No other document will be released prior to the competition

2.2 Tasks that may be performed during the contest

- Applying mathematical concepts involving parallel, 60, 45, 22½° offsets.
- Interpreting and applying the blueprint specifications.
- Assembly of various Pipe and Fitting systems
 - Steel-Threaded
 - Copper - Hard and Soft Soldering.

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PVC Plastic Solvent Weld (Sluter one-step glue)

- Bending of copper pipe using mechanical benders. (Ridgid model 310 Catalogue #36962) 5/8 O.D.
- Apply safe work practices
- All dimensions shall be in millimeters
- All dimensions will be taken from the designated centreline or benchmarks
- There will not be any onsite pipe joinery technique instruction
- Proper insertion for all pipe joints is mandatory
- Only damp cloth wipe down of project. NO sanding or polishing of project allowed.
- It is to be understood that throughout the competition, safety and project judging will be on going.
- No project specific aids, tools or jigs allowed.

3. EQUIPMENT, MATERIAL, CLOTHING

3.1 Equipment and material provided by Skills Canada

- Pipe threaders
- Tri-stands
- Tube bender Ridgid model 310 5/8 O.D.
- Flaring tool
- Soldering torches (B tank turbo)
- 1 meter metal rule
- 2 foot square
- Adhesives
- Teflon
- Threading paste
- Soldering paste
- Brazing materials including torches

3.2 Equipment and material provided by the competitor

- Pocket calculators
- Measuring tape in millimeters (23 mm wide recommended)
- Ridgid # 756 8-inch standard utility pliers or equivalent
- Ridgid 12 inch pipe wrench or equivalent

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- Ridgid 14 inch pipe wrench or equivalent
- Ridgid #390M 9-inch level or equivalent
- Ridgid #624 24-inch level or equivalent
- Ridgid #1012 10-inch or 12-inch metal saw with spare blades, or equivalent
- Ridgid #1205 PVC pipe saw or equivalent
- Adjustable wrenches (8" and 12" recommended)
- Pipe cutters for ½" and ¾" diameter copper pipe
- Ridgid #101 mini pipe cutter or equivalent
- Ridgid #154P pipe cutters for 1 ½" to 4" plastic pipes, or equivalent
- cordless drill (2-battery) with assorted bits and drills (½/3 Robertson, blade and Phillips)
- 16-ounce hammer or equivalent
- ½ round steel file and/or flat smooth file
- Plumb bob
- Utility knife
- Striker
- Assorted screw drivers
- Hex and/or spud 14 inch wrench

3.3 Required clothing (Provided by competitor)

- Long sleeve clothing
- No jewellery

4. SAFETY REQUIREMENTS

4.1 List of required personal protective equipment(PPE) provided by competitors

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Safety Glasses | <input checked="" type="checkbox"/> CSA approved Safety shoes | <input type="checkbox"/> Latex gloves |
| <input type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding helmet | <input type="checkbox"/> Dust Mask |
| <input checked="" type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding gloves | <input checked="" type="checkbox"/> Leather gloves |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Respiratory protection | <input type="checkbox"/> No PPE required |

Note: Competitors will not be allowed to compete if the above items are not brought and used

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4.2 List of required personal protective equipment(PPE) provided by Skills Canada

- | | | |
|---|--|--|
| <input type="checkbox"/> Safety Glasses | <input type="checkbox"/> CSA approved Safety shoes | <input type="checkbox"/> Latex gloves |
| <input type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding helmet | <input type="checkbox"/> Dust Mask |
| <input type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding gloves | <input type="checkbox"/> No PPE required |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Respiratory protection | <input checked="" type="checkbox"/> No additional PPE will be supplied by S/CC |

5. ASSESSMENT

5.1 Point breakdown

POINT BREAKDOWN	/1000
Accuracy of Installation	400
Quality of Workmanship	400
Air Pressure Test at 50 psi	100
Safe work practices	100
Full marks for dimension within 2 mm	
Half marks for dimension within 3 to 4 mm	
1% Point deduction for each deviation from plan per fitting and joints.	
2% Points deduction for each safety infraction. Competitor will be advised immediately	

5.2 Tie (No ties are allowed)

In the event of a tie, the competitor with the highest mark in ``Accuracy of Installation`` shall be the declared the winner.

6. PROVINCIAL TECHNICAL COMMITTEE MEMBERS

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