

Skills Canada National Competition

SCOPE DOCUMENT

SCOPE DOCUMENT	
Competition Year	2012
Competition location	Edmonton, AB
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 as specified time frame.

1.2 Duration of contest.

12 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.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
Project	April 1 st , 2012

2.2 Tasks that may be performed during the contest*

- Applying mathematical concepts involving parallel, 60, 45, 22 ½ ° offsets.
- Interpreting and applying the blueprint specifications.
- Assembly of various pipe and fitting systems
 - Steel - Threaded
 - Copper – Silver brazing, soft soldering (lead free with water based flux) and flared joints

- Copper t-drill (3/4" extraction on 1 1/2" pipe maximum size)
Demonstration available before competition
- Pex tubing (crimp or Uponor expansion jointing methods)
- Pro-press (2" maximum) Demonstration available before competition
- 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.
- Tool inspection prior to event or the evening before competition.
- There will not be any onsite pipe joinery technique instruction.
- Proper insertion for all pipe joint is mandatory.
- Only damp cloth wipe down of project. NO sanding or polishing of project is allowed after completion.
- 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.

* Dimensions may be modified before competition

3. EQUIPMENT, MATERIAL, CLOTHING

3.1 Equipment and material provided by Skills/Compétences Canada

- Pipe threaders
- T-drill tool and dimpler
- Tube bender Rigid model 310 5/8 O.D.
- Flaring tool
- Pex crimpers and/or expanders
- Pro-press tool

Equipment and materials provided for each competitor

- Tri-stands
- Soldering torches (B tank turbo)
- meter metal rule
- 2 foot square
- Adhesives
- Teflon
- Threading paste
- Soldering paste
- Flux brushes
- 1/2" and 3/4" cleaning brushes

- Sand cloth
- Brazing materials

3.2 Equipment and material provided by the competitor

No other tools than the tools listed below will be allowed into competition area

- Pocket calculators
- Measuring tape in millimeters (25 mm wide recommended)
- Ridgid # 756 8-inch standard utility pliers or equivalent
- Ridgid 10-inch pipe wrench or equivalent
- Ridgid 12 inch pipe wrench or equivalent
- Ridgid 14-inch pipe wrench or equivalent
- Ridgid 18-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
- Adjustable wrenches (8" and 12" recommended)
- Pipe cutters for ½" to 2" diameter copper pipe
- Ridgid #101 mini pipe cutter or equivalent
- cordless drill (2-battery) with assorted bits and drills (1/2/3 Robertson, blade and Phillips)
- 16-ounce hammer or equivalent
- ½ round steel file and or flat smooth file
- Plumb bob
- Pencil / soapstone / marker
- Paper
- Small tri square
- Utility knife
- Striker
- Deburring tool/Champhering tools
- Assorted screw drivers
- Hex and or spud 14 inch wrench
- Tool box maximum dimensions: Height 16" length 30" width 16"
- Centre punch

3.3 Required clothing (Provided by competitor)

- Nitrile-coated gloves. (Black Hawk 380 by Watson. Available at Mark`s Work Warehouse.) or similar.
- Long sleeve clothing
- No jewellery
- long hair must be tied back and concealed

4. SAFETY REQUIREMENTS

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

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

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

- No additional PPE will be supplied by SCC

5. ASSESSMENT

5.1 Point breakdown

POINT BREAKDOWN	/1000
Accuracy of Installation	450
Quality of Workmanship	450
Air Pressure Test (50 PSI max.)	100
Safe work practices	%deduction
Full marks for dimension within 2mm	
Half marks for dimension within 3 to 4mm	
1% Points deduction for each material item request.	
1% Points deduction for each deviation from plan per fitting and joints.	
Points deduction for each safety infraction. Competitor will be advised immediately.	

6. ADDITIONAL INFORMATION

6.1 Consecutive translation

If consecutive translation is required on site, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service might not be guaranteed.

6.2 Tie (No ties are allowed)

In the event of a tie, judges will choose additional dimensions from the plan.

6.3 Competition rules

Please refer to the competition rules for all general SCNC information.

7. NATIONAL TECHNICAL COMMITTEE MEMBERS

Region	Name	Email address
Pacific Region	Nick Doyon	nickd@nait.ca
Western Region	Len Kuhl	lkuhl@rrc.mb.ca
Ontario	Russell Jessop	rjessop@ua527.com
Québec	Jacques Cormier	cormierj@videotron.ca
Atlantic Region	Chris Gushue	cgushue@ualocal740.ca
Workshop Supervisor	Matthew Lindberg	matthewl@nait.ca