



CONTEST DESCRIPTION / DESCRIPTION DE CONCOURS

STEAMFITTER - PIPEFITTER TUYAUTERIE ET MONTAGE DE CONDUITES DE VAPEUR

POST-SECONDARY /
NIVEAU POSTSECONDAIRE

Table of Contents

1 THE ESSENTIAL SKILLS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY	3
2 CONTEST INTRODUCTION	3
3 CONTEST DESCRIPTION	4
4 EQUIPMENT, MATERIAL, CLOTHING	5
5 SAFETY REQUIREMENTS.....	7
6 ASSESSMENT	7
7 ADDITIONAL INFORMATION	7
8 NATIONAL TECHNICAL COMMITTEE MEMBERS	8

1 THE ESSENTIAL SKILLS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY

SCC is currently working with Employment and Social Development Canada (ESDC) in order to bring awareness to the importance of Essential Skills that are absolutely crucial for success in the workforce. Part of this ongoing initiative requires the integration and identification of Essential Skills in contest descriptions, projects, and project documents. The next phase and very important aspect of our Essential Skills (ES) initiative is to provide an ES report card to each competitor at the Skills Canada National Competition. The purpose of the ES report card is to inform the competitor about their current level of essential skills based on their competition scores. With this knowledge, the competitor will be made aware which essential skill may require improvement. Full implementation is expected in the 2017 Skills Canada National Competition.

The following 9 skills have been identified and validated as key essential skills for the workplace in the legend below:

¹Numeracy, ²Oral Communication, ³Working with Others, ⁴Continuous Learning, ⁵Reading Text, ⁶Writing, ⁷Thinking, ⁸Document Use, ⁹Digital

These essential skills have been identified with in section 2.4 and/or 3.2 of your Contest Description. The top three Essential Skills for your area of competition have been identified on your Project and all other supporting project documents.

2 CONTEST INTRODUCTION

2.1 Description of the associated work role(s) or occupation(s).

<http://skillscompetencescanada.com/en/careers/construction/steamfittersprinkler-system-installation/>

2.2 Purpose of the Challenge.

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

2.3 Duration of contest.

12 hours

2.4 Skills and Knowledge to be tested.

- Applying mathematical concepts involving planning, measuring and layout of a piping system.
- Interpretation and application of blueprint specifications.
- Assembling and fabricating a piping system
 - Measure, cut, and fabricate steel pipe and copper tube system
 - Use fabrication tools & equipment to join pipe and fittings
 - Applying safe work practices
- Assemble and fabricate two heating systems and related components
 - Measure, cut, thread, braze and solder and install two (2) heating systems (hydronic and steam)
 - Apply safe work practices

3 CONTEST DESCRIPTION

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

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
Test Project	April, 2017

3.2 Tasks that may be performed during the contest

- Applying mathematical concepts involving offsets. ¹
- Interpreting and applying the blueprint specifications⁸
- Assembly of various pipe and fitting systems
 - Carbon steel threaded / / bolted
 - Copper soldering / Silfos brazing /
 - Heating Systems Fabrication
 - Fabrication of hangers for system supports
- Apply safe work practices
- All dimensions shall be in millimetres and/or inches
- All dimensions will be taken from the designated centerline or benchmarks unless directed otherwise
- Tool inspection prior to event or the evening before competition
- Competitors requiring assistance using equipment can ask for help from the National Technical Committee (NTC)
- Proper insertion for all pipe joint is mandatory
- It is to be understood that throughout the competition, safety and project judging will be ongoing
- No project specific aids, tools or jigs allowed

Essential Skills – ¹Numeracy, ⁸Document Use

4 EQUIPMENT, MATERIAL, CLOTHING

4.1 Equipment and material provided by Skills/Compétences Canada

- Pipe threaders
- Benches, vices and/or tables
- Consumables
- 5" Grinder c/w discs (including cutting/grinding/buffing discs)
- 2 foot square
- Tri Square
- "B"- tanks c/w regulator, hose and torch kit
- 12" Adjustable Wrench
- Combination Wrench Sets (3/4-1 1/4")
- 2' and 9" Level
- Soap stone / and holder
- Permanent sharpie marker / calculators
- Ball Peen Hammer
- Centre Punch
- Small Drill Index
- Ridgid #15 and Ridgid #20 cutters
- Set of Robertson Screwdrivers
- Master Pro-Dope, Brush top
- Teflon tape
- Power cords (GFCI)
- Tig gloves and Hy-flex
- 14", 18" and 24" Aluminum Pipe Wrench – Ridgid model: #814, #818 and #824
- 12" Spud Wrench - Ridgid model: 31400
- Tri-Stand Chain Vice - Ridgid model: 460-6
- V-head high pipe stand - 28" - 52" - Ridgid model: VJ-99
- Tubing cutter – Ridgid model: #10 and #20
- RP 200 Battery Press tool kit w/ProPress Jaws 1/2"-1" - Ridgid model: RP200-B
- Copper Reamer - Ridgid model: 2275
- 300 Threading Machine Complete w/ die heads 1/2" - 2" - Ridgid model: 300
- Nipple Chuck complete - 1/2" - 2" NPT - Ridgid model: 819
- 5m/16' Tape Measure - Stanley/Dewalt model: 30-496
- 12" Square - Stanley/Dewalt model: 45-912
- 9" Torpedo Level - Stanley/Dewalt model: 42-465
- 24" Level - Stanley/Dewalt model: STHT42409

- 12" Grooved Joint Pliers - Stanley/Dewalt model: 84-111
- 14 piece combination wrench set - 3/8" - 1 1/4" set - Stanley/Dewalt model: 85-990
- 10" Half round file c/w handles - Stanley/Dewalt model: 22-308
- Round rattail file c/w handle - Stanley/Dewalt model: 22-307
- Cordless Portaband saw c/w blades - Stanley/Dewalt model: DCS371P1
- 18" Fatmax Open Tote - Stanley/Dewalt model: 518160M
- Multidrivers - Stanley/Dewalt model: 54-925
- 12" Crescent Wrench - Stanley/Dewalt model: 87-473
- 18 volt 1/2" cordless drills - Stanley/Dewalt model: DCD780C2
- Cordless 5" angle grinder - Stanley/Dewalt model: DCG412B
- 5" cutting discs - Stanley/Dewalt model: DW8063
- Utility knife - Stanley/Dewalt model: 10/1/0486
- 1/2" Drive Torque wrench c/w 1 1/4" socket - Wurth

Note: No other tools than the tools listed **ABOVE** will be allowed into competition area.

COMPETITORS WILL BE REQUIRED TO USE THE MATERIAL AND EQUIPMENT PROVIDED BY SCC. ALL OTHER MATERIAL AND EQUIPMENT WILL BE REMOVED FROM THE SKILL AREA.

4.2 Equipment and materials provided by the competitor

- No equipment and material will be provided by the competitor

4.3 Required clothing (Provided by competitor)

- Coveralls / overalls allowed if sleeves used
- No jewellery
- Long hair must be tied back and concealed
- No cell phones or electronic devices allowed

5 SAFETY REQUIREMENTS

5.1 Safety workshop

Upon arrival at the Skill area, Competitors will participate in a Safety workshop and they will be expected to work and maintain a safe working area during the competition. Any Competitor breaking any health, safety and environment rules, may be required to undertake a second safety workshop, this will not affect the Competitor's competition time.

5.2 List of required personal protective equipment (PPE) provided by Skills/Compétences Canada.

- Safety glasses – McCordick
- Mechanic Gloves – McCordick
- Nitrile Gloves – McCordick
- Earplugs – McCordick
- Face Shields with harness – McCordick
- Hard Hats – McCordick
- Leather Tig Gloves – McCordick

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

- CSA approved safety shoes

6 ASSESSMENT

6.1 Point breakdown

POINT BREAKDOWN	/100
Heat Exchanger & Steam Supply	50
Steam Supply to Terminal Unit	30
Condensate Piping System	10
Hydronic System	10

7 ADDITIONAL INFORMATION

7.1 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.

7.2 Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, NTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules.

7.3 Tie (No ties are allowed)

In the event of a tie the competitor with the highest score in the Condensate Piping System criteria will be declared the winner. If a second tie occurs the competitors with the highest score in the Hydronic System criteria will be declared the winner.

7.4 Competition Rules

Please refer to the competition rules of the Skills Canada National Competition.

8 NATIONAL TECHNICAL COMMITTEE MEMBERS

Member Organization	Name	Email address
British Columbia	Will Schwarz	
Newfoundland and Labrador	Bruce Gillingham	
Ontario - Chair	Ray Lemieux	Ray.lemieux@uacanada.ca
Saskatchewan	Chris Henriksen	
New Brunswick	Michel Breau	
Alberta	Chris Waples	
Nova Scotia	Greg Pope	