



**SCNC**  
**SKILLS CANADA**  
**NATIONAL**  
**COMPETITION**



**OCMT**  
**OLYMPIADES**  
**CANADIENNES**  
**DES MÉTIERS**  
**ET DES**  
**TECHNOLOGIES**

  
**skillsCompétences**  
**Canada**  
Halifax2019

CONTEST DESCRIPTION / DESCRIPTION DE CONCOURS

# **SPRINKLER SYSTEMS RÉSEAUX D'EXTINCTEURS AUTOMATIQUES**

POST-SECONDARY / NIVEAU POSTSECONDAIRE



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## **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 next Skills Canada National Competition.

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

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

These essential skills have been identified in your Contest Description and if applicable, in your Project and all other supporting project documents.

## **2 CONTEST INTRODUCTION**

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

<https://www.skillscompetencescanada.com/en/skills/construction/sprinkler-system-installer/>

### **2.2 Purpose of the Challenge.**

To assess the contestant's knowledge and skills in the fabrication and installation of a fire sprinkler system and components with high regard to the aspects of quality of workmanship, proficiency of piping/system component installation and accuracy of work within a specified time frame.

### **2.3 Duration of contest.**

12 hours

## 2.4 Skills and Knowledge to be tested.

- Applying mathematical concepts involving planning, measuring, layout and installation of a piping system<sup>1</sup>
- Interpretation and application of blueprint specifications<sup>8</sup>
- Recognition of types of systems, setup and troubleshoot with use of manufacturer's data<sup>7</sup>
- Assembling and fabricating a piping system
  - Measure, cut, and fabricate steel pipe and fittings<sup>1</sup>
  - Use tools & equipment to join pipe, fittings and system components
  - Applying safe work practices and strong positive work ethic

*Essential Skills – <sup>1</sup>Numeracy, <sup>7</sup>Thinking (Problem Solving), <sup>8</sup>Document Use*

## 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
Project	January, 2019

### 3.2 Tasks that may be performed during the contest.

- Interpreting and applying the blueprint specifications<sup>8</sup>
- Assembly of various pipe and fitting systems (4 hours)<sup>7</sup>
- Carbon steel grooved pipe. Apply safe work practices. All dimensions will be taken from the designated centerline or benchmarks unless directed otherwise.
- Blazemaster CPVC Piping. Apply safe work practices. All dimensions will be taken from the designated centerline or benchmarks unless directed otherwise.
- There will not be any onsite pipe joinery technique instruction
- Proper insertion for all pipe joint is mandatory

*Essential Skills – <sup>1</sup>Numeracy, <sup>7</sup>Thinking (Problem Solving, Decision Making), <sup>8</sup>Document Use*

## 4 EQUIPMENT, MATERIAL, CLOTHING

### 4.1 Equipment and material provided by Skills/Compétences Canada

- Benches and/or tables
- Chain Vices
- Pipe Stands
- 9" level
- Paint markers
- Pencil/paper/calculator

- Power cords (GFI)
- Pipe cutters
- Roll groovers
- Air groovers
- Ridgid 300 Power Machine
- Tape measure
- Bastard half round file
- 10" channel lock pliers
- 10" crescent wrench
- 6' Platform Ladder
- CPVC Reamer
- CPVC Solvent Cement

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 the competitor.

- Full Length Pants (Denim or Equivalent)
- 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 environmental 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.

- Gloves
- Safety Glasses

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

- CSA approved safety shoes

- Gloves (cut resistant, i.e. Mechanix) Competitor can choose to bring their own gloves as long as they are cut resistant and in good condition (May be subject to review by the National Technical Committee (NTC)).

## 6 ASSESSMENT

### 6.1 Point breakdown

POINT BREAKDOWN	/100
Steel Piping Fabrication	20
Steel Piping Installation	10
CPVC Piping Fabrication	10
CPVC Piping Installation	10
Dimension Calculation	10
Use of Tools	10
Sprinkler Installation	10
Structural Bracing	10
Safety	10
<b>Point deduction:</b> Full points for dimensions within 1/8". Points deduction for wasted material. Points deduction for safety infractions	

## 7 CONTEST SPECIFIC RULES

Contest specific rules cannot contradict or take priority over the Competition Rules. They do provide specific details and clarity in areas that may vary from contest to contest. Any additional contest rules will be reviewed during competitor orientation.

TOPIC/TASK	CONTEST SPECIFIC RULE
Tools / Infrastructure	<ul style="list-style-type: none"> <li>• The National Technical Committee (NTC) will be conducting a tool box inspection during competitor orientation</li> <li>• No project specific aid tools allowed</li> </ul>

## 8 ADDITIONAL INFORMATION

### 8.1 Interpreter

If a competitor requires the help of an interpreter once onsite during the competition, 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.

## 8.2 Ties

- Tiebreaker #1: The competitor with the highest score in the Safety criteria will be declared the winner.
- Tiebreaker #2: The competitor with the highest score in the Steel Piping Fabrication criteria will be declared the winner.
- Tiebreaker #3: The competitor with the highest score in Steel Piping Installation will be declared the winner.

## 8.3 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.

## 8.4 Competition rules.

Please refer to the competition rules of the Skills Canada National Competition which can be found on the Skills/Compétences Canada website

## 9 NATIONAL TECHNICAL COMMITTEE MEMBERS

Member Organization	Name
Saskatchewan	Michael Chriest
Ontario - Chair	Nicholas Smirnov
Alberta	Lorin Bates
British Colombia – Co-Chair	Robert Dhensaw
Nova Scotia	James Brightman
New Brunswick	Marc Arsenault
Newfoundland and Labrador	Peter Russell

Contact the Skills/Compétences Canada national secretariat for any questions or concerns: Nathalie Maisonneuve ([nathaliem@skillscanada.com](mailto:nathaliem@skillscanada.com)).