Skills Compétences Canada
Moncton2016

CONTEST DESCRIPTION

DESCRIPTION DE CONCOURS

ELECTRICAL INSTALLATIONS
INSTALLATIONS ÉLECTRIQUES

SECONDARY
NIVEAU SECONDAIRE

CONTINUOUS LEARNING — FORMATION CONTINUE
DIGITAL — COMPÉTENCES NUMÉRIQUES
DOCUMENT USE — UTILISATION DE DOCUMENTS
NUMERACY — CALCUL
ORAL COMMUNICATION — COMMUNICATION ORALE
READING TEXT — LECTURE
WORKING WITH OTHERS — TRAVAIL D'ÉQUIPE
WRITING — RÉDACTION
THINKING — CAPACITÉ DE RAISONNEMENT

1. The Importance of 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. This will be piloted in a number of areas for 2016 with full implementation in the 2017 Skills Canada National Competition.

This is part of an ongoing initiative that requires the integration and identification of Essential Skills in contest descriptions, projects, and project documents. Essential skills are used in nearly every job and at different levels of complexity. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Good Essential Skills means you will understand and remember concepts introduced in technical training. The level of Essential Skills required for most trades is as high or higher than it is for many office jobs. The following 9 skills have been identified and validated as key essential skills for the workplace in the legend below:

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

These essential skills have been identified with in section 2.3 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 Purpose of the Challenge.

Assess the contestant's skills and abilities performing various installation tasks in the field of residential, commercial and industrial electrical wiring.

2.2 Duration of contest.

12 hours

2.3 Skills and Knowledge to be tested.

Throughout the final contest, contestants may expect to be evaluated in one, two, three or all of the following areas:

- Installing residential, commercial wiring and control systems;
- Installing branch circuit components;
- Installing heating equipment and controls;
- Installing basic motor control system
- Installing warning devices and various types of detectors.

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 (drawings)	January, 2016

3.2 Tasks that may be performed during the contest

Contestants must demonstrate mastery of the following technical skills:

- Measuring and marking dimensions on a work surface using scale plans and drawings based on the metric or imperial measuring system;[8]
- Measuring and accurately marking the location of outlets and tapping holes on control panels; [1]
- Installing electrical equipment, cables, conduit, tubing and raceways;
- Measuring and bending tubing and conduit;
- Measuring, sawing, drilling, deburring metals and plastics;
- Assembling components using screws, staples and bolts;
- Linking lines and equipment to control panels and their components; [7]
- Wiring and connecting electrical components;
- Identifying and marking conductors according to plans and drawings. [8]
- PVC bending to be accomplished through the use of a 120v/15amp heat gun.

Contestants must demonstrate mastery of the following theoretical skills:

- reading, interpreting and executing plans, drawings, diagrams and schematics in compliance with standards; [8]
- reading, interpreting and executing manufacturer's technical specifications for the electrical components to be installed; [8]
- knowledge of electrical materials and construction work methods;
- knowledge of basic electrical circuits;
- knowledge of basic electrical devices and equipment;
- knowledge of occupational health and safety regulations;
- knowledge and application of electrical code requirements in Canada and installation to comply with the current addition of the Canadian electrical code book (CEC current edition) [7]

Essential Skills – [1]Numeracy [7]Thinking (Problem Solving) [8]Document Use

4. EQUIPMENT, MATERIAL, CLOTHING

4.1 Equipment and material provided by Skills/Compétences Canada

- Work bench
- Ladder – Featherlite
- Access to a 120-volt 15A (5-15R) for the battery charger and power drill.
- Cordless drill/driver - DeWalt
- Manual pipe bender

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 material provided by the competitor

- Supplies for drawing and writing, i.e., pencil, eraser, etc.
- Metric tape measure (or a metric/sae combination)
- Set of screwdrivers (Robertson, flat and Philips)
- Electrician's pliers (lineman pliers)
- Tri square
- Cutting pliers
- Knife (**no utility knives, box cutters etc**) Must be a lockable or fixed blade type.
- Needle-nose pliers
- Hammer
- Adjustable wrench (crescent wrench)
- Set of hex wrenches
- Wood bit, 1/2 - 5/8 - 3/4Fish tape
- 1 Unibit metal bit , capable of 7/8" hole and/or
- 1 set **manual** hole punches for 1/2" knock-outs
- Tapping screwdriver (6/32 - 8/32 -)
- Metal hack saw
- Wire stripper
- Torpedo level
- Multimeter
- Multi-purpose pliers
- Adjustable pliers (multi-purpose)
- Set of metal drill bits
- Canadian Electrical Code Book (CEC Current Edition)
- Contestants may bring tools other than those listed above. If you wish to bring additional tools, please email the chair of this committee for approval. Contestants will need approval from the chair in order to use these additional tools
- No other outside material allowed.

4.3 Required clothing (Provided by competitor)

- Neat and clean – torn clothing is not allowed
- No facial, hand or loose hanging jewellery

Note: Your contest area for SCNC 2016 will be hosted outside under tents. Come prepared for any weather conditions and dress accordingly.

5. SAFETY REQUIREMENTS

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

- Safety goggles
- Hard Hat
- Hearing protection
- CSA approved Safety shoes
- Safety gloves

6. ASSESSMENT

6.1 Point breakdown

POINT BREAKDOWN	/100
Operation	35
Equipment and component installation	10
Measurement	15
Cable installation	10
Tubing and conduit installation	10
Connection of conductor to components and equipment	15
Compliance with health and safety rules	5

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 Tie (No ties are allowed)

In the event of a tie, the competitor with the highest score in the Operation criteria will be declared the winner. If a second tie occurs, the competitor with the highest score in the Health and Safety criteria will be declared the winner. If a third tie occurs, the competitor with the highest score in the Measurement criteria will be declared the winner.

7.3 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.

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

8. NATIONAL TECHNICAL COMMITTEE MEMBERS

Member Organisation	Name	Email address
Alberta – Chair	Ron Stocks	ronald.stocks@rdc.ab.ca
Manitoba	Derrick Doyle	
Ontario	Adam Hicks	
Québec	Serge Guay	
Nova Scotia	Curt Goodwin	
New Brunswick	Rick Mason	
British Columbia	Norm Chamberlain	
Newfoundland and Labrador	Randy Rice	
Yukon	Aaron France	
Prince Edward Island	Ray Murphy	
Saskatchewan	Jay Vollet	