

12TH PROVINCIAL SKILLS COMPETITION

2009 SKILLS CANADA NEWFOUNDLAND AND LABRADOR



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BRICK MASONRY

Post Secondary

Scope document

Friday, April 3rd, 2009 – College of the North Atlantic - PPD campus, St. John's

Duration of Contest: 6hrs.

PURPOSE OF THE CHALLENGE

- a) Bricklaying covers the construction of buildings and parts of buildings, brick, and/or block, artificial and natural stone walls.
- b) The test project consists of practical work including bricklaying and block laying by respecting the indications on the plan/design (for cutting and detail)
- c) The theoretical knowledge is limited to that which is necessary to carry out the practical work. Knowledge on rules, regulations and standards is not tested.
- d) The test project includes the construction of brick and block walls, or surfaces of with brick facing. For example, decorative brickwork with projections and recesses in all possible bonds, sections of walls with segmental, semicircular, triangular, flat, gothic arches; curved walls and cavity walls.
- e) The test project is available one (1) month before the contest, and PTC members have the authority to change a maximum of 25% of the project for the final test project.

SKILLS AND KNOWLEDGE TO BE TEST

- a) Practical work
- b) The competition may be designed from the following
 - 80 to 85% brickwork (clay brick and/or concrete brick.)
 - 10 to 25% block and stone work
 - 15 to 30% Arch set out other detail
- c) The appropriate technical skills are:
 - Measuring lengths.
 - Calculating and marking of angles.
 - Determining the gauge.
 - Cutting brickwork.
 - Leveling and plumbing.
 - Making corners.
 - Building walls with brick, block or stone in different bonds: using stretcher or header, brick on end, brick on edge, raking; corbels, decorative bond, practical and/or aesthetics details
 - Sloping or battering walls according to the drawing and using material

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- indicated 2.1.
- Compliance with the plans.
- Jointing pointing according to required profile.
- Cleaning.
- d) Material
 - Bricks, face bricks, backing bricks, uniformly baked or formed, dimensionally accurate and sharp-edge, blocks maximum 15kg (30lbs).
 - Bounding agent: lime and cement or masonry cement.
 - Aggregate: sand grain size 0 to 3mm max.
 - Mortar additive may be used to make mortar softer (workable)
 - The use of brick cleaning fluids or oil is not allowed
 - Brick cutting to be limited to a maximum of 15% of the total numbers of bricks, half bricks not included.
- e) Technical assessment. This may include:
 - problem solving
 - knowledge of bonding
 - calculations
 - drawing interpretation
 - general work health and safety

EQUIPMENT, TOOLS, SUPPLIES, CLOTHING

- a) Workshop station
 - each competitor will have a working area of at least 3m x 3m. The floor surface will be even (± 5 mm in 2m long) horizontal and a adequate loading capacity. There will be sufficient space for delivery and storage of material.
 - There should be a space of 2m between public barrier and the competitor materials.
 - Each work station floor area must be covered by a material that is suitable to set out and construct masonry on.
- b) General layout.
 - Water supply and electric power.
- c) The following machines and equipment will be made available to each competitor;
 - mortar board
 - water bucket
 - block (support for mortar board)
 - straight edges 2m
 - static electric brick cutting machines (one machine for 2 competitors if necessary)
 - wood template if necessary

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- safety glasses
- hard hat for replacement if broken

d) Contestants must bring their own tool boxes, containing the following tools, at a minimum:

- Line blocks
- Levels
- Steel jointers
- Trowel
- Slicker
- Hammer
- Square
- Chalk line
- Measuring tapes
- Brush
- Line
- Safety equipment (Hard Hat, Work boots, ear plugs and safety glasses)

Note

- Safety boots and hard hats are mandatory.
- Contestants must wear safety goggles and hearing protection when cutting.
- Only metric system will be used.

POINT BREAKDOWN/1000 TOTAL

The following may be assessed:

| | | |
|---|----------------------------------|------|
| A | dimensions; | 200/ |
| B | leveling; | 125/ |
| C | plumb; | 175/ |
| D | alignments | 125/ |
| E | angles; | 50/ |
| F | detail; | 125/ |
| G | health and safety; | 50/ |
| H | joint uniformity and finishing; | 100/ |
| I | overall appearance, cleanliness; | 50/ |

Tie Breaker

In the event of a tie the highest combined score in B, C & D will be determined the winner.

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PROVINCIAL TECHNICAL COMMITTEE

| | | |
|----------------------|----------------|--|
| John Leonard (Chair) | BAC | iubacl@nf.sympatico.ca |
| Melvin Sparkes | BAC | |
| Frank Snook | CNA, Carbonear | |