



2011 Secondary Regional Technological Skills Competition

Friday, March 25, 2011
Georgian College, Owen Sound

Welding — Secondary Level

Winners may advance to the Skills Ontario Qualifier Competition Saturday, April 16, 2011

PURPOSE OF CONTEST:

To test and evaluate the various safety-oriented welding and fitting skills of Ontario's youth. In addition, the print reading and welding symbols interpretation will also be assessed.

SAFETY RULES: see attached Georgian College waiver

Safety is a priority at the Secondary Regional Technological Skills Challenge. Any student can be removed from the competition site for not having the proper safety equipment and/or not acting in a safe manner.

- 1. It is mandatory for all students to wear CSA approved eyewear (including side shields for prescription eyewear).***
- 2. It is mandatory for all competitors to wear CSA approved footwear.***
- 3. Jewelry such as rings, bracelets and necklaces, or any items deemed unsafe by the judge, shall be removed for the competition.***
- 4. Proper shop attire is to be worn (no loose straps, baggy sleeves). Any attire, that is deemed unsafe by the judges, will not be permitted.***
- 5. Judges have final authority on matters of safety.***

SKILLS AND KNOWLEDGE TO BE TESTED /

1. General safety on arc welding, safe working habits
2. Selection of arc welding electrodes by their CSA metric classifications
3. Selection of welding variables
4. Shielding gases for GMAW
5. Blueprint reading ability (**dimensions are given in millimetres only**)
6. Transfer of measurements and other information from blueprint to the project
7. Layout, position, fit and tack weld components
8. Welding with various processes, SMAW, GMAW
9. Interpretation and application of welding symbols
10. Cleaning of finished welds

EQUIPMENT AND MATERIALS:

Supplied by Committee:

- All power sources, consumables and test materials. Materials may be plate or pipe

Supplied by Competitor:

- Tape measure (Metric, millimetres)
- Soap Stone
- Scriber, pen, pencil
- Chipping Hammer



- 12" Set Square
- Wire Brush
- Cold chisel
- Divider
- Vice Grip, clamps, magnets
- Hammer
- Striker
- Centre Punch

CLOTHING REQUIREMENTS, etc:

Competitors must provide their own CSA approved clear safety glasses, welding helmet (#10 lens minimum), gloves, safety boots and work clothing appropriate for welding. Speed lenses are permitted. Safety glasses must be worn during the contest at all times.

Note: Failure to wear personal protective equipment in an appropriate manner will result in loss of marks.

PRACTICAL TEST (Approximate duration 5 hrs)

Welding:	
SMAW:	SMAW: 2F, 3F, (vert. up), 5F 1G, (fill, cap) E4918, 2.5 and 3.2mm
GMAW:	2F, 3F, (vert. up), 5F 1G, (root, fill, cap) ER 49S-6, 0.9mm 75% Ar +25%Co ₂

A tie will be broken by the highest score in the SMAW criteria.

RESUME/JOB INTERVIEW:

Y Employment Services will be available to students who require assistance preparing resumes and interview skills for the Ontario Skills Competition. More information will be available in the winners' package.

ADDITIONAL INFORMATION:

Latecomers will not be allowed to enter the competition. Butane lighters are not allowed in the welding area. Grinding is not permitted.

CONTACT:

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(2011 SECONDARY REGIONAL TECHNOLOGICAL SKILLS CHALLENGE)

Never wear loose clothing around machines, remove hats, vests, ties and roll sleeves to the elbows.

Do not wear rings, watches, or jewellery etc. which could become tangled in machinery.

Long or loose hair must be tied back or covered.

Do not attempt to operate any machine before you fully understand how it works, and be sure you know how to stop a machine before you start it.

Always stop a machine before measuring, cleaning, oiling or making any adjustments.

Never operate a machine unless all safety guards are in place.

Do not attempt to stop a machine with your hands e.g. drill press spindle or lathe chuck.

Do not use shop rags near moving parts, e.g., drill press spindle, mill cutters or lathe chucks.

Store used shop rags in proper containers or storage areas.

Always keep the floor clear of oil, grease, tools and metal cuttings.

Avoid horseplay.

Never have more than ONE, (1) person operating a machine at a time, and do not crowd the working area.

If the lift is heavy, get help to avoid back strain.

It is the student's full responsibility to wear safety glasses at all times while in the shop.

It is the student's full responsibility to wear safety boots, or safety shoes at all times while in the shop.

Any student not wearing approved safety equipment will be dismissed from class.

AGREEMENT:

I, _____ understand the safety regulations and the requirement to wear safety glasses, safety boots or shoes, at all time in the shop.

(Please Print)

Signature of Student/Competitor

Date

Signature of Parents/Guardians**

Date

** If you are under 18 years of age, permission by a parent/guardian is required to participate