



DSBN REGIONAL **WELDING** SKILLS CHALLENGE 2020 SECONDARY LEVEL SCOPE

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PURPOSE OF THE CONTEST:

To test and evaluate the various safety-oriented welding and fitting skills of DSBN's students, and to determine the student who will move up to represent the DSBN at Ontario Technological Skills Competition.

EVENT DETAILS:

Date: Wednesday, Feb. 26th, 2020

Time: 8:00 am- 4:00 pm

Location: Niagara College Technology Centre (Welland Campus) TC40

8:00 a.m for Registration & Tool Drop Off.

8:30 a. -8:40 a.m Group Orientation- Auditorium AH141

Note that there will also be a Provincial qualifying competition for this challenge at Niagara College of Applied Arts and Technology. Please refer to the Competition Information Package at www.skillsontario.com, for details regarding the Qualifying Competitions.

SKILLS AND KNOWLEDGE TO BE TESTED:

- general safety on arc welding, safe working habits
- selection of arc welding electrodes by their CSA metric classifications
- selection of welding variables
- shielding gases for GMAW
- blueprint reading ability
- transfer of measurements and other information from blueprint to the project
- layout, position, fit and tack weld components
- welding with various processes, SMAW, GMAW
- cleaning of finished welds

Practical Tests

Project #1 - Mild Steel Structure (6 hrs)

SMAW (flat, horiz, vert)

2F, E4918 / E7018, 2.5 and/or 3.2mm 3F, (vert. up)
 E4918 / E7018, 2.5 and/or 3.2mm 5F, E4918 /
 E7018, 2.5 and/or 3.2mm 2G – E6010 root,
 E7018 filler and cap

GMAW (flat, horiz, vert)

2F, 3F, (vert. up)

ER 49S-6, 0.9mm (0.035") 75% Ar +25%Co2

EQUIPMENT, MATERIALS, TOOLS, AND SUPPLIES:

Equipment Supplied by the Contest Coordinator/Committee:

All power sources, consumables and test materials. Materials may be plate or pipe. **PLEASE REVIEW THE DRAWING CAREFULLY**

Equipment Supplied by the Competitor:

Tape measure (Metric, millimeters) Chipping Hammer Scrap Plate Soap Stone
 Wire Brush Divider Scriber, pen, pencil Cold chisel Striker 12" Set Square Centre
 Punch Vice Grip, Clamps, Magnets, Hammer

All Personal Protective Equipment listed below in Safety

SAFETY REQUIREMENTS: Safety is a priority at the DSBN Technological Skills Challenges. At the discretion of the judges and technical chair, any competitor can be removed from the competition site for not having the proper safety equipment and/or not acting in a safe manner. Hosted at Niagara College, their safety procedures must also be respected and followed.

- 1. **It is mandatory for all competitors and teacher advisors to wear CSA approved eyewear (including side shields for prescription eyewear) AT ALL TIMES.**
- 2. Competitors must bring a welding helmet with a minimum of a #10 lens.
- 3. **It is mandatory for all competitors and teacher advisors to wear CSA approved Footwear**
- 4. All competitors must come with appropriate gloves.
- 5. **NO** food or drink allowed in the welding lab (lunch provided in another room)
- 6. Proper shop attire is to be worn (no loose straps, baggy sleeves etc.). Nor any item deemed unsafe by competition judges.*

*** [Competition judges will have final authority on matters of safety.](#)

CLOTHING REQUIREMENTS:

Competitors are to be dressed in clean and appropriate attire with DSBN Technology Skills shirts if possible.

JUDGING CRITERIA:

Percentage of evaluation:

Safety 10%

Fitting 10%

SMAW 45%

GMAW 35%

100%

JOB INTERVIEW COMPONENT:

All students should prepare a resume. An interviewing workshop will be held for the gold medalist moving on to provincial competitions.

ENTRY:

Students must register online at teched.dsbm.org/skills. Space in this challenge is **strictly limited to 15** competitors! All required information must be completed, including submission of the parent/guardian consent form, in order to participate. **Should extra spots be available we will accept additional competitors from a wait list.**

TRANSPORTATION:

Students are responsible for their own transportation. Please be on time or you risk forfeiting your spot.

TEACHER'S ROLE:

Instructors are expected to acquaint their student participants with all of the enclosed guidelines. Teachers supervising must accompany their students and can visit any time during the competition, but may not assist competitors during the challenge. Time is allowed to help your students with the initial machine set up. Niagara College staff is not responsible for supervising DSBM students.

SPECIAL INSTRUCTIONS OR GUIDELINES:

- **Attendance at the Orientation is required**
- Latecomers will not be allowed to enter the competition.
- Butane lighters are not allowed in the welding area.
- Grinding is not permitted.

- **Contact with advisors/teachers/coaches/parents is not permitted during contest time and will be handled at the discretion of the Technical Chair**

SAFETY GLASSES AND STEEL TOES! All teachers and students must wear **safety boots** and **glasses** at all times in the Welding Shop at Niagara College. FAILURE TO DO SO WILL LEAD TO REMOVAL OF TEACHER OR STUDENT.

COMPETITION AGENDA:

8:00- 8:30 a.m.	Sign in- Registration & Tool Drop
8:30 a.m -8:40 a.m	Orientation Auditorium AH141
8:40-3:00	Projects 6 hours
11:00 a.m *****	Lunch *****
(or when ready)	
12:00 p.m	Competition resumes
3:00 p.m	Competition ends

3:05 p.m

Judging

**** Competitors must be on time for their contest and may be disqualified if they do not sign-in at their contest site prior to the start of orientation. At the discretion of the technical committee chair, the competitor may be permitted to compete but would not receive any additional time. Each competitor will be given a number by their coordinator upon registration at the location and will be judged anonymously during the competition.**