



## DSBN REGIONAL **WELDING** SKILLS CHALLENGE 2021 SECONDARY LEVEL SCOPE

<b>CHAIR:</b>	Bill Meloche (bill.meloche@dsbn.org) Port Colborne High school
<b>Co-CHAIR:</b>	Srecko Polich (srecko.polich@dsbn.org) Westlane High school

### EVENT DETAILS:

**Date:** Monday, March 1 – March 12, 2021  
**Time:** 4 hours period  
**Location:** Individual Schools

### PURPOSE OF THE CONTEST:

To test and evaluate the various safety-oriented welding and fitting skills of DSBN's students.

### 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 (4 hrs)	
<u>SMAW</u>	2F, E7018, 2.5 and or 3.2mm 3F, (vert. up)E7018, 2.5 and or 3.2mm 2G – E6010 root, E7018 filler and cap
<u>GMAW</u>	2F, 3F, (vert. up) 1G, (root, fill, cap) ER 49S-6, 0.9mm 75% Ar +25%Co <sub>2</sub>

### **EQUIPMENT, MATERIALS, TOOLS AND SUPPLIES:**

#### **Supplied by Committee:**

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

#### **Supplied by Competitor:**

Tape measure	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**

### **SAFETY REQUIREMENTS:**

Safety is a priority at the DSNB 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.

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
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 shirts if possible.

**PROJECT AND COMPETITION EXPECTATIONS:**

Competition drawings and instructions will be provided one week prior to competition date (Feb.22 -pending go ahead)

Individual teachers are required to pick up project kit from Chair- (This kit pick up date will depend on whether or not there is enough time to obtain the materials from suppliers once or if we return to school.)

	<b>Percentage of evaluation</b>
<b>Safety</b>	10%
<b>Fitting</b>	10%
<b>SMAW</b>	45%
<b>GMAW</b>	35%
	100%

**JUDGING CRITERIA:**

All projects will be numbered and sent to Port Colborne High for central judging (numbers will be provided by Chair to ensure fairness)

Teachers are not to coach or enter booths until the challenge is completed.

**ENTRY:**

Students must register online at <http://teched.dsbns.org/skills>.

**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.

**SPECIAL INSTRUCTIONS OR GUIDELINES:**

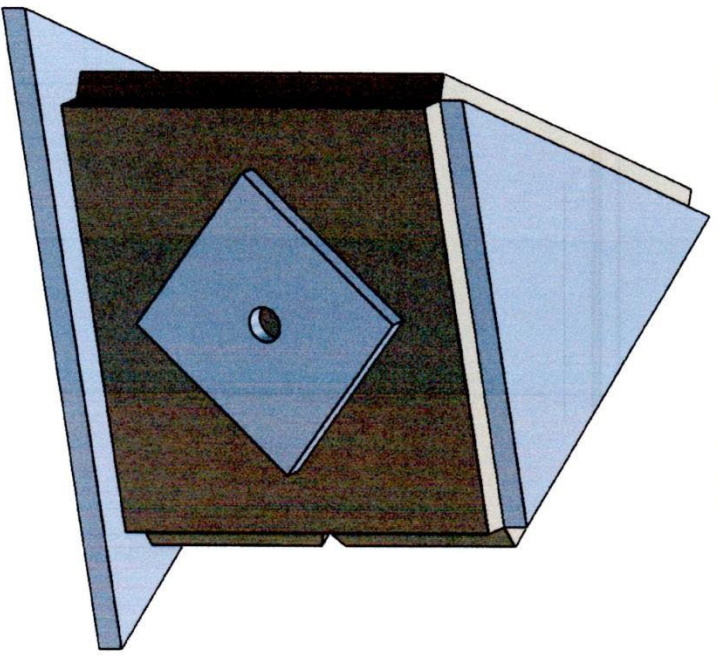
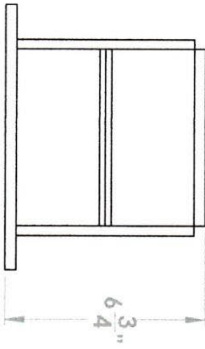
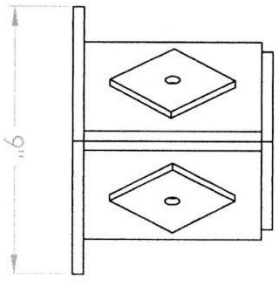
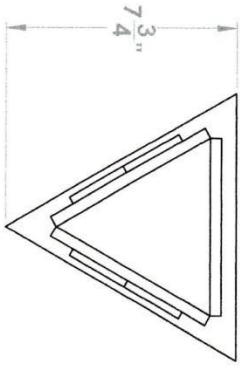
- Latecomers will not be allowed to enter the competition.
- Butane lighters are not allowed in the welding area.
- Grinding is not permitted.
- **Contact with advisors/teachers/coaches/parents is not permitted during contest time and will be handled at the discretion of the Technical Chair**

**SAFETY GLASSES (PPE)**

All teachers and students must wear **safety glasses** AT ALL TIMES in the Welding Shop.  
FAILURE TO DO SO WILL LEAD TO REMOVAL OF TEACHER OR STUDENT.

<b>Bill of Material for DSBN Welding Competition Project</b>				
Item	Quantity	Material	Size	Check Off
1	2	HRS	1/4 x3 x 3	
2	3	HRS	3/8 x 6 x 6	
3	2	HRS	3/8 x 3 x 6	
4	1	HRS	3/8 x 8 x 9	

➤\* HRS- Hot Rolled Steel



**PROPRIETARY AND CONFIDENTIAL**  
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UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 FRACTIONS ± .005  
 ANGULAR ± .01 DEG. BEND ± .1  
 TWO PLACE DECIMAL ± .01  
 THREE PLACE DECIMAL ± .001  
 INTERPRET GEOMETRIC TOLERANCING PER: [REDACTED]

FINISH	MATERIAL	COMMENTS:
DO NOT SCALE DRAWING	HRS	

DRAWN	CHECKED	ENG APPR.	MFG APPR.	O.A.	NAME	DATE
BM	BM	BM	BM	BM		31/01/21
						31/01/21
						31/01/21

TITLE: Welding Skills Challenge Project  
 SIZE: A  
 DWG. NO.: 2021001  
 SCALE: 1:5 WEIGHT: SHEET 1 OF 1  
 REV: 1