



2024 South West Regional Skills Canada Competition

Contest Description (Scope Document)

Lethbridge College

Saturday, March 16, 2024

EVENT: Welding		LEVEL: Secondary										
DURATION OF CONTEST: 5 HOURS		LOCATION: Lethbridge College TT1927										
COMPETITION SCHEDULE: <table border="1"> <tr> <td>CHECK IN (FOUNDERS' SQUARE)</td> <td>7:30 AM</td> </tr> <tr> <td>ORIENTATION</td> <td>7:45 AM</td> </tr> <tr> <td>COMPETITION BEGINS</td> <td>8:15 AM</td> </tr> <tr> <td>LUNCH</td> <td>11:30 AM – 12:00 PM</td> </tr> <tr> <td>COMPETITION ENDS</td> <td>1:45 PM</td> </tr> </table>		CHECK IN (FOUNDERS' SQUARE)	7:30 AM	ORIENTATION	7:45 AM	COMPETITION BEGINS	8:15 AM	LUNCH	11:30 AM – 12:00 PM	COMPETITION ENDS	1:45 PM	REGIONALIZED: YES If YES, To compete at the Provincial Skills Canada Competition students must qualify at their Regional Skills Canada Competition.
CHECK IN (FOUNDERS' SQUARE)	7:30 AM											
ORIENTATION	7:45 AM											
COMPETITION BEGINS	8:15 AM											
LUNCH	11:30 AM – 12:00 PM											
COMPETITION ENDS	1:45 PM											
AWARDS CEREMONY INFORMATION: The awards ceremony will be held at 4:00 p.m. in the Swing Space (AN1804). It is open to the public, parents are encouraged to attend.												

CONTEST INTRODUCTION

To enable competitors to demonstrate their knowledge & skill of welding principles. The competition will consist of a practical examination. Competitors will be expected to utilize their practical skills & knowledge in drawing interpretation of fitting, and welding. The following processes are applicable: SMAW & GMAW. Safety procedures will also be evaluated.

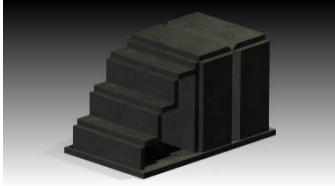
SKILLS AND KNOWLEDGE TO BE TESTED

The regional skills competitors should be prepared to apply their theory knowledge in a layout and drawing interpretation to complete a 5 hour practical project which may include but not limited to the following tasks (please see the below isometric image and attached project drawing and weld procedures):

- SMAW 1G, 2G, 3G Butt Weld
- GMAW 1G,2G,3G Butt Weld
- SMAW or GMAW, 2F & 3F Welds
- SMAW- 1G on plate. Root E6010 1/8", E4310 3.2mm. Fill and cap E7018 3/32 or 1/8",E4918 2.5mm or 3.2mm
- Fillets- 2F, 3F, E7018 -1/8"and or 3/32", E6010 1/8", E4918 3.2 mm and or 2.5mm or E4310 3.2mm.
- GMAW- 1G & 3G on plate , 2F and 3F (vertical up and down)

PROJECT DESCRIPTION

Please see the attached dimensional print and weld processes.



Competitors that advance onto the Provincial Skills Canada Competition will also be provided the dimensional print with their contest description; the Provincial project can be changed up to 30% on the day of the competition. This percentage change however, will not be implemented at the Regional competition level.

EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

Work Boots (CSA Approved steel toe work boots)	Welding Helmet
Side shields required for prescription glasses	Safety Glasses
Appropriate clothing (100% cotton coveralls recommended)	Welding Gloves
Long Sleeve Denim Shirt or Jacket - 100% cotton	

*** Competitors are encouraged to bring their own items from the above list, however, if a competitor cannot supply the helmet, the committee will supply it (to be returned at end of competition).**

Competitors are encouraged to bring their own tools from the list below, however, the committee will have all items available for competitor usage on the day of the competition EXCEPT magnets.

Competitors tools will be limited to the following:

Pipe liner files	Wire Brush	Vice Grips/Pliers
Magnets	Tri Square	Imperial/Metric Tape Measure
Centre Punch	Hammer	Cold Chisel
Soap Stone		

Grinders are NOT permitted.

Cell phones or ear buds are NOT permitted in the competition area due to safety concerns.

*Competitors are required to follow all industry standards during the competition.

Equipment and Materials Supplied by the Committee:

- Materials and Consumables to build project.
- Ear plugs

WELDING ASSEMBLY (Please also reference the Regional project prints)

1. The project is to be completely assembled first (tack welded).
2. Then the project is to be placed flat on the table to perform all of the welding. (The order of welds is competitor’s choice.)

WELD PROCEDURES

- 1G SMAW E4310 (E6010) Root, E4918 (7018) Fill & Cap.
- 3G GMAW Root, E4918 (7018) SMAW Fill & Cap.
- 3G GMAW Root, Fill & Cap.
- 3F GMAW.
- 2F GMAW. 6mm and 9mm.
- 2F E4310 (E6010). 6mm and 9mm.
- 2F E4918 (E7018). 3.2mm and 9mm.

JUDGING CRITERIA

ASPECT	The following aspects will be reviewed during the marking:
A1	GMAW fillet size-Are the GMAW fillet sizes according to prints?
A2	Are the GMAW welds free of surface porosity?
A3	SMAW fillet size-Are the SMAW fillet sizes according to prints?
A4	Are the SMAW welds free of surface porosity?
A5	SMAW penetration-Is the SMAW groove weld completely penetrated 0 to 3mm
A6	SMAW reinforcement-Does the SMAW groove weld have excessive reinforcement 0 to 3mm
A7	GMAW penetration-Is the GMAW groove weld completely penetrated 0 to 3mm
A8	GMAW reinforcement-Does the GMAW groove weld have excessive reinforcement 0 to 3mm
A9	Weld cleaning-Is all weld spatter and slag removed?
A10	Overall appearance
A11	Welding position – are the welds produced in the correct position and location?

TIE BREAKING PROCESS

In the event of a tie, the competitor with the higher marks in categories A5, A7 and A11 will win.

RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all modules are located at the following website:

https://education.alberta.ca/media/160533/fab_course_summaries_old.pdf

- | | | | | | |
|----------|----------|----------|------|----------|------|
| FAB 1040 | FAB 2020 | FAB 3048 | 101B | 102A | 103A |
| FAB 1048 | FAB 2030 | FAB 3050 | 101C | 102B | 103B |
| FAB 1050 | FAB 2040 | FAB 3060 | 101G | 102C | 103C |
| | FAB 2048 | FAB 3170 | 101I | 102D | 103D |
| | FAB 2050 | | 101F | 103F,G&H | |
| | FAB 2060 | | | | |
| | FAB 2070 | | | | |



CLOTHING REQUIREMENT

It is important that competitors present a professional image and appearance. Appropriate work clothing must be worn to compete. All clothing must be neat and clean and free of rips and tears. Casual wear such as shorts will not be permitted. No loose fitting clothes or jewelry.

SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

ADDITIONAL INFORMATION

Lunch will be provided for all competitors, teacher chaperones, judges, and volunteers. Unfortunately, all allergies may not be able to be accommodated for. Your lunch ticket will be in the back of your name tag.

PARKING INFORMATION & VENUE MAPS:

Please park in Lot I or K – there is no charge. Overflow will also be allowed in Lot P. A printable parking map of Lethbridge College can be found at: <https://lethbridgecollege.ca/document-centre/forms/facilities-management/parking-map>

REGIONAL REGULATIONS & POLICIES

A copy of the Skills Canada Alberta Regional Regulations & Policies can be found at the following link: <http://www.skillsalberta.com/policies-and-procedures>

EVENT SCHEDULE

7:30	Students check-in at Founders’ Square
7:45	Orientation & Safety
8:15	Competition Begins
11:30	Lunch Break – 30 minutes
12:00	Competition resumes
1:45	Competition ends – Judging Begins
2:00	Competitor debrief in TT1937 – teachers are welcome to join competitors for generic feedback. Once completed, competitors may proceed to the competitor lounge.
4:00	Awards Ceremony Swing Space (AN1804) – open to the public

COMMITTEE MEMBERS

Dave Heins	Lethbridge College
Jeremy Lauzon	Lethbridge College
Holly Lehbauer	Career Transitions
Judy Stolk-Ingram	Career Transitions
Tara Yagos	Career Transitions