



# WELDING FABRICATION

## ELIGIBILITY (Team of Three)

Open to active SkillsUSA members enrolled in programs with welding as the occupational objective. This is a team event. Each team will be composed of three student members from the same school and training program.

## CLOTHING REQUIREMENTS

Clothing required by home school lab areas, long sleeve shirts. Black or brown leather work shoes and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.) All school names must be covered. All students should wear appropriate PPE for cutting/welding/grinding at all times.

*Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.*

## EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. All necessary welding equipment Miller XMT welding machine
2. Print
3. Carbon steel to complete the project

## EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

- All students must have a one-page, typewritten resume.
- Proof of Training signed
- Hearing and/or ear protection, safety glasses, welding jackets
- 2 bar clamps at least 3 foot in length
- Welding helmet with appropriate filter plate/lens and protective cover plate/lens in a flip or slide front. Auto darkening is permissible.
- Spare filter lens/plates for arc welding helmet
- Pocket calculator
- Lead pencil and/or ball point pen
- Soapstone with holder
- Scribe and magnet
- Combination square set and framing square
- Fillet weld gauge
- Center punch and ball peen hammer
- Chipping hammer with or without wire brush
- Wire brush
- 2-foot level
- Electric grinder
- Fillet weld gauges for final inspection
- All PPE (safety glasses, welding gloves, FR jacket, safety toed work boots, jeans with no holes)
- Recommend having on hand extra batteries for welding hoods



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- Burning shield
- Grinding shield

## **SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)**

*(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)*

## **KNOWLEDGE PERFORMANCE**

The contest will include a 20-question multiple choice written knowledge exam of welding, including safety, measurement and blueprint reading. There may be questions related to saw operation, drilling, grinding, and material handling.

## **SKILL PERFORMANCE**

The team will fabricate their project according to the blueprints provided. Contestants will be required to utilize GMAW, SMAW, and OFC in various positions according to the competition blueprint provided. Each part of the competition is timed. No additional time can be given once time is called.

## **SAFETY REQUIREMENTS**

Both the instructor and the contestant certify by agreeing to enter the contest that the contestant has received instruction and has satisfactorily passed an examination on the safe use of all power tools. Further they agree that SkillsUSA, Western Montgomery Career & Technology Center, the SkillsUSA Championships Technical Committee and judges are released from all responsibility relating to personal injuries resulting from their use. Contestants will be removed from the competition if proper training has not been provided and/or they are using the equipment in an unsafe manner.

## **CONTEST GUIDELINES**

1. Contestants must correctly use the welding equipment during the contest. The contest chairman and contest coordinator may stop a contestant at any section of the contest if they deem a contestant's manner to be hazardous to either themselves or others. Such stoppage shall disqualify the participant for that section of the contest. If the contestant is warned a second time, he or she will be disqualified as a contest participant.
2. Contestants will be assigned a contest number for use during the welding contest. The contestants will be known to the contest judges by their assigned number only.
3. Maintain proper organization and operation of the work area.
4. All contestants must inspect welding and thermal cutting equipment for safe operation.
5. Identify arc welding/cutting safety procedures.
6. Select the appropriate welding technique, equipment, and supplies for a given metal or process.
7. Interpret the basic elements of a drawing or sketch.



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8. Demonstrate a professional attitude and communication throughout the entire contest.
9. Once time is called, the contestant must stop working. Any contestant who continues to work after time is called will be disqualified.
10. All contestants must clearly display their contestant number on their projects (no names or school names)

## **SKILL/TEST**

Contestants will demonstrate their ability to perform jobs and skills selected from the following list of competencies:

1. **Team of Three Fabrication Skills Competition**
  - A. Complete all projects according to blueprints within the time period given
  - B. Display familiarity with industrial and OSHA safety standards
  - C. Contestants will be provided all blueprints the day of the competition
2. **Task Presentation**
  - A. Briefly describe the welding process used and any other details you would like about your project.
  - B. Read blueprint and fabrication off the print provided and explain to judges.



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## WELDING FABRICATION SCORING SHEET

Item Name	Description	Possible Points
Completed project within the specified time given		40
Setup and Operate Welding/cutting equipment		40
All dimensions specified on the blueprint are within tolerance		45
Visual Weld Inspection		45
Display familiarity with industrial and OSHA safety standards		30
Knowledge test		20
	SUBTOTAL = 220	
No Resume	Deduction - 10	
Clothing Penalty	Deduction - 10	
Safety Penalty	Deduction -10	
	TOTAL	

*Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.*

*Note: Scorecards should only be used as guidance. Changes may occur.*