

WELDING
CAREER DEVELOPMENT EVENT
RULES AND REGULATIONS
TEAM COMPETITION



ALABAMA FFA ASSOCIATION

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Alabama State Department of Education, Dr. Eric G. Mackey, State Superintendent of Education

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Revised: January 2024

Welding CDE

Welding Career Development Event

PURPOSE:

This event is designed to help students learn more about various welding processes and gain skills needed to further this career path.

ELIGIBILITY AND REQUIREMENTS:

- Contestants must meet **ALL** the following requirements to be eligible to compete in the contest.
 - Show on their chapters roster and be submitted to the National FFA Organization for the current year.
 - Currently in the 9th grade or higher
- If a cell phone or smartwatch is seen or heard in the possession of a competitor, that individual student will be disqualified from the competition and receive a score of zero.
- All participants must wear the proper Personal Protective Equipment. Students will not be allowed to compete without the following items.
 - Closed toed leather footwear.
 - Long pants with no holes or frays (jeans or cotton) no synthetic pants
 - Welding sleeves, Welding Jacket, or flame-retardant long-sleeved shirt
 - Z87.1 Safety Glasses
 - Welding Hood
 - Welding Gloves
 - Long Hair Protection if required.

The top four from each category will be recognized. The district winners will come from the Advanced Contest.

District Awards/Sponsors

Calhoun Community College

Rogers Group Inc.

Miller Electric

Polaris

Lincoln Electric

Turner Construction

Sexton Welding Supply

EVENT GENERAL RULES

1. Students will compete as individuals. Each FFA chapter may bring a maximum of two students to compete in the SMAW contest, maximum of two students to compete in the GMAW contest and one student for the Advanced. Total of five student's maximum from each school. Competitors can only compete in one category.
2. Welds will be scored by a minimum of three industry experts selected by the contest officials and all placings are final.
3. The top ten in SMAW, GMAW and Advanced will be selected and ranked by visual inspection.
4. Competitors with improper weld placement or not following the blueprints correctly will not be scored.
5. Any student that willfully disregards any safety rules posted by the event coordinator will be disqualified.
 - a. Safety glasses must be worn at all times.
 - b. Handle hot metal with proper tools.
 - c. Proper welding gloves must be worn when welding and quenching.
6. All participants are responsible for bringing the following equipment: chipping hammer, wire brush, and tool for handling hot material. GMAW and Advanced should bring Welpers or cutting pliers. Advanced should also bring a tape measure or ruler. Additional tools may be brought, if needed, with judges and contest officials having the final say on their use. Hand Tools only/No Power Tools
7. Competitors are responsible for bringing all steel required for the weld tests. The welding coupon must be brought to the contest prepped and tacked up.
8. Consumables for the contest will be supplied. 3/32 7018, 1/8 6010, .035 wire, and 75/25.
9. All welds must be cleaned by hand. Electric grinders/needle scalers are not allowed.
10. Machines will be pre-set. It is the contestant's responsibility to make sure the machine is set to their individual specifications.
11. Participants must stay with their assigned group. Contest Officials will not attempt to locate a participant that is in the wrong group.
12. Participants will have **20 minutes** to complete each part of the contest. Contest Officials have the option to extend the time for all contestants but not decrease the allowed time.
13. FFA advisors, parents, or anyone affiliated with the participants are not allowed in the shop area during the contest.

Contest Layout

1) SMAW Contest 2F 7018

- a. Each participant will complete a 3-Pass weld on one side of the T-Joint coupon. The root pass will be the full length of the coupon. The 2nd pass will be $\frac{3}{4}$ the length of the coupon, and the 3rd pass will be half the coupon.
- b. The other side will be a 3-Pass the full length of the T-Joint
- c. Each participant may mark where each weld is to stop.

2) GMAW Contest 2F

- a. Each participant will complete a 3-Pass weld on one side of the T-Joint coupon. The root pass will be the full length of the coupon. The 2nd pass will be $\frac{3}{4}$ the length of the coupon, and the 3rd pass will be half the coupon.
- b. The other side will be a 3-Pass the full length of the T-Joint
- c. Each participant may mark where each weld is to stop

3) Advanced Contest SMAW and GMAW

- a. Teachers will receive the blueprint without weld symbols, a minimum of three weeks prior to the contest, so they may get material and tack the pieces together.
- b. The final blueprint that includes the welding symbols will be given to competitors on contest day.
- c. The final blueprint may include welding in the flat, horizontal, and/or vertical position.
- d. The final blueprint may consist of welding with E7018, E6010, E6011 and/or .035 smooth wire.

4

3

2

1

1ST PASS FULL
2ND PASS 3/4 LENGTH
3RD 1/2 LENGTH

3 PASS FULL

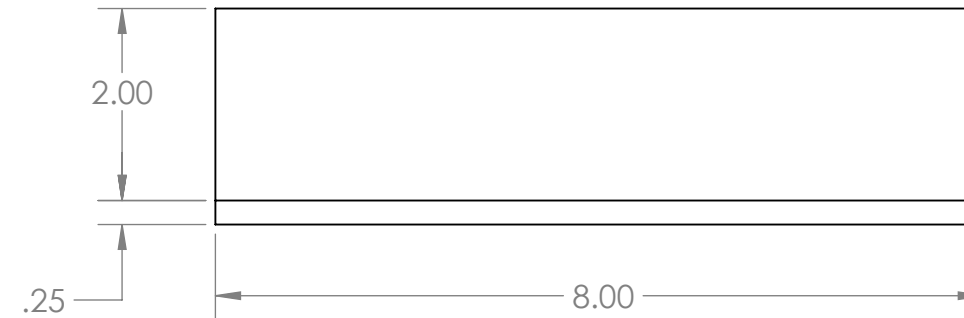
B

A

B

A

SMAW
7018



NOTE:

- 1) WELDING TO BE COMPLETED WITH PLATE A FLAT TO TABLE.
- 2) 1/4 STEEL IS SHOWN BUT 3/16 MAY BE SUBSTITUTED HOWEVER, 1/4 IS STRONGLY SUGGESTED.

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
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3

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1

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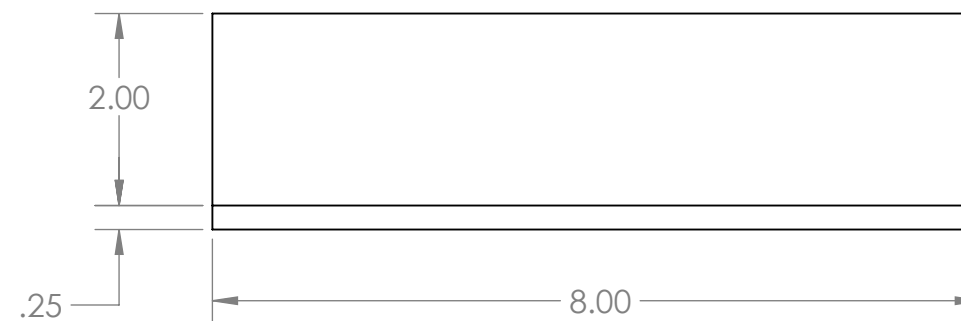
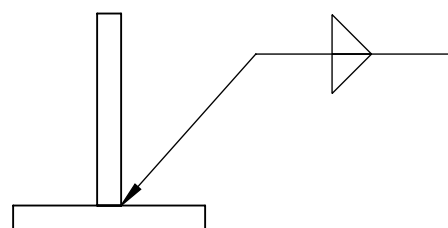
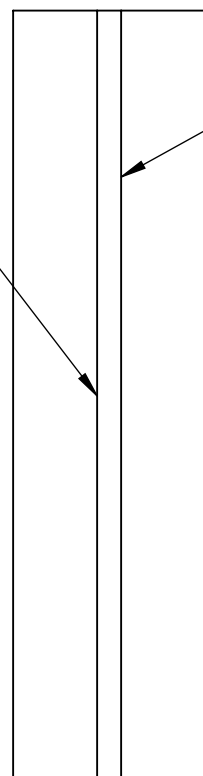
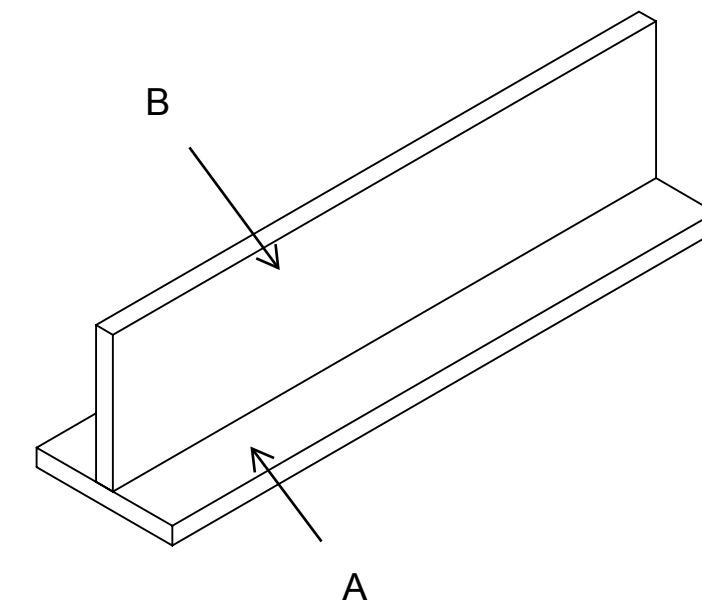
3

2

1

1ST PASS FULL
2ND PASS 3/4 LENGTH
3RD 1/2 LENGTH

3 PASS FULL



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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE		
		DIMENSIONS ARE IN INCHES	DRAWN		TITLE: GMAW-HS2023	
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		FRACTIONAL ±	ENG APPR.			
		ANGULAR: MACH ± BEND ±	MFG APPR.			
		TWO PLACE DECIMAL ±	Q.A.		SIZE	DWG. NO.
		THREE PLACE DECIMAL ±	COMMENTS:		B	GMAW
		INTERPRET GEOMETRIC TOLERANCING PER:			SCALE: 1:2	WEIGHT:
		MATERIAL				SHEET 1 OF 1
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APPLICATION		DO NOT SCALE DRAWING				

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