

2003 State Competition
FFA Agricultural Mechanics Contest
University of Missouri
50 points

Contestant # _____
Contestant Name _____
Chapter _____

ARC WELDING

Problem:

Weld the two plates together as positioned below.

Materials:

2- 1/4" x 4" x 4" metal plate.

Appropriate electrode(s) selected from those in the welding booth.

1 – Firebrick to rest metal against.

Directions:

- Prepare the metal, cleaning, etc.
- Secure the metal.
- Select electrode from those in welding booth and set welder amperage.
- Have the Contest official record the type of rod and welder amperage
- Position metal as shown.
- Tack as needed on the side as shown below. **DO NOT TACK on the BACK SIDE.**
- Perform weld, welding in the joint as indicated below. Use **TWO** passes.
- Using your pliers, cool your metal and then hand your weld to a contest official.
- Put your contestant number on the backside of the welded plates and on this sheet.
- Turn in your work and this sheet.



*Welder Number/Name _____

*Amperage setting _____

*Rod number _____

*Note: A contest official must record this information.

Evaluation Score Sheet

Points

Evaluation Item	Possible	Earned
Metal positioned properly	5	_____
Proper selection of electrode	5	_____
Correct welder amperage (correct arc length)	5	_____
Distortion	5	_____
Weld appearance (temperature, width, and face)	5	_____
Correct Number of Passes	5	_____
Weld passes the guided bend test	10	_____
Points from ID and problem solving	10	_____
<u>Improper Safety clothing and supplies</u>	-40	_____
Total -----	50	_____

Problem Solving

1. Which bottle of gas is suited for MIG welding?
A. B. C.
2. Which rod has the highest tensile strength?
A. B. C. D.
3. Which tip (A, B or C) is in operating condition?
A. B. C.
4. Identify item labeled #4?
A. Ground electrode
B. Arc electrode
C. Incoming power cord
5. Which of the following adjustments effects amperage?
A. B. C. D.
6. Which of the following wire sizes is suitable for mig welding?
A. 0.0035
B. 0.035
C. 0.35
D. 3.50
7. If you were welding with a 7018 rod, which welder would be best suited?
A. B.
8. What position can the rod labeled #8 be used?
A. Flat only
B. Vertical
C. Overhead
D. Any
9. Which of the following metals would be the hardest to weld with a mig welder?
A. B. C. D.
10. Name the type of distortion noted on the metal plate tagged #10.

