

**Welding Job Readiness**  
**Arc Welding Information Sheet**  
*Welding Equipment*



**Welding Helmet**



**Welding Gloves**



**Electrode Holder**



**Electrodes**



**Ground Clamp**



**Chipping Hammer**

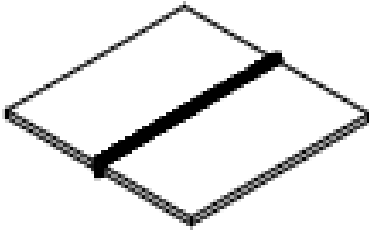


**Safety Glasses**

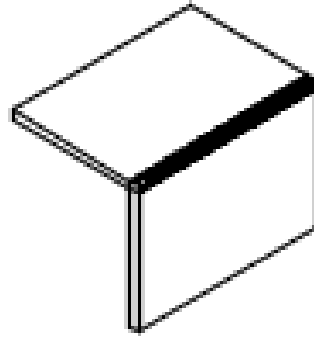


**Wire Brush**

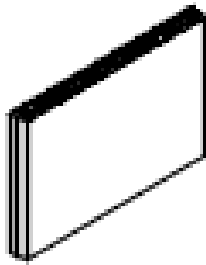
**Welding Job Readiness**  
**Arc Welding Information Sheet**  
*Welding Joints*



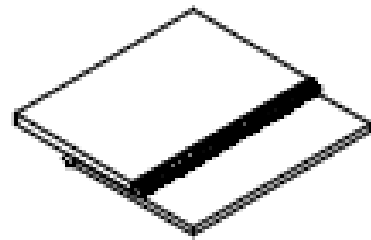
Butt Joint



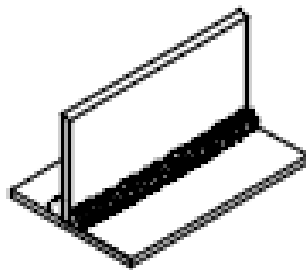
Corner Joint



Edge Joint



Lap Joint



Tee Joint

# **Welding Job Readiness Contest Guidelines**

## **Each contestant will need to bring:**

- Safety Glasses
- Welding Helmet
- Welding Gloves
- Protective Clothing (Leather, etc.)
- Leather boots or leather work shoes

## **Each contestant will be provided with:**

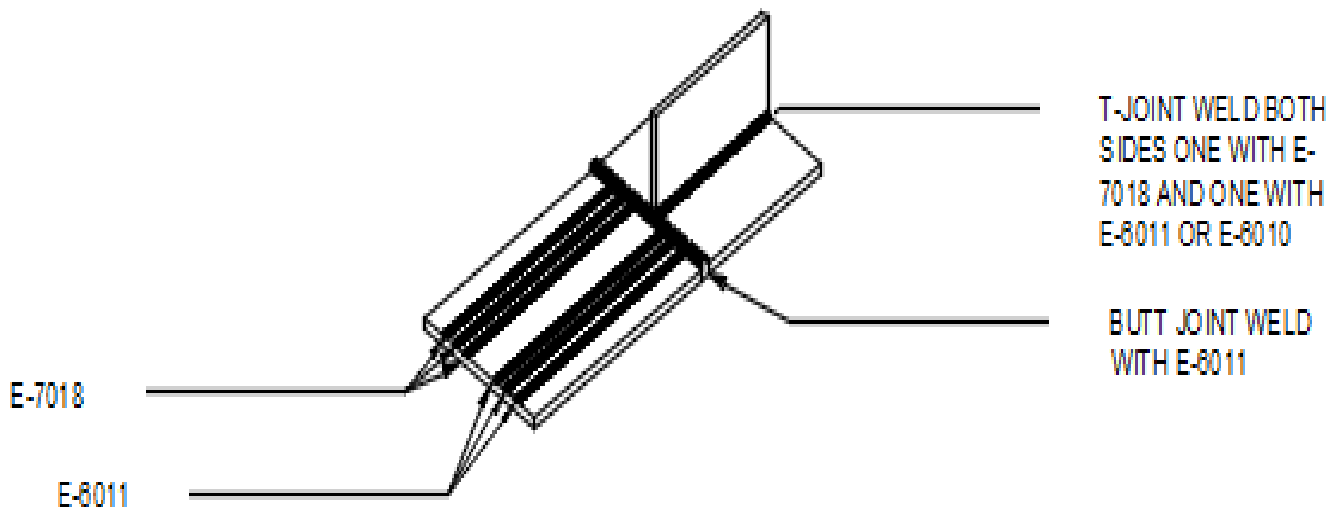
- Electrodes-both 7018 and 6011 or 6010 (1/8" diameter)
- Test Plate
- 6' x 4" x 1/4"- Thick plate
- 4" x 4" x 1/4"- Thick plate
- 2" x 4" x 1/4"- Thick Plate
- Welding Helmet and Gloves

## The welding contest will consist of contestants completing the following:

- Running three (3) flat beads with 7018 rods welded on a 4" x 6" plate.
- Running three (3) flat beads with choice of 6011 or 6010 rods welded on a 4" x 6" plate.
- Welding a tee weld in a flat position with a 4" x 4" plate and a 2" x 4" plate. Tee to be welded on both sides-one side using 6011 or 6010 and the other using 7018.

All beads are single pass only!

- Welding a butt joint in the flat position using the 4" x 6" plate and the 4" x 4" plate with 6011 or 6010 rod.



- Taking a written test on welding

The task should be completed within a 20-minute time limit. This time span does NOT include set up time, only actual welding time. Assistance will be provided for setting machine adjustments.

# Welding Job Readiness

## Arc Welding Test

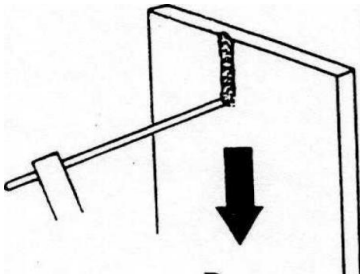
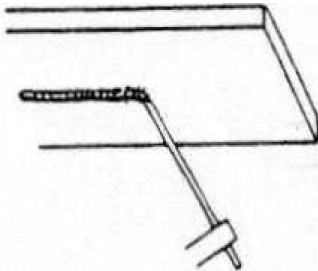
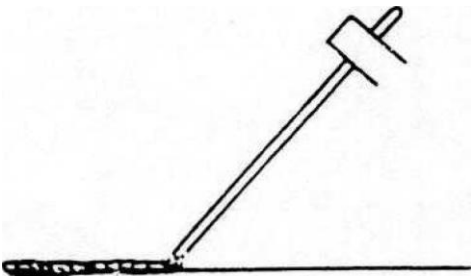
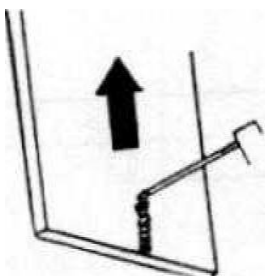
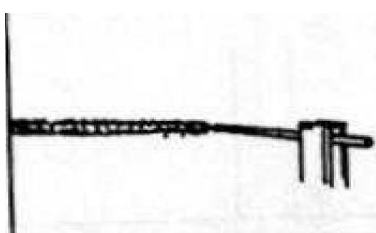
1. Match these terms with the correct definition.

- |          |   |               |
|----------|---|---------------|
| _____ A. | Made by one pass of the electrode.  | 1. Arc        |
| _____ B. | Metal rods which conduct a current from the electrode holder to the base metal. | 2. Base Metal |
| _____ C. | Metal to be welded.   | 3. Bead weld  |
| _____ D. | Fusion of metal.  | 4. Bevel      |
| _____ E. | Weld between two metal parts in the same plane.                                 | 5. Butt joint |
| _____ F. | Flow of electric current across a narrow gap.                                   | 6. Crater     |
| _____ G. | Type of edge preparation.   | 7. Electrodes |
| _____ H. | Depression at the end of the weld.  | 8. welding    |

2. Identify these pieces of arc welding equipment.

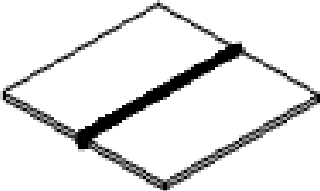
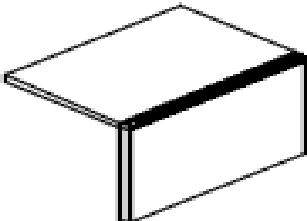
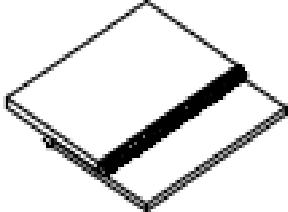
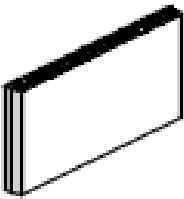
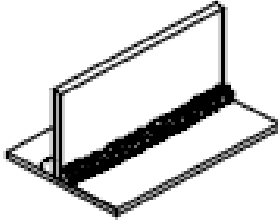
 <p>1</p>	<p>A. Safety Glasses B. Welding Helmet C. Electrode Holder D. Ground Clamp</p>	 <p>2</p>	<p>A. Chipping Hammer B. Wire Brush C. Ground Clamp D. Electrode Holder</p>
 <p>3</p>	<p>A. Chipper Hammer B. Ground Clamp C. Wire Brush D. Electrodes</p>	 <p>4</p>	<p>A. Electrodes B. Welding Helmet C. Protective Shield D. Safety Glasses</p>
 <p>5</p>	<p>A. Welding Gloves B. Safety Helmet C. Hand Protectors D. Protective Gear</p>	 <p>6</p>	<p>A. Bead B. Thick Plate C. Electrodes D. Electrode Holder</p>
 <p>7</p>	<p>A. Chipping Hammer B. Wire Brush C. Ground Clamp D. Electrode Holder</p>	 <p>8</p>	<p>A. Chipping Hammer B. Electrode C. Ground Clamp D. Electrode Holder</p>

3. Identify the following different types of welding positions.

<p>A</p> 	<p>A. Horizontal B. Flat C. Overhead D. Vertical Down</p>
<p>B</p> 	<p>A. Overhead B. Flat C. Vertical D. Horizontal</p>
<p>C</p> 	<p>A. Overhead B. Flat C. Vertical D. Horizontal</p>
<p>D</p> 	<p>A. Overhead B. Horizontal C. Vertical Up D. Vertical Down</p>
<p>E</p> 	<p>A. Overhead B. Flat C. Vertical D. Horizontal</p>

4. Identify the welding joints below.



<p>A</p> 	<p>A. Corner Joint  B. Butt Joint  C. Edge Joint  D. Lap Joint</p>
<p>B</p> 	<p>A. Lap Joint  B. Tee Joint  C. Edge Joint  D. Corner Joint</p>
<p>C</p> 	<p>A. Tee Joint  B. Lap Joint  C. Edge Joint  D. Butt Joint</p>
<p>D</p> 	<p>A. Edge Joint  B. Corner Joint  C. Lap Joint  D. Butt Joint</p>
<p>E</p> 	<p>A. Edge Joint  B. Lap Joint  C. Tee Joint  D. Butt Joint</p>

# Welding (ARC) Test Answer Sheet

1. Arc Welding Test:

- A. 3
- B. 7
- C. 2
- D. 8
- E. 5
- F. 1
- G. 4
- H. 6

2. Identify these pictures of Arc welding equipment:

- A. Welding Helmet
- B. Electrode Holder
- C. Chipping Hammer
- D. Safety Glasses
- E. Welding Gloves
- F. Electrodes
- G. Wire Brush
- H. Ground Clamp

3. Identify the welding positions:

- A. Vertical Down
- B. Overhead
- C. Flat
- D. Vertical Up
- E. Horizontal

4. Identify the following types of welding joints:

- A. Butt Joint
- B. Corner Joint
- C. Lap Joint
- D. Edge Joint
- E. Tee Joint

Contestant # \_\_\_\_\_

# JOB READINESS Arc Welding Contest Score Sheet

Category	Excellent	Very Good	Good	Fair	Poor	Comments
<b>Safety:</b>						
***Safety Glasses	20	-----	-----	-----	0	
*** Hearing Protection	20	-----	-----	-----	0	
<b>Clothing Penalty (0-5 of total points)</b>	20	15	10	5	0	
Straightness of bead, tee and butt joint	20	15	10	5	0	
Undercut	20	15	10	5	0	
No excess spatter	20	15	10	5	0	
<b>Cleaning:</b>						
Chipping	10	8	6	4	2	
Brushing	10	8	6	4	2	
						Total Possible: 140
<b>Sub Total</b>						<b>Total: _____</b>

\*\*\* Judges may provide safety glasses in order for contestants to continue... Contestant receives 0 points for the safety portion of the competition.

**Score from welding skill test (above) \_\_\_\_\_**

**Score from written test (30 points possible) \_\_\_\_\_**

**Time Penalty\* (minus 0-5 from total points) \_\_\_\_\_**

**Resume Penalty\* (minus 0-5 from total points) \_\_\_\_\_**

**Judges' Final Score \_\_\_\_\_**

Time Start \_\_\_\_\_

Time Finish \_\_\_\_\_

Time Penalty: a 5 point penalty will be deducted for each minute over 20 minutes so time will be a definite factor in determining the winner!