JOB READINESS

Arc Welding Information Sheets

Welding Equipment

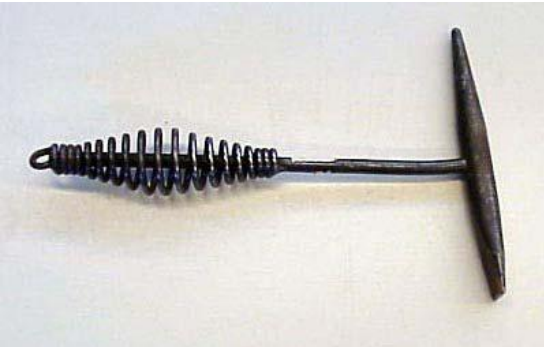
Welding Helmet

Welding Gloves

Electrode Holder

Electrodes

Ground Clamp



Chipping Hammer

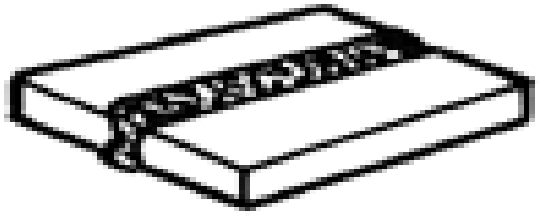
Wire Brush

Safety Glasses

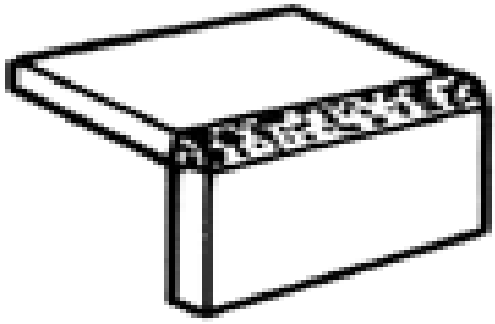
Job Readiness -

WELDING (ARC) INFORMATION SHEET

WELDING JOINTS



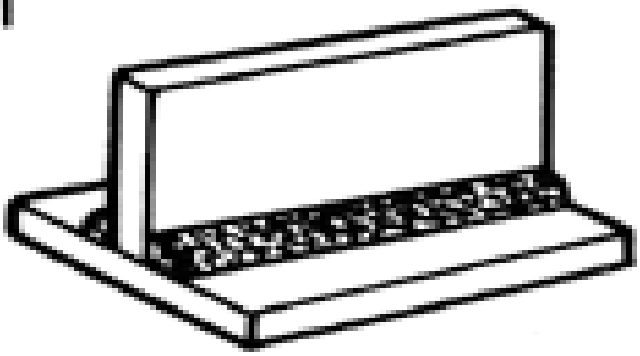
BUTT JOINT



CORNER JOINT

EDGE JOINT

LAP JOINT



TEE JOINT

JOB READINESS

Welding Contest Guidelines

Each contestant will need to bring:

*safety glasses
*welding helmet
*welding gloves
*protective clothing (leathers, 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 ¼” – thick plate
*4” x 4” X ¼” – thick plate
*2” X 4” X ¼” – thick plate
*Welding helmet and gloves

The welding contest will consist of contestants completing the following:

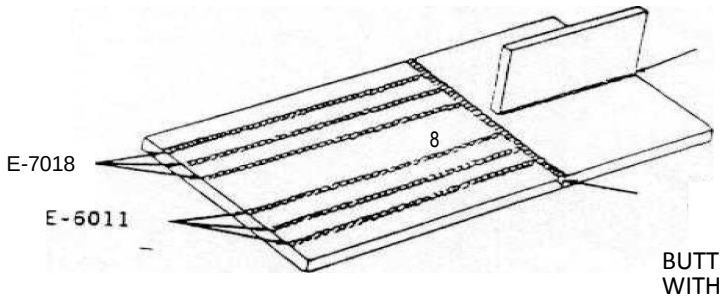
*Running three (3) flat beads with 7018 rods welded on a 4” x 6” plate.

*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.

T-JOINT-WELD BOTH SIDES-ONE WITH E-7018 AND ONE WITH E-6011 OR E-6010



BUTT JOINT WELD WITH E-6011

*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.

Job Readiness

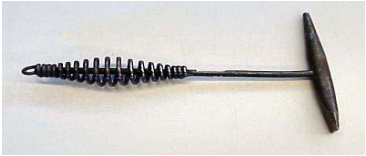
Arc Welding Test

Contestant No._____

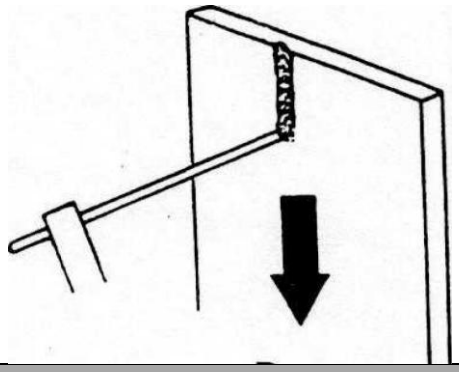
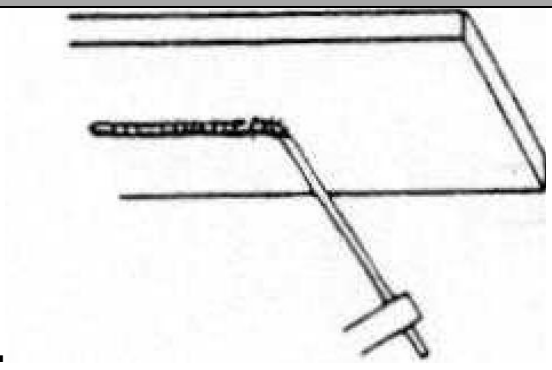
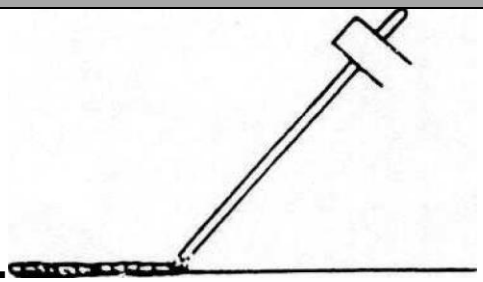
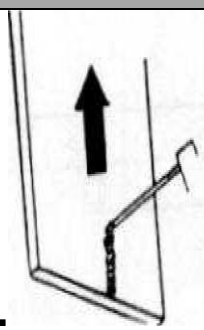
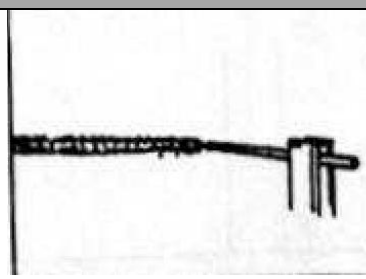
1. Match these terms with the correct definition.

_____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 metals	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

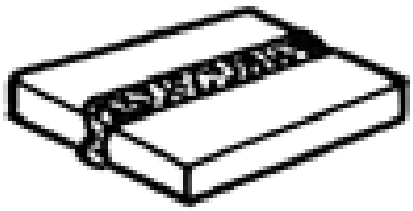
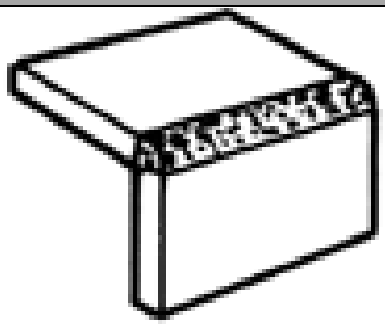
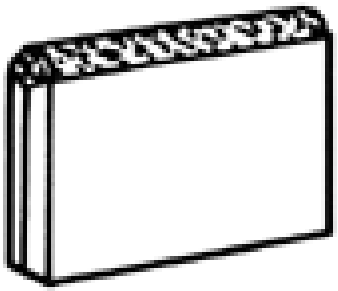
2. Identify these pieces of arc welding equipment.

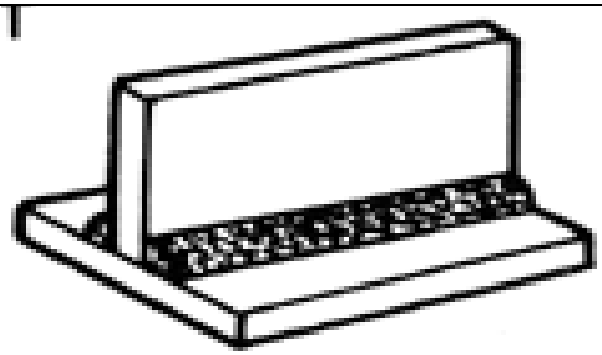
A.	A. Safety Glasses B. Welding Helmet C. Electrode Holder D. Ground Clamp	E.	A. Welding Gloves B. Safety Helmet C. Hand Protectors D. Protective Gear
B.	A. Chipping Hammer B. Wire Brush C. Ground Clamp D. Electrode Holder	F.	A. Bead B. Thick Plate C. Electrodes D. Electrode Holder
C. 	A. Chipping Hammer B. Ground Clamp C.Wire Brush D. Electrodes	G.	A. Chipping Hammer B. Wire Brush C. Ground Clamp D. Electrode Holder
D.	A. Eye Glasses B. Welding Helmet C. Protective Shield D. Safety Glasses	H.	A. Chipping Hammer B. Electrodes C. Ground Clamp D. Electrode Holder

3. Identify the following different types of welding positions

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

4. Identify the welding joints below.

 A.	A. Corner Joint B. Butt Joints C. Edge Joint D. Lap Joint
 B.	A. Lap Joint B. Tee Joint C. Edge Joint D. Corner Joint
C.	A. Tee Joint B. Lap Joint C. Edge Joint D. Butt Joint
 D.	A. Edge Joint B. Corner Joint C. Lap Joint D. Butt Joint

 **E.**	**A. Edge Joint** **B. Lap Joint** **C. Tee Joint** **D. Butt Joint**

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. Electrode
   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

JOB READINESS
Arc Welding Contest
Score Sheet

Contestant No._____

Category	Excellent	Very Good	Good	Fair	Poor	Comments
Safety:						
Safety Glasses***	20	-------	-------	-------	0	
Weld Quality:						
Evidence of penetration	20	15	10	5	0	
Straightness of bead, tee and butt joints	20	15	10	5	0	
Undercut	20	15	10	5	0	
No excess spatter	20	15	10	5	0	
Cleaning:						
Chipping	10	8	6	4	2	
Brushing	10	8	6	4	2	
Sub Total						**Total** _____

***Judge may provide safety glasses in order for contestant 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* _____

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!