

Name _____

Applying Shielded Metal Arc Welding

Define the following terms.

Alternating current

Amperage

Arc length

Arc welding

Conductor

Crater

Direct current

Duty cycle

Electricity

Electrode

Electrons

Fillet weld

Groove weld

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | | |
|----------------|---------------|------------|
| a. arc length | e. electrode | h. welder |
| b. arc welding | f. polarity | i. welding |
| c. duty cycle | g. resistance | j. weldor |
| d. electricity | | |

- _____ 1. Melting, flowing together and freezing of metals under controlled conditions.
- _____ 2. Bare metal rod.
- _____ 3. Person doing the welding.
- _____ 4. Opposition to the flow of current in a circuit.
- _____ 5. Uses electricity to heat and melt the metal.

- _____ 6. Machine doing the welding.
- _____ 7. Flow of tiny particles called electrons through a conductor.
- _____ 8. Direction the current is flowing.
- _____ 9. Percentage of a 10 minute period that a welder can operate at a given current setting.
- _____ 10. Distance from the tip of the bare end of the electrode to the base metal.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

- 1. Electron flow in one direction is called _____.
- 2. The process of building up several layers of weld deposit by running overlapping passes is known as _____.
- 3. _____ is equal to the diameter of the bare end of the electrode.
- 4. Correct speed of travel should produce a bead that is _____ to _____ times the diameter of the bare end of the electrode.
- 5. Correct amp setting depends on the _____ of the base metal and the _____ of the electrode.
- 6. When electrical current alternates or reverses the direction of electron flow is called _____.
- 7. _____ is what causes the electric energy to be transformed into heat.
- 8. Running a bead with a sidewise or oscillating motion is called _____.

Part Three: Short Answer

Instructions. Provide information to answer the following questions. Use complete sentences.

- 1. What are the requirements of a good or sound weld?
- 2. What are the three functions of flux?
 - a.
 - b.
 - c.
- 3. Summarize what you believe are the top 10 safety rules when welding.
 - a.
 - b.
 - c.

d.

e.

f.

g.

h.

i.

j.

4. List the four welding positions:

A.

B.

C.

D.