Arc strikes are usually caused by?

- a. high welding voltage
- b. incorrect electrode selection
- c. careless welder
- d. austenitic steel

The flux on a SMAW electrode is designed to

- a. remove impurities on the metal
- b. protect the weld from the atmosphere
- c. cleanses impurities from the base metal
- d. all of these

The number 1 in AWS E6012 tells the welder that this electrode can be used in:

- a. the flat position only
- b. the flat and horizontal positions only
- c. all positions
- d. all positions but vertical down

From the list below, select the electrode (or electrodes) that are considered low hydrogen?

- **a. E7018** b. E7010 c. E6013
- d. all the above

What welding condition may cause a narrow weld bead with a high crown?

a. arc length too long

b. welding current too low

- c. arc voltage too high
- d. too slow of a travel speed

What condition may cause a welder to have trouble starting a SMAW electrode (the electrode sticks)?

- a. too small of an electrode being used
- b. arc voltage too high
- c. welding current too high
- d. welding current too low

The core wire of a SMAW electrode (for low carbon steel use) is usually composed of:

a. mild steel

- b. special alloyed material
- c. metal that is the same base material
- d. high alloy flux

The best penetration for the covered electrode process will be given by the following polarity/current:

- a. electrode positive
- b. work negative
- c. reverse polarity
- d. all of the above

For an E7018 electrode, the (70) represents the:

a. amount of weld metal deposited per hour

b. minimum tensile strength of the weld

- c. electrode speed
- d. weight of electrode per foot

Duty cycle is measured in what time interval in the United States?

- a. seconds
- **b. minutes**
- c. hours
- d. days

Which of the following groups are low hydrogen electrodes?

- a. E6012, E6013, & E7014
- b. E7018, E8018, & E11018
- c. E7024 & E6027
- d. E6010, E6011, E7010, & E8010

In shielded metal arc welding, shielding is accomplished by the:

a. shielding gas from the gun.

b. the electrode flux vaporizing

c. inert gas provided by the rare gas deoxidizers in the core wire.

d. using an argon filled chamber.

Arc blow is due to:

- a. magnetic forces.
- b. size of welding lead.

c. improper electrode design.

d. eddy currents in the transformer.

The temperature of an electric arc (SMAW) is:

- a. 200,000 C b. 5,800 C
- c. 5,800 F
- d, 11,000 F

What determines the electrical characteristics of a SMAW electrode? (i.e. AC, DC-, DC+)

- a. core wire
- b. current density
- c. brand of welding machine
- d. chemical composition of the flux

The last digit of a SMAW electrode designation is an indication of:

- a. the composition of the coating
- b. the arc characteristics
- c. the recommended type of current the degree of penetration

The flux covering on a SMAW electrode provides:

- a. gas shielding for the molten puddle
- b. arc stabilization
- c. alloys
- d. deoxidization
- e. all of the above

The correct electrode and work connections for Direct Current straight polarity are:

a. electrode positive, work negative

b. electrode negative, work positive

- c. work positive, electrode positive
- d. work negative, electrode neutral

What does a 60% duty cycle mean?

- a. the machine will run six out of ten minutes without over heating at the rated current
- b. the machine will only deliver 60% of rated current
- c. the machine can only weld 60% of any material
- d. none of the above

Too high of a current setting will result in:

- a. poor arc stability
- b. damage to the electrode
- c. excessive spatter
- d. all of these

What is the source of hydrogen contamination in a weld?

- a. oil
- b. moisture
- c. paint
- d. all the above

When welding in the vertical up position using a side-to -side motion, the finished weld has under cut on both sides. What would cause this?

a. current too low

b. arc length too short

- c. not pausing on the sides long enough
- d. polarity

Porosity is most often caused by:

- a. improper welding technique
- b. surface contamination
- c. incompatibility of electrode and base material
- d. all of the above

The maximum depth of undercut allowed for a one inch plate welder qualification test according to AWS D1.1 is:

a.1/32 of an inch

- b. 1/8 inch maximum
- c. 1/16 of an inch
- d. no undercut is allowed

An E6011 electrode, can be used with what polarity?

- a. DCRP b. DCEE **c. AC or DCEP**
- d. DCEN or DCEP

Reverse polarity means:

a. the positive terminal is grounded

- b. the positive terminal is connected to the electrode holder
- c. the negative terminal is connected to the electrode holder
- d. none of these