



Welding

Flexible Instruction Day

Assignment #5

Chapter 1: Principals of SMAW Assessment

Learning Standard	Standard CC.3.5.9-10.A. <u>Cite specific textual evidence, etc....</u>
Task # & Description	Review the information and complete the activity Follow written instructions to complete work assignments and rules.

CONTACT INFORMATION/ASSISTANCE

Instructor Name: George Petronelis, Jacob Hughes

We will be available by email 7:40-12, and 12:30-3:10 to answer your questions. Please reach out if you are having difficulty completing your assignments.

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INSTRUCTIONS

- All work is due on the day we return to school. This is counted towards your attendance **and** as a classroom assignment.
- Read the information
- Complete the attached assignment

Name: _____

Session: _____

_____/____ points

Directions: Choose the letter of the best answer.

- ## SMAW-PRINCIPLES: **AQ**

Multiple Choice

Directions: Choose the letter of the best answer.

11. The advantage(s) of the shielded metal arc welding (SMAW) process is/are _____.
 - A. Low cost of equipment
 - B. Low cost of consumables
 - C. Ability to weld in various environments
 - D. All of these
12. Open circuit voltage is best described as the _____.
 - A. Electrical flow of energy
 - B. Voltage of the power source when ON but not welding
 - C. Voltage when the power source is switched to OFF
 - D. The shock to the operator when the ground is disconnected
13. Which of the following is the most basic traditional power source used for SMAW?
 - A. Transformer
 - B. Transformer/rectifier
 - C. Inductance Coil
 - D. Inverter
14. Which of the following is part of the welding electrical circuit?
 - A. Electrode
 - B. Workpiece
 - C. Electrode/work cables
 - D. All of these
15. Welding power sources use a _____ type of transformer to create electricity for welding.
 - A. Steady state
 - B. Solid state
 - C. Step-up
 - D. Step-down
16. The transformer inside a welding power source converts high voltage, low amperage electricity into _____ electricity for welding.
 - A. High voltage, high amperage
 - B. Low voltage, low amperage
 - C. High voltage, low amperage
 - D. Low voltage, high amperage
17. Which of the following electrical characteristics is kept constant with a constant current power source?
 - A. Voltage
 - B. Amperage
 - C. Polarity
 - D. All of these
18. To increase the penetration of a bead, you should select which welding polarity?
 - A. DCEN
 - B. DCEP
 - C. AC
 - D. Both DCEP and AC
19. Which polarity results in an increased melt-off rate of the electrode when shielded metal arc welding?
 - A. AC
 - B. DCEN
 - C. DCEP
 - D. None of these

20. Which of the following electrical characteristic is most directly correlated to arc length?
- A. Voltage
 - B. Current
 - C. Watts
 - D. Ohms
21. Which of the following polarities can be used with the SMAW process?
- A. AC
 - B. DCEP
 - C. DCEN
 - D. All of these
22. SMAW requires a continuous supply of electrical current, which can only be supplied by ____.
- A. Engine-driven generators
 - B. Power company lines
 - C. Engine-driven alternators
 - D. All of these
23. DCEP is sometimes referred to with the nonstandard term ____.
- A. Straight polarity
 - B. Reverse polarity
 - C. Alternating polarity
 - D. Negative polarity
24. When welding with DCEN, the workpiece is the ____ and the electrode is the ____.
- A. Negative; Positive
 - B. Cathode; Anode
 - C. Direct; Alternating
 - D. Anode; Cathode
25. When welding with 60 Hz AC, the voltage and the amperage are at zero ____ times per second.
- A. 30
 - B. 60
 - C. 120
 - D. 240