

SECTION 8 ARC WELDING

Unit 25 Selecting and Using Arc Welding Equipment

Arc welding equipment is widely used in agricultural construction and maintenance. Knowledge of arc welding and skill in its use will be valuable to you.

Class Activity 25-1

Understanding Arc Welding

Class Activity 25-2

Identifying Arc Welding Advantages

Class Activity 25-3

Identifying Arc Welding Safety Items

Class Activity 25-4

Identifying Electrode Code Numbers

Job Sheet 25-1

Name _____ Date _____

Understanding Arc Welding

Objective

Upon completing this activity, you will have demonstrated an understanding of arc welding.

Tools and Materials

Job Sheet 25-1

Pen or pencil

Procedure

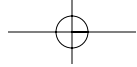
Complete the following worksheet.

1. What are the benefits of slag formation in welding?

2. The arc temperature can reach _____ degrees F.

3. What are reasons for this temperature to vary?

4. What does duty cycle mean when applied to arc welders?



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5. What are the differences between direct and alternating current welders?

6. What are the common amperages of popular agricultural welders?

7. Portable DC welders are commonly driven by _____

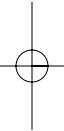
8. Portable welders may also be used as _____.

9. What happens if too small welding cables are used? _____

10. Describe a desirable electrode holder. _____

11. Describe a ground clamp. _____

Instructor's Score or Approval _____



Job Sheet 25-2

Name _____ Date _____

Identifying Arc Welding Advantages**Objective**

Upon completing this activity, you will have demonstrated the ability to identify arc welding advantages.

Tools and Materials

Job Sheet 25-2

Pen or pencil

Procedure

Match the items in column I with those in column II.

Column I

- ___ 1. Inexpensive source of heat for welding
- ___ 2. Can be used for
- ___ 3. Can be learned quickly
- ___ 4. Engine driven
- ___ 5. Arc welding is
- ___ 6. Farm arc welders are

Column II

- a. portable welders
- b. fast and reliable
- c. electricity
- d. brazing and heating as well as welding
- e. arc welding
- f. relatively inexpensive

Instructor's Score or Approval _____

Job Sheet 25-3

Name _____ Date _____

Identifying Arc Welding Safety Items

Objective

Upon completing this activity, you will have demonstrated the ability to identify arc welding safety items.

Tools and Materials

Job Sheet 25-3

Pen or pencil

Procedure

Match the items in column I with those in column II.

<i>Column I</i>	<i>Column II</i>
___ 1. Convert power: high voltage low amperage to low voltage high amperage	a. DC welders
___ 2. Driven by electric motors or gasoline engines	b. AC welders
___ 3. Large cables	c. electrode holders
___ 4. Welding curtains	d. high amperage
___ 5. Spring-loaded device	e. protection for others
___ 6. Welding table	f. comfortable workstation

Instructor's Score or Approval _____

Job Sheet 25-4

Name _____ Date _____

Identifying Electrode Code Numbers

Objective

Upon completing this activity, you will have demonstrated the ability to identify the electrode code numbers.

Tools and Materials

Job Sheet 25-4

Pen or pencil

Procedure

Complete the following worksheet. Remember: The answer pertains only to the number or letter, not to the blanks.

<i>Number</i>	<i>Meaning</i>
___ 1. E ___	a. thousand pounds of tensile strength
___ 2. ___ 1	b. usable in all directions
___ 3. ___ 1 _	c. usable only in the flat or horizontal positions
___ 4. ___ 2	d. usable for vertical down only
___ 5. ___ 3	e. DC reverse polarity only
___ 6. ___ 4	f. AC and DC reverse polarity
___ 7. ___ 5	g. AC and DC straight polarity
___ 8. ___ 6	h. AC and DC
___ 9. ___ 8	i. DC reverse polarity
___ 10. ___ 2 _	j. electrode
___ 11. ___ 4 _	
___ 12. _ 7 0 _	
___ 13. ___ 0	

Note: Meanings can apply to more than one number.

Instructor's Score or Approval _____