Instructor: Date:

Course: Unit:

Chapter 8: Manual Welding Techniques

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| Objectives | Standards |
| * Identify types and grades of steel and steel alloys. |  |
| * Identify shapes and forms of steel and steel alloys. |  |
| * Select the appropriate steel filler based on the steel to be welded. |  |
| * Explain joint preparation, weld backing, and preheating for steels. |  |
| * Recall welding procedures and techniques for welding steel using DCEN. |  |
| * Recall correct torch positioning for various types of welds. |  |
| * Differentiate between stringer beads and weave beads. |  |
| * Recognize groove and fillet weld defects. |  |
| * Recall factors that influence postweld treatment. |  |

Materials, Equipment, and Supplies

Materials:

Instructional Resources

* **Reproducible Master 8-1: Groove Weld Defects and Corrective Actions.** This reproducible master illustrates groove weld defects and lists corrective measures for each.
* **Reproducible Master 8-2: Fillet Weld Defects and Corrective Actions.** This reproducible master illustrates fillet weld defects and lists corrective measures for each.
* **Teaching Visual 8-1: Torch Angles.** This teaching visual can be used as a visual aid in explaining torch work angles, torch travel angles, and filler rod angles.
* Other resource:
* Other resource:

Assessment

* 1. Review Questions, Text p. 152
  2. Other assessment:

Web Site(s)

American Iron and Steel Institute

[www.steel.org](http://www.steel.org)

ASTM International

[www.astm.org](http://www.astm.org)

Additional Notes