Instructor: Date:

Course: Unit:

Chapter 11: Manual Welding of Magnesium

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| Objectives | Standards |
| * Identify the characteristics of magnesium. |  |
| * Identify wrought material and tempers by their designations. |  |
| * Summarize the filler metal choices for magnesium and its alloys. |  |
| * Recognize common joint designs for welding magnesium with ac and continuous high-frequency voltage. |  |
| * Recall joint preparation techniques, including preweld cleaning, weld backing, tooling, preheating, and tack welds. |  |
| * Select the correct power source, shielding gases, and electrodes for welding magnesium using DCEN and DCEP. |  |
| * Apply correct procedures for welding magnesium using ACHF. |  |
| * Summarize the postweld heat treatment needed for magnesium. |  |
| * Apply correct procedures for welding magnesium using DCEN. |  |
| * Apply correct procedures for welding magnesium using DCEP. |  |

Materials, Equipment, and Supplies

Materials:

Instructional Resources

* **Teaching Visual 11-1: Welding Magnesium with ACHF—Weld Joint Designs.** This teaching visual illustrates common joint designs for magnesium that will be welded with ACHF current.
* **Teaching Visual 11-2: Stress Relief.** This teaching visual shows the stress-relief times and temperatures required for various magnesium alloys.
* **Teaching Visual 11-3: Welding Magnesium with DCEN—Weld Joint Designs.** This teaching visual shows weld joint designs used when welding magnesium with DCEN current.
* **Teaching Visual 11-4: Welding Magnesium with DCEP.** This teaching visual shows joint configurations and settings recommended for DCEP welding of magnesium.
* Other resource:
* Other resource:

Assessment

* 1. Review Questions, Text p. 192
  2. Other assessment:

Web Site(s)

International Magnesium Association

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

Additional Notes