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| Module 4: | Shielded Metal Arc Welding 160 hours**Key Indicators:**1. Perform safety inspections of SMAW equipment and accessories.

**Objective:** Provided with a period of instruction and demonstration on safety inspection guidelines, protective clothing and equipment, hand tools, and SMAW equipment and accessories, the trainee performs safety inspections of protective equipment and clothing, hand tools, SMAW equipment and accessories, and work area.**Evaluation Criteria:** The trainee’s protective equipment and clothing, hand tools, SMAW equipment and accessories, and work area meet safety requirements. Hazard warnings are communicated to others in the immediate area prior to the start of SMAW operations. In the course of daily operations, the trainee is observed following safe SMAW practices on a routine basis. In accordance with the requirements of AWS QC10, the trainee shall achieve a score of 100% on the written safety test for Module 2: Safety and Health of Welders, based on ANSI Z49.1: Safety in Welding, Cutting, and Allied Processes. □ Provide safety tour and orientation to fabrication tools and equipment.**Recommended Instructional Activities:**□ Provide safety tour and orientation to SMAW equipment and accessories.□ Provide demonstrations on ANSI Z49.1, Section 11, Arc Welding and Cutting Equipment Safety. □ Provide demonstrations on routine safety inspections of protective equipment and clothing, hand tools, SMAW equipment and accessories, and work area.□ Provide instruction on ANSI Z49.1, Section 11.□ Reinforce previous instruction from ANSI Z49.1, Part 1-General Aspects.□ Introduce relevant terms and definitions and observe trainee using proper SMAW terms and definitions.□ Observe trainee conducting safety inspections for SMAW.□ Observe trainee following safe SMAW practices.□ Develop and administer formative or diagnostic tests on safe SMAW practices.□ Prepare trainee for the written examination based on ANSI Z49.1.□ Keep records reflecting each trainee’s successful completion of training in SMAW safe practices.1. Makes minor external repairs to SMAW equipment and accessories.

**Objective:** Provided with a period of instruction and demonstration on repair materials, equipment and tools, the trainee performs will make minor external repairs to SMAW equipment and accessories.**Evaluation Criteria:** The trainee’s repairs to SMAW equipment and accessories are made in accordance with manufacturer’s recommendations and the institution’s repair policy. The correct repair materials, equipment, and tools are selected. The assignment is completed in a timely manner. The objective is performed as required during the SMAW portion of the program.**Recommended Instructional Activities:** □ Provide instruction and demonstrations on SMAW equipment and accessories identification. □ Provide instruction and demonstrations on minor external repairs on SMAW equipment and accessories.□ Introduce relevant terms and definitions and observe trainee using proper SMAW terms and definitions.□ Provide training exercises on making minor external repairs on SMAW equipment and accessories.□ Observe each trainee’s ability to carry out training exercises on making minor external repairs on SMAW equipment and accessories.□ Observe trainee following safe practices for SMAW while making repairs.□ Develop and administer formative or diagnostic tests on SMAW equipment and accessories identification and making minor external repairs.□ Prepare trainee for the SMAW equipment and accessories identification and making minor external repairs portion of a written examination from the relevant sections of AWS Welding Handbook, Volume One, Welding Technology; Volume Two, Welding Processes-Part 1.□ Keep records reflecting each trainee’s successful completion of training in SMAW equipment and accessories identification, and making minor external repairs. |