

NORTH CAROLINA CAREER AND TECHNICAL EDUCATION STANDARDS

Trade, Technology, Engineering, and Industrial Education

Grade: Grade 9 - 12

Course: Welding Technology I **Updated**

NCCTE.2020.IM61 - Welding Technology I

NCCTE.2020.IM61.01.00 - Apply Procedures to complete AWS SENSE Module 2 - Safety and Health of Welders

NCCTE.2020.IM61.01.01 - Demonstrate proper use and inspection of personal protection equipment (PPE).

NCCTE.2020.IM61.01.02 - Demonstrate proper safe operation practices in the work area.

NCCTE.2020.IM61.01.03 - Demonstrate proper use and inspection of ventilation equipment.

NCCTE.2020.IM61.01.04 - Demonstrate proper Hot Zone operation.

NCCTE.2020.IM61.01.05 - Demonstrate proper work actions for working in confined spaces.

NCCTE.2020.IM61.01.06 - Demonstrate proper use of precautionary labeling and SDS information.

NCCTE.2020.IM61.01.07 - Demonstrate proper inspection and operation of equipment used for each welding and thermal cutting process.

NCCTE.2020.IM61.02.00 - Apply Procedures to complete AWS SENSE Module 8 - Thermal Cutting Process - Safety

NCCTE.2020.IM61.02.01 - Perform safety inspections of manual and mechanized OFC equipment and accessories.

NCCTE.2020.IM61.02.02 - Perform safety inspections of manual PAC equipment and accessories.

NCCTE.2020.IM61.02.03 - Perform safety inspections of manual CAC-A equipment and accessories.

NCCTE.2020.IM61.03.00 - Apply Procedures to complete AWS SENSE Module 8 - Thermal Cutting Process - Unit 1: Manual Oxyfuel Cutting and Unit 2: Mechanized Oxyfuel Gas Cutting

NCCTE.2020.IM61.03.01 - Make minor external repairs to manual and mechanized OFC equipment and accessories.

NCCTE.2020.IM61.03.02 - Set up for manual and mechanized OFC operations on carbon steel.

NCCTE.2020.IM61.03.03 - Operate manual and mechanized OFC equipment on carbon steel.

NCCTE.2020.IM61.03.04 - Perform straight and shape, square and bevel edge cutting operations in flat position, on carbon steel.

NCCTE.2020.IM61.04.00 - Apply Procedures to complete AWS SENSE Module 8 - Thermal Cutting Process - Unit 3 Manual Plasma Arc Cutting

NCCTE.2020.IM61.04.01 - Make minor external repairs to manual PAC equipment and accessories.

NCCTE.2020.IM61.04.02 - Sets up for manual PAC operations on carbon steel, austenitic stainless steel, and aluminum.

NCCTE.2020.IM61.04.03 - Operate manual PAC equipment on carbon steel, austenitic stainless



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steel, and aluminum.

NCCTE.2020.IM61.04.04 - Perform straight and shape, square edge, cutting operations, in the flat position, on carbon steel, austenitic stainless steel, and aluminum.

NCCTE.2020.IM61.05.00 - Apply Procedures to complete AWS SENSE Module 8 -Thermal Cutting Process -Unit 4 Manual Air Carbon Arc Cutting

NCCTE.2020.IM61.05.01 - Make minor external repairs to manual CAC-A equipment and accessories.

NCCTE.2020.IM61.05.02 - Set up for manual CAC-A scarfing and gouging operations on carbon steel.

NCCTE.2020.IM61.05.03 - Operate manual CAC-A equipment on carbon steel.

NCCTE.2020.IM61.05.04 - Perform scarfing and gouging operations to remove base and weld metal, in the flat and horizontal positions, on carbon steel.

NCCTE.2020.IM61.06.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Safety

NCCTE.2020.IM61.06.01 - Perform safety inspections of SMAW equipment and accessories.

NCCTE.2020.IM61.06.02 - demonstrate safe working practices as described in American National Standard Z49.1

NCCTE.2020.IM61.07.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Base Metal Prep and Welding Positions

NCCTE.2020.IM61.07.01 - Operate SMAW equipment on carbon steel.

NCCTE.2020.IM61.07.02 - Prepares base metal for welds

NCCTE.2020.IM61.07.03 - Identifies and performs various welding positions

NCCTE.2020.IM61.08.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Equipment Setup

NCCTE.2020.IM61.08.01 - Make minor external repairs to SMAW equipment and accessories.

NCCTE.2020.IM61.08.02 - Set up for SMAW operations on carbon steel.

NCCTE.2020.IM61.09.00 - Apply Procedures from AWS SENSE Module 4 - Shielded Metal Arc Welding (SMAW) Fillet Weld

NCCTE.2020.IM61.09.01 - Make fillet welds in all positions on carbon steel.

NCCTE.2020.IM61.09.02 - Perform welds using E6010, E6011, or E7018 electrodes.

