



National Aeronautics and
Space Administration

John C. Stennis Space Center
Stennis Space Center, MS 39529-6000

COMPLIANCE IS MANDATORY

John C. Stennis Space Center Standard PROCEDURE FOR WELDING COPPER TUBE

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Stennis Standard	SSTD-8070-0125-WELD	B
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Responsible Office: NASA Center Operations Directorate		
SUBJECT: Procedure for Welding Copper Tube		

Document History Log

Revision	Date	Originator/ Phone	Description
Basic	2/25/05	Doug Dike 8-2803	Initial Release.
A	2/09/10	Doug Dike 8-2803	Updated references. Corrected typographical and grammatical errors. Administrative changes only, no changes to technical meaning or content.
B	2/12/15	Doug Dike 8-2803	Five-year review. Updated references and acronyms. Administrative changes required. NASA SSC Project Management Division and Safety and Mission Assurance added as Concurrence Organizations. In 1.0 Purpose and 2.0 Applicability, replaced “seamless copper tube P No. 31” with “P No. 31 copper tube, pipe, fittings, plate, bar, rod, shapes, and forgings (UNS Numbers C10200, C10400, C10500, C10700, C11000, C12000, C12200, C14200, and C19200)”. Redefined 5.2 Base Material to indicate, “The base material shall be copper tube, pipe, fittings, plate, bar, rod, shapes, or forgings with UNS Numbers C10200, C10400, C10500, C10700, C11000, C12000, C12200, C14200, or C19200 (designated as a P No. 31 material in ASME Boiler and Pressure Vessel Code, Section IX) conforming to any of the applicable material specifications in Section 3.0.” Updated 5.5 Position to note, “This procedure allows for welding in any position provided that each individual welder is qualified in accordance with ASME Boiler and Pressure Vessel Code, Section IX, for the weld position he or she is using to produce welds under this procedure.”

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1.0 PURPOSE

This John C. Stennis Space Center (SSC) standard (SSTD) specifies the procedure for Gas Tungsten Arc Welding (GTAW) of P No. 31 copper tube, pipe, fittings, plate, bar, rod, shapes, and forgings (UNS Numbers C10200, C10400, C10500, C10700, C11000, C12000, C12200, C14200, and C19200) at SSC.

2.0 APPLICABILITY

This SSTD applies to contractor and subcontractor personnel involved in the GTAW welding of P No. 31 copper tube, pipe, fittings, plate, bar, rod, shapes, and forgings (UNS Numbers C10200, C10400, C10500, C10700, C11000, C12000, C12200, C14200, and C19200).

3.0 REFERENCED DOCUMENTS

Referenced documents shall be the latest edition unless otherwise specified.

ASME Boiler and Pressure Vessel Code, Section II, Materials, Part B, *Nonferrous Material Specifications*

ASME Boiler and Pressure Vessel Code: Section IX, *Welding, Brazing and Fusing Qualifications*

ANSI/AWS A5.7M, *Specification for Copper and Copper-Alloy Bare Welding Rods and Electrodes*

ASTM B5, *Standard Specification for High Conductivity Tough-Pitch Copper Refinery Shapes*

ASTM B42, *Standard Specification for Seamless Copper Pipe, Standard Sizes*

ASTM B68, *Standard Specification for Seamless Copper Tube, Bright Annealed*

ASTM B75, *Standard Specification for Seamless Copper Tube*

ASTM B88, *Standard Specification for Seamless Copper Water Tube*

ASTM B111, *Standard Specification for Copper and Copper-Alloy Seamless Condenser Tubes and Ferrule Stock*

ASTM B124, *Standard Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes*

ASTM B187, *Standard Specification for Copper, Bus Bar, Rod, and Shapes and General Purpose Rod, Bar, and Shapes*

ASTM B188, *Standard Specification for Seamless Copper Bus Pipe and Tube*

ASTM B280, *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*

ASTM B283, *Standard Specification for Copper and Copper-Alloy Die Forgings (Hot-Pressed)*

ASTM B302, *Standard Specification for Threadless Copper Pipe, Standard Sizes*

ASTM B306, *Standard Specification for Copper Drainage Tube (DWV)*

ASTM B359, *Standard Specification for Copper and Copper-Alloy Seamless Condenser and Heat Exchanger Tubes With Integral Fins*