This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: A450/A450M – 21

Standard Specification for General Requirements for Carbon and Low Alloy Steel Tubes[1]

This standard is issued under the fixed designation A450/A450M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This specification[2] covers a group of requirements which, with the exceptions of 6.3 and Sections 7, 8, 19, 20, 21, 22, 23, 24, and 25, are mandatory requirements to the following ASTM tubular product specifications:[3]

Title of Specification	ASTM Designation[A]
Electric-Resistance-Welded Carbon Steel and Carbon-Manganese Steel Boiler Tubes	A178/A178M
Seamless Cold-Drawn Low-Carbon Steel Heat-Exchanger and Condenser Tubes	A179/A179M
Seamless Carbon Steel Boiler Tubes for High-Pressure Service	A192/A192M
Seamless Medium-Carbon Steel Boiler and Superheater Tubes	A210/A210M
Electric-Resistance-Welded Carbon Steel Heat-Exchanger and Condenser Tubes	A214/A214M
Seamless and Electric-Welded Low-Alloy Steel Tubes	A423/A423M
Specification for Seamless and Welded Carbon Steel Heat-Exchanger Tubes with Integral Fins	A498/A498M
Seamless Cold-Drawn Carbon Steel Feedwater Heater Tubes	A556/A556M
Seamless, Cold-Drawn Carbon Steel Tubing for Hydraulic System Service	A822/A822M

[A] These designations refer to the latest issue of the respective specifications.

1.2 One or more of Sections 6.3, 7, 8, 19, 20, 21, 22, 22.1, 24, and 25 apply when the product specification or purchase order has a requirement for the test or analysis described by these sections.

1.3 In case of conflict between a requirement of the product specification and a requirement of this general requirement specification only the requirement of the product specification need be satisfied.

1.4 The values stated in either SI units or inch-pound units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard. The inch-pound units shall apply unless the "M" designation (SI) of the product specification is specified in the order.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[4]

A178/A178M Specification for Electric-Resistance-Welded Carbon Steel and Carbon-Manganese Steel Boiler and Superheater Tubes

A179/A179M Specification for Seamless Cold-Drawn Low-Carbon Steel Heat-Exchanger and Condenser Tubes

A192/A192M Specification for Seamless Carbon Steel Boiler Tubes for High-Pressure Service

A210/A210M Specification for Seamless Medium-Carbon Steel Boiler and Superheater Tubes

A214/A214M Specification for Electric-Resistance-Welded Carbon Steel Heat-Exchanger and Condenser Tubes

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A423/A423M Specification for Seamless and Electric-Welded Low-Alloy Steel Tubes

A498/A498M Specification for Seamless and Welded Carbon Steel Heat-Exchanger Tubes with Integral Fins

A530/A530M Specification for General Requirements for Specialized Carbon and Alloy Steel Pipe

A556/A556M Specification for Seamless Cold-Drawn Carbon Steel Feedwater Heater Tubes

[1] This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.09 on Carbon Steel Tubular Products.

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[2] For ASME Boiler and Pressure Vessel Code applications see related Specification SA-450 in Section II of that Code.

[3] *Annual Book of ASTM Standards*, Vols 01.01 and 01.04.

[4] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

***A Summary of Changes section appears at the end of this standard**

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