



Designation: B 394 – 9903

Standard Specification for Niobium and Niobium Alloy Seamless and Welded Tubes¹

This standard is issued under the fixed designation B 394; 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.

1. Scope

1.1 This specification covers wrought niobium and niobium alloy seamless and welded tubes as follows:

NOTE 1—Committee B-10 has adopted “niobium” as the designation for Element No. 41, formerly named “columbium.”

1.1.1 R04200-Type 1— Reactor grade unalloyed niobium,

1.1.2 R04210-Type 2— Commercial grade unalloyed niobium,

1.1.3 R04251-Type 3— Reactor grade niobium alloy containing 1 % zirconium, and

1.1.4 R04261-Type 4— Commercial grade niobium alloy containing 1 % zirconium.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *The following precautionary caveat pertains only to the test methods portion of this specification. This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

B 391 Specification for Niobium and Niobium Alloy Ingots²

¹ This specification is under the jurisdiction of ASTM Committee B-10 on Reactive and Refractory Metals and Alloys and is the direct responsibility of Subcommittee B10.03 on Niobium and Tantalum.

Current edition approved Nov. 10, 1999; 2003. Published January 2000; September 2003. Originally published as B394-89; approved in 1989. Last previous edition approved in 1999 as B 394 - 959.