

**ASTM A334M-89/ASME SA334 SEAMLESS AND WELDED CARBON AND ALLOY STEEL TUBES FOR LOW TEMPERATURE SERVICE**

This standard is issued under the fixed designation A 334/A 334M; 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 (2) indicates an editorial change since the last revision or reapproval.

1.Scope

1.1 This specification covers several grades of minimum-wall-thickness, seamless and welded, carbon and alloy-steel tubes intended for use at low temperatures. Some product sizes may not be available under this specification because heavier wall thicknesses have an adverse affect on low-temperature impact properties.

1.2 Supplementary Requirement S1 of an optional nature is provided. This shall apply only when specified by the purchaser.

NOTE 1 A For tubing smaller than 1/2 in. [12.7 mm] in outside diameter, the elongation values given for strip specimens in Table 1 shall apply. Mechanical property requirements do not apply to tubing smaller than 1/8 in. [3.2 mm] in outside diameter and with a wall thickness under 0.015 in. [0.4 mm].

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

Material Comparison Tables (ASTM, KS, JIS, DIN, BS, NF, UNI)

ASTM Standard	UNS NO.	KOREA/JAPANES			GERMAN				BRITISH			FRENCH			ITALIAN		
		KS/JIS Symbol	KS/JIS Number	Remarks	DIN Type	DIN Number	Material Number	Remarks	B.S Number	B.S Grade	Remarks	AFNOR Type	NF Number	Remarks	UNI Type	UNI Number	Remarks
A 334 Seamless and Welded Carbon and Alloy Steel Tubes for Low-Temperature Service																	
Grade 1	K03008	STLT 39 / STBL 380	D3571 / G 3464		TT St 41N		1.0437	WBL-680(3b)			(3)	TU 42 BT	A49-230	(32)	C 15	5949	(6)Seamless Only
Grade 3	K31918	STLT 46 / STBL 450	D3571 / G 3464		10 Ni 14		1.5637	WBL-680(3b)	3603	HFS 503 LT 100	CAT.2	TU 16 N 14	A49-230	(3c)	18 Ni 14	5949	Seamless Only

Grade 6	K03006			(3)	TT St 45 N		1.0456	WBL-680(3b)	3603	HFS 410 LT 50	CAT.2	TU A 42 BT	A49-230	(29)	C 20	5949	Seamless Only
Grade 8	K31340	STLT 70 / STBL 690	D3571 / G 3464		X8 Ni 9		1.5662	WBL-680(3b)	3603	HFS 590 LT 196	CAT.2	TU Z 11 N 9	A49-230	(6)	12 X Ni 09	5949	Seamless Only

JIS Number and Corresponding Foreign Standards

JIS			ASTM			BS			DIN			NF			ISO			Index Number
Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	
G3464	STBL380	C	A334	Gr1	C	3603	HFS410LT50	C	17173	FONi14	Ni				2604/2	TS6	C	C014
	(STBL39)					"	CFS410LT50	C	17174	X8Ni9	Ni							
						"	ERW410LT50	C										
						"	CEW410LT50	C										
	STBL450	Ni	A334	Gr3	Ni	3603	HF503LT100	Ni				A49-230	TU10N14	Ni	2604/2	TS43	Ni	
	(STBL46)					"	CF503LT100	Ni				A49-213	TU10N14	Ni				
	STBL690	Ni	A334	Gr8	Ni	3603	HFS509LT196	Ni				A49-230	TUZ6N9	Ni	2604/2	TS45	Ni	
	(STBL70)					"	CFS509LT196	Ni				A49-215	TUZ6N9	Ni				