ASTM A192M-89 / ASME A192 SEAMLESS CARBON STEEL BOILER TUBES FOR HIGH PRESSURE SERVICE

This standard is issued under the fixed designation A 192/A 192M; 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.

This specification has been approved for use by agencies of the Department of Defense. Consult the DoD Index of Specifications and Standards for specific year of issue which has been adopted by the Department of Defense.

1.Scope

1.1 This specification covers minimum-wall-thickness, seamless carbon steel boiler and superheater tubes for high-pressure service.

1.2 The tubing sizes and thickness usually furnished to this specification are 1/2 in. to 7 in. [12.7 to 177.8 mm] outside diameter and 0.085 to 1.00 in. [2.2 to 25.4 mm], inclusive, in minimum wall thickness. Tubing having other dimensions may be furnished, provided such tubes comply with all other requirements of this specification.

1.3 Mechanical property requirements do not apply to tubing smaller than 1/8 in [3.2 mm] inside diameter or 0.015 in. [0.4 mm] thickness.

1.4 When these products are to be used in applications conforming to ISO Recommendations for Boiler Construction, the requirements of specification A 520 shall supplement and supersede the requirements of this specification.

1.5 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, NBN, NF, UNI)

ASTM Standard	UNS NO.	KOREA/JAPANES			GERMAN				BRITISH			BELGIAN			FRENCH			ITALIAN		
		KS/JIS Symbol	KS/JIS Number	Remarks	DIN Type	DIN Number	Material Number	Remarks	B.S Number	B.S Grade	Remarks	NBN Type	NBN Grade	Remarks	AFNOR Type	NF Number	Remarks	UNI Type	UNI Number	Remarks
A 192 Seamless C-Steel Boiler Tube for High Pressure Service	K01201	STBH 340 / STB 340	D3563 / G3461	(30)	St 35.8	17175	1.0305		3059	320	(27)(30)	D45	837	(27)	TU 37C	A49-213	(27)	C14	5462	(27)

JIS Number and Corresponding Foreign Standards

																		Index Number
	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	
G3461	STB340	C	A161	LC	C	3059	HFS320	C				A49-245	TS34e	C				C010
	(STB35)		A192	-	C	"	CFS320	C				"	TS34c	C				
			A226	-	C	"	ERW320	C										
			A556	GrA2	C	"	CEW320	C										
			A557	GrA2	C	"	S1 360	C										
						"	S2 360	C										
						"	ERW 360	C										
						"	CEW360	C										
						3606	ERW320	C										
						"	CEW320	C										
						"	CFS320	C										
	STB410	C	A179	Gr C	C	3059	S1 440	C	17175	St45.8	C	A49-213	TU42c	C	2604/2	TS9H	C	
	(STB42)		A210	GrA1	C	"	S2 440	C	17177	St42.8	C	A49-215	TU42c	C	"	TW9H	C	
			A556	GrB2	C	"	ERW 440	C				A49-243	TS42c					
			A557	GrB2	C	"	CEW 440	C				A49-245	TS42c					
						3602	HFS 410	C				"	TS42c					
						"	CFS 410	C										
						"	ERW 410	C										
						"	CEW 410	C										
						3606	ERW 440	C										
						"	CEW 440	C										
						"	CFS 440	C										
STB510	C							C	17175	19Mn5	C	A49-213	TU52C	C	2604/2	TS18	C	
(STB52)								C				A49-248	TU52C	C				