ASTM A210M-88/ASME SA210 SEAMLESS MEDIUM CARBON STEEL BOILER AND SUPERHEATER TUBES

This standard is issued under the fixed designation A 210/A 210M; 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 minimum-wall-thickness, seamless medium-carbon steel, boiler tubes and boiler flues, including safe ends (Note 1), arch and stay tubes, and superheater tubes.

NOTE 1AThis type is not suitable for safe ending by forge welding

- 1.2 The tubing sizes and thickness usually furnished to this specification are 1/2 in. to 5 in. [12.7 to 127 mm] in outside diameter and 0.035 to 0.500 in. [0.9 to 12.7 mm], inclusive, in minimum wall thickness. Tubing having other 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] in inside diameter or 0.015 in. [0.4 mm] in 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 value 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		KOREA/JAPANES			GERMAN B			BRITISH			BELGIAN			FRENCH			ITALIAN		
	uns no.	KS/JIS	KS/JIS	Remarks	DIN	DIN	Material	B.S		Remarks	NBN	NBN e Grade	Remarks	AFNOR		Remarks	UNI		Remarks
		Symbol	Number		Туре	Number	Number	Number			Туре			Туре	Number		Туре	Number	
A 210																			
Seamless Medium-Carbon Steel																			
Boiler and Superheater Tube																			
Grade A-1	K02707	STHA 410 /	D3563 /	(30)(24)	C) 45 0 4	47475	1.0405	3059	320	(30)	D45	837	(13)	TU	A40 212	(4) (12)	C 10	5462	(38)
		STB 410	G3461		St 45.8	17175								A42-C	H49-213	(6)(13)	C 18		

JIS Number and Corresponding Foreign Standards

าเร	JIS ASTM			BS			DIN NF ISO							Index				
Standard Number	Grade	Туре	Standard Number	Grade	Туре	Standard Number	Grade	Туре	Standard Number	Grade	Туре	Standard Number	Grade	Туре	Standard Number	Grade	Туре	Number

STB340	С	A161	LC	С	3059	HFS320	С				A49-245	TS34e	С				C010
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		i	GrA2				<u> </u>										
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		A557	GIAZ	C													
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					3606	ERW320	С										
						CEW320	С										
						CFS320	С										
STB410	С	A179	GrC	С	3059	S1 440	С	17175	St45.8	С	A49-213	TU42c	С	2604/2	TS9H	С	
(STB42)		A210	GrA1	С		S2 440	С	17177	St42.8	С	A49-215	TU42c	С		TW9H	С	
		A556	GrB2	С		ERW 440	С				A49-243	TS42c					
		A557	GrB2	С		CEW 440	С				A49-245	TS42c					
					3602	HFS 410	С					TS42c					
						CFS 410	С										
						ERW 410	С										
						CEW 410	С										
					3606	ERW 440	С										
						CEW 440	С										
							С										
С	<u> </u>						С	17175	19Mn5	С	A49-213	TU52C	С	2604/2	TS18	С	
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	(STB42)	(STB35) (ST	(STB35) A192 A226 A556 A557 A557 A179 STB410 C A179 (STB42) A210 A556 A557	(STB35) A192 - A226 - A556 GrA2 A557 GrA2 A557 GrA2 A557 GrA2 A179 GrC (STB42) A210 GrA1 A556 GrB2 A557 GrB2 A557 GrB2	(STB35)	(STB35)	(STB35)	(STB35)	STB35 A192	STB35 A192 -	(STB35)	(STB35)	(STB35)	(STB35)	(STB35)		