

DIN 1626-84 WELDED CIRCULAR TUBES OF NON ALLOY STEELS WITH SPECIAL QUALITY REQUIREMENTS

The sub clauses marked with a single dot give specifications which are to be agreed upon at the time of ordering.

The sub clauses marked with two dots give specifications which are optional and may be agreed upon at the time of ordering.

1. FIELD OF APPLICATION

1.1. This standard applies to welded circular tubes and pipes (hereinafter briefly referred to as "tubes") with pipes (hereinafter briefly referred to as "tubes") with a longitudinal or spiral weld, made of unalloyed steels a longitudinal or spiral weld, made of unalloyed steels as listed in table 2. These tubes are predominantly used in the construction of chemical plant, vessels, pipework and for general mechanical engineering purposes, The maximum permissible working pressure and permissible working temperature are specified in table 1. (The upper yield stress values for tubes at temperatures up to 300°C are specified in Appendix A.)

Elevated temperature upper yield stress values for tubes 1)

Table A.1.

Steel grade		Upper yield stress values for a design temperature of							
		50°C		200°C 2)		250°C		300°C	
Symbol	Material number	and a wall thickness							
		≤16mm	>16≤40mm	≤16mm	>16≤40mm	≤16mm	>16≤40mm	≤16mm	>16≤40mm
		N/mm ²							
USt 37.0	1.0253	235		185		165		140	
St 37.0	1.0254	235	225	185	175	165	155	140	135
St 44.0	1.0256	275	265	215	205	195	185	165	160
St 52.0	1.0421	355	345	245	225	225	215	195	190

1) The values specified are approximate values for the 0.2% proof stress and it is not required to verify them. This should be taken into account in design by using a higher safety coefficient (e.g. as in DIN 2413, June 1972 edition, sub clause 4.1.2, the value shall be increased by 20% for category II).

2) For the ranges between 20°C and 50°C and 200°C, linear interpolation should be made. It is not permitted to round the values.

Steel grade		Comparable steel grades	
Symbol	specified in DIN 1626 1)	Symbol	specified in DIN
St 33	Part 2	St 33	1615
St 37	Part 2	-	-
St 42	Part 2	-	-

St 34-2	Part 3	-	-
St 37-2	Part 3	USt 37.0	1626
		St 37.0	1626
St 42-2	Part 3	-	-
-		St 44.0	1626
St 52-3	Part 3	St 52.0	1626
St 34-2	Part 4	-	-
St 37-2	Part 4	St 37.4	1628
St 42-2	Part 4	-	-
-	Part 4	St 44.4	1628
St 52-3	Part 4	St 52.4	1628
1) January 1965 edition, in each case.			

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

ASTM Standard	UNS NO.	KOREA/JAPANESE			GERMAN				BRITISH			BELGIAN			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	UNI Type	UNI Number	Remarks
A 53 Welded and Seamless Steel Pipe																	
Grade A	K02504	SPPS38 / STPG370	D3562 / G3454	(16)	St37.2	1626	1.0036	(18)Welded	3061	320	BW,S,ER	E37.2	630	(2)(3b)(9)	Fe35-1	663	
					St35	1629	1.0308	(18)Seamless									
Grade B	K03005	SPPS42 / STPG410	D3562 / G3454	(16)	St45	1629	1.0408	(18)Seamless	3601	410	BW,S,ER	E42.2	630	(2)(3b)(9)			(3)
					St42-2	1626	1.0040	(18)Welded									

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

ASTM Standard	UNS NO.	KOREA/JAPANESE			GERMAN				BRITISH			BELGIAN			FRENCH		
		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

A 214 Electric Resistance Welded Heat Exchange and Condenser Tubes	K01807	STBH 340 /	D3563 / G3461	(24)	St37-2	1626	1.0036	(3b)ERW Only	3606	ERW30	D37-1	1629	(3b)	TS34e	A49-245
		STB 35													
		STBH 410 /	D3563 / G3461	(24)											
		STB 42													
		STBH 510 /	D3563 / G3461	(24)											
		STB 52													

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		
G3454	STPG370 (STPG38)	C	A135	Gr A	C	3601	ERW360	C	1626	St37.0	C	A49-112	TS27b	C	559	TS4	C	C002	
			A587	-	C	"	S360	C	1629	St37.0	C	A49-141	TS37a	C	2604/2	TS4	C		
										17172	StE210.7	C	A49-142	TS37a	C	2604/3	TW4		C
													"	TS37b	C				
													A49-150	TSE235	C				
													A49-212	TS37c	C				
													A49-242	TS37c	C				
													A49-250	TAE24a	C				
												A49-400	TSE220	C					
	STPG410 (STPG42)	C	A135	GrB	C	3601	ERW410	C	1626	St44.0	C	A49-112	TS42b	C	559	TS9	C		
			A524	-	C	"	S410	C				A49-141	TS42b	C	2604/2	TW9	C		
													A49-212	TS42c	C	2604/3	TW9	C	
													A49-242	TS42c	C	3183	E24-1	C	
													A49-250	TSE26b	C	"	E24-2		
												A49-400	TSE250	C					