

ASTM A53 -89a/ASME SA53 PIPE STEEL, BLACK AND HOT DIPPED ZINC COATED WELDED AND SEAMLESS

This standard is issued under the fixed designation A 53; 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. This specification has been approved for use by agencies of the Department of Defense to replace WW-P-404. 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 seamless and welded black and hot-dipped galvanized steel pipe in NPS 1/8 to 26 (Note 1), inclusive, with nominal (average) wall thickness as given in Tables X2.2 and X2.3. Pipe having other dimensions (Note 2) may be furnished provided such pipe complies with all other requirements of this specification.

NOTE 1A The dimensionless designator NPS (nominal pipe size) has been substituted in this standard for such traditional terms as "nominal diameter," "size," and "nominal size."

NOTE 2AA comprehensive listing of standardized pipe dimensions is contained in American National Standard ANSI B30.10.

1.2 Pipe may be furnished in the following types and grades:

1.2.1 Types F A Furnace-butt welded, continuous welded,

1.2.2 Types E A Electric-resistance welded, Grades A and B, and

1.2.3 Types S A Seamless, Grades A and B.

NOTE 3 A See Appendix X1 for definitions of types of pipe.

1.3 Pipe ordered under this specification is intended for mechanical and pressure applications and is also acceptable for ordinary uses in steam, water, gas, and air lines. It is suitable for welding, and suitable for forming operations involving coiling, bending, and flanging subject to the following qualifications:

1.3.1 Type F is not intended for flanging.

1.3.2 When Types S and E are required for close coiling or cold bending, Grade A should be specified. This provision is not intended to prohibit the cold bending of Grade B pipe.

1.3.3 When pipe is required for close coiling, this should be specified on the order.

1.3.4 Type E may be furnished either nonexpanded or cold expanded at the option of the manufacturer. When pipe is cold expanded, the amount of expansion shall not exceed 1/2 % of the outside diameter pipe size.

1.4 The values stated in inch-pound units are to be regarded as the standard. The metric equivalents may be approximate.

1.5 The following precautionary caveat pertains only to the method portion, Section 9, 10, 11, 12, 13, and 14, of this specification: This standard does not purport to address all of the safety problems, 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.

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

ASTM STANDARD	UNS NO.	KOREA/JAPANESE			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 53 Welded and Seamless Steel Pipe																				
Grade A	K02504	SPPS38 / STPG370	D3562 / G3454	(16)	St 37.2	1626	1.0036	(18) Welded	3061	320	BW,S,ER	E 37.2	630	(2) (3b) (9)			(3)	Fe 35-1	663	
					St 35	1629	1.0308	(18) Seamless												
Grade B	K03005	SPPS42 / STPG410	D3562 / G3454	(16)	St45	1629	1.0408	(18) Seamless	3601	410	BW,S,ER	E 42.2	630	(2) (3b) (9)			(3)			(3)
					St42-2	1626	1.0040	(18) Welded												

JIS Number and Corresponding Foreign Standards

JIS			ASTM			BS			DIN			NF			ISO			Index Number
Std.No	Grade	Type	Std.No	Grade	Type	Std.No	Grade	Type	Std.No	Grade	Type	Std.No	Grade	Type	Std.No	Grade	Type	
G3452	SGP	C	A53	Type F	C				1615	St 33-2	C	A49-145	TS34-1	C	65	TW	C	C001
									2441	St33-2	C	A49-146	TS334-a	C	559	TWO	C	