



Coffee Break Training - Fire Protection Series

Standpipe Systems: Steel Pipe Standards for Standpipe Systems

No. FP-2014-6 February 11, 2014

Learning Objective: The student will be able to identify the minimum materials and dimensions for steel pipe used in fire protection standpipe systems.

Fire protection standpipe systems typically are manufactured from steel because of its strength and durability. National Fire Protection Association (NFPA) 14, *Standard for the Installation of Standpipe and Hose Systems* provides material and assembly guidance.

NFPA 14 includes the following material standards for steel pipe:

Pipe Materials and Standards

Material	Standard
Ferrous (Iron) Pipe	
Ductile Iron Pipe, Centrifugally Cast, for Water	AWWA* C151
Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges	AWWA C115
Electric-Resistance Welded Steel Pipe	
Standard Specification for Electric-Resistance Welded Steel Pipe	ASTM** A 135
Welded and Seamless Steel Pipe	
Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use	ASTM A 795
Standard Specification for Pipe, Steel, Black & Hot-Dipped, Zinc-Coated, Welded & Seamless	ASTM A 53
Welded and Seamless Wrought Steel Pipe	ANSI B36.10M†

* American Water Works Association

** American Society for Testing and Materials

† American National Standards Institute



In addition to suffering corrosion from the weather, this Class I manual standpipe outlet is missing its threaded adapter and protective cover. (See Coffee Break Training FP-2012-36 for inspection guidance.) (Photo/Byron Blake)

Minimum Steel Pipe Wall Thicknesses*

Pipe and Fittings	Standpipe Size	Wall Thickness	Standpipe Size	Wall Thickness
	(in.)	(in.)	(mm)	(mm)
Welded or Roll-Grooved Pipe and Fittings	≤5	Schedule 10	127	Schedule 10
	6	0.134	150	3.40
	8	0.188	203	4.78
	10	0.188	254	4.78
Threaded and Cut Groove	≥8	Schedule 30	203	Schedule 30
	<8	Schedule 40	203	Schedule 40

* For standpipe operating pressures up to 300 psi (20.7 bar)

Where corrosive conditions exist or piping is exposed to the weather, corrosion-resistant types of pipe, tube, fittings, and hangers or protective corrosion-resistive coatings should be used.

For additional information on standpipe systems, review past Coffee Break Training items at http://www.usfa.fema.gov/nfa/coffee-break/issue_index.shtm.



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