PLAINTIFF'S EXHIBIT
JMMC-244

Division Headquarters
December 28, 1961
PDA # 54

C O N F I D E N T I A L

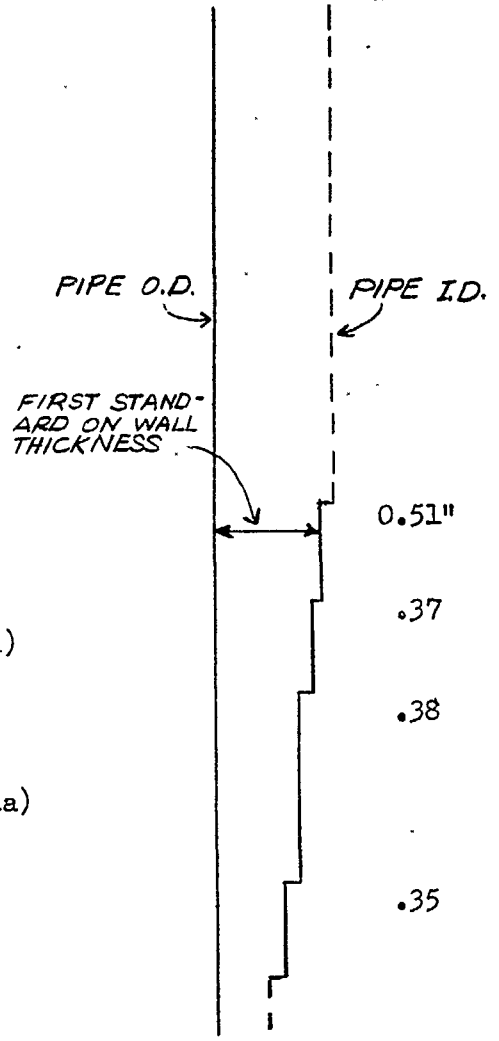
TO: 322-S, 321-S, 12, 1071

PERSPECTIVE

It is salutary we feel, to step back from the heat and action of the day's battle and view your adversary long range. Often it is revealing because points of vulnerability sometimes stand out quite clearly.

The service record of cast iron pipe in the past and the promise of future service life can be "appreciated" in practical perspective when one reviews a simple chronological listing of Time vs. Events that illustrate the evolution of cast iron pipe. Notice the trend in wall thickness.

TIME	EVENT	WALL THICKNESS	CLASS 150 6"	12"	24"
Circa 1664	Versailles, France Installation.				
" 1803	First cast iron laid in U.S. in Philadelphia.				
" 1850	Vertical pit casting started in U. S.				
" 1881	American Water Works Association formed.				
1908	First AWWA Specification covering Pit Cast Pipe				
1924	Centrifugal casting started in U.S. on production basis		0.51"	.68"	1.04"
1927	Federal Specification covering centrifugal cast pipe (WW-P-421)		.37	.50	.76
1952	ASA Specifications covering centrifugal cast pipe		.38	.48	.73
1955	Federal Specification (WW-P-421a) changed to agree with ASA				
1957	Cast Iron pushing higher strength metal (21/45)		.35	.41	.68
Present	Rumor about Ductile Iron				



Corrosion of Cast Iron of Various Compositions

"The many experiments on a laboratory scale, using agitated water as the corroding agency resulted in the conclusion that all cast iron of compositions usable practically in cast iron pipe for water and gas--that is, capable of being cut, drilled and tapped--corroded at substantially the same rate, so that the problem of preventing corrosion remained one of protection rather than composition of iron."

(Quotation from ASA - A21.1 - 1957 "Manual for Computation of Strength and Thickness of Cast Iron Pipe").

Observations

1. Standardized wall thicknesses have been in use for only the past 54 years. Wall thicknesses of pipe before 1908 may have been much thicker.

2. Cast Iron Specifications have permitted a 25 to 30 per cent reduction in wall thickness (depending on size) from pit cast to present ASA thicknesses.

3. Cast Iron pipe as supplied today (centrifugal casting) enjoys an actual service record of 38 years (since 1924) in the U. S. and not 100 years plus as suggested in advertising. (note Transite dates from 1930).

4. In view of the comment on corrosion, it is doubtful that today's cast iron pipe will provide a similar long service record (on the average) as pipe of the 1800's has provided.

Place this in TR 200-A under Competition.

O. A. WIRSIG

OAW/bgs

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