

Firewater Piping Specification - Ductile Iron

PRESSURE-TEMPERATURE RATINGS (0.000" Corrosion Allowance)

PIPE MATERIAL Ductile Iron

Temp.C 0 to 66
Temp.F 32 to 150

Max. Hydro.
Test Press.

SERVICE
Firewater (1)

Press. psig 250

375 (minimum hydro.=200psig. Minimum hold time
per NFPA 24 is 2 hours for domestic US locations)

FLOW C=140 (Hazen-Williams)
COEFFICIENT

JOINT See Table 1
DEFLECTION

INSTALLATION Installation of Ductile Iron Water Mains
METHODS and their appurtenances, ANSI/AWWA C600-87

PIPE 4 to 12 Ductile Iron, Restrained Push-on Joint, in accordance with
(2,3,4,7) ANSI/AWWA C151/A21.51, Class 350, standard cement mortar
 lining per ANSI/AWWA C104/A21.4, Gaskets per ANSI/AWWA
 C111/A21.11.

14 to 24 Ductile Iron Restrained Push-on Joint, in accordance with
ANSI/AWWA C151/A21.51, Class 250, standard cement mortar
lining per ANSI/AWWA C104/A21.4, Gaskets per ANSI/AWWA
C111/A21.11.

ELBOWS 4 to 24 ELL (11-1.4, 22-1/2, 45, 90), POxPO, DI, ANSI/AWWA
(2,3,4,7) C153/A21.53, Gaskets per ANSI/AWWA C111/A21.11, cement
 lining per ANSI/AWWA C104/A21.4.

TEES 4 to 24 Tee, POxPO, DI, ANSI/AWWA C153/A21.53, Gaskets
(2,3,4,7) per ANSI/AWWA C111/A21.11, cement lining per
 ANSI/AWWA C104/A21.4.

TIE-INS 4 to 24 MJ Solid Sleeve, Short, DI, ANSI/AWWA C153/A21.53
(5,6) or ANSI/AWWA C111/A21.11, w/Gaskets, Bolts & Ductile
 Iron Retainer Glands, cement lined per ANSI/AWWA
 C104/A21.4.

FLANGE 4 to 24 Flange Adapter, CL125# FF Flange one end x plain end
ADAPTER w/Bevel, ANSI/AWWA C110/21.1, cement lined per
(4,7,8) ANSI/AWWA C104/A21.4.
4 to 24 Flange X Bell Adapter, CL125# FF Flange x Push-on bell
ANSI/AWWA C110/21.1, cement lined per ANSI/AWWA C104/A21.4.

NOTES

- 1) All systems should be flushed in accordance with the following minimum flow rates are preferred. NPS 4-400 gpm (25dm /sec), NPS 6-900 gpm (57 /sec), NPS 8-1600 gpm (220dm /sec), NPS 14 and larger-4500 gpm (284dm /sec).
- 2) Gaskets for Ductile Iron Pipe and Fittings to be furnished with the pipe and fittings - packed separately.
- 3) Gasket Lubricant to be compatible with gasket material and furnished by pipe supplier.
- 4) Typical corrosion protection for Ductile Iron Piping Systems, all pipe, valves, fittings and appurtenances below grade to be encased in loose polyethylene wrap or tubes per ANSI/AWWA C105/A21.5.
- 5) All Mechanical Joint bolts and nuts to be high-strength, low alloy Corr-Ten or equal.
- 6) Mechanical Joint Retainer Glands to be used on all M.J. connections in restrained systems. Retainer Glands to be Mega-Lug Retainer Glands, by EBBA Iron or equal.
- 7) Piping, fittings and accessories having Factory Mutual/Underwriter's Laboratory (UL/FM) approval are preferred. Use of materials or components not bearing such approval should be reviewed for suitability by Fire Protection Engineer.
- 8) All Flange Connections to be compatible with Class 125, flat faced per ANSI B16.1