

FUSIBLE PVC® PIPE: SIMPLICITY AND SAVINGS IN OPEN-CUT

Overview

As a recent AWWA report, "Buried No Longer: Confronting America's Water Infrastructure Challenge," states that restoring and expanding the existing water systems in the United States will cost at least \$1 trillion over the next 25 years. Fusible PVC® pipe is a commonly specified material for trenchless installations, but an increasing number of utilities, engineers and contractors are harnessing the benefits of fused PVC pipe for open-cut projects as well.

PVC pipe accounts for more than 70 percent of the new water pipelines installed in the U.S. The steady growth in the use of PVC pipe is due to its combination of high strength, light weight, corrosion resistance, and proven performance over the past 50 years in both potable water and wastewater applications. In open-cut applications, unrestrained bell-and-spigot PVC pipe is commonly used with thrust blocking to prevent joint separation caused by thrust forces at horizontal and vertical offsets, valves and fittings. With increasingly tight utility corridors, the use of thrust blocks is frequently being replaced with metallic bell-restraint hardware meeting ASTM 1674. To meet the standard of care for reasonable restraint life in corrosive soils more protection is required, including polyethylene bagging, application of denso-mastic and petrolatum tape, as well as harness coatings and the use of 300 series stainless steel hardware.

As an alternative to bell-restraints and associated corrosion protection requirements, Fusible PVC® pipe provides a fully-restrained (ASTM F1674 restraint compliant) pipeline that saves on overall installation costs, increases production rates, and provides a complete, restrained pipe section offering easy integration into a bell-and-spigot PVC pipe system. With more than one million feet of Fusible PVC® pipe installed via open-cut, the advantages are clear.

Fusible PVC® Pipe Advantages

Increased Production Rates: Pre-fused pipe strings can facilitate higher daily production rates. In appropriate site and soil conditions, Fusible PVC® pipe coupled with high-volume trenching equipment can compress schedules.

Ease of Reconnection with bell-and-spigot PVC: Fusible PVC® pipe has identical dimensionality and uses the same reconnection hardware for easy integration with bell-and-spigot PVC.

Safer Work Environment: Fusible PVC® pipe installation reduces in-trench work. A two-person crew can install Fusible PVC® pipe without a trench box.

Simplifies Corrosion Protection: No cathodic protection required and no metallic components.

Provides Design Alternatives: Fusible PVC® pipe can "sweep" through some alignments, eliminating additional fittings, deflection couplings, and restraints.

Intrinsically Restrained Joint: Meets ASTM F1674 and helps maintain joint integrity during soil settlement and ground shift.

Chemical Resistance: Superior permeation resistance to hydrocarbon contaminated soils.

Closed System with Lower Long-Term Ownership Costs: Eliminates infiltration, ex-filtration and root intrusion in gravity sewers, reducing long term treatment and maintenance costs. Reduces treated water loss in potable water distribution systems.



INSTALLATION PROFILE: OPEN-CUT
FUSIBLE C-900® | FUSIBLE C-905® | FPVC®



SFO Airport: 7,150 LF of 30", 24", 18" - 8"



West Palm, FL: 1,080 LF of 8" & 6"



Williston, ND: 16,900 LF of 24" & 20"



Spanish Fork, UT: 1,600 LF of 30"



De Beque, CO: 22,230 LF of 24" & 18"



Tollette, AR: 9,510 LF of 8"



Eastvale, PA: 1,044 LF of 24"



Lawrence, KS: 9,500 LF of 16" & 12"



Rio Rancho, NM: 27,265 LF of 16" & 10"



Schofield Barracks, HI: 51,210 LF of 24", 18", 16", 14", 12", 10", 8", 6" & 4"



Minden/Carson City, NV: 28,200 LF of 36", 30", 24" & 16"



Butler, IN: 1,400 LF of 10"

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San Diego, CA: 2,962 LF of 14", 8", 6" & 4"



Raymore, MO: 2,100 LF of 24"



Sacaton, AZ: 2,860 LF of 16" & 12"



Cloverdale, CA: 1,884 LF of 16" & 8"



Fort Collins, CO: 3,285 LF of 24"



Louisville, KY: 627 LF of 30"



Savannah, GA: 2,790 LF of 20"



St. Clair, MI: 8,300 LF of 4"



Sinking Springs, PA: 5,560 LF of 16"



Dallas, TX: 2,378 LF of 12", 8" & 6"



Warwick, RI: 15,162 LF of 18" & 12"



Apra Harbor, Guam: 2,812 LF of 14" - 4"

Underground Solutions, Inc. provides infrastructure technologies for water, wastewater and power cable conduit applications. Underground Solutions' Fusible PVC® pipe products, including Fusible C-900®, Fusible C-905® and FPVC®, utilize patented technology to produce a fused monolithic, fully-restrained, gasket-free, leak-free piping system ideal for trenchless (horizontal directional drilling, pipe bursting and sliplining) or conventional "open-cut" installations and are available in 4-inch to 36-inch diameters. The combination of standard fittings and lower weight with higher flow for a given pressure class versus other thermoplastic pipes ensures that Fusible PVC® pipe brings greater economy to most pipeline projects.



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