Project Profile: Baltimore Tunnel

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US Pipelining LLC Completes Major Cured-In-Place-Pipe (CIPP) Restoration Project of Baltimore Harbor Tunnel Fire Suppression System.

Baltimore Tunnel Receives Class IV Structural CIPP Restoration to 14,000'/LF of High-Pressure Fire Suppression Lines

Philadelphia, PA – US Pipelining, LLC., an emerging leader in Cured-In-Place-Pipelining solutions (CIPP), announces the completion of project for the State of Maryland, Maryland Transportation Authority which included the Rehabilitation of the Baltimore Harbor Tunnel Fire Suppression Standpipes. The project called for the structural restoration of 14,000' linear feet of pressurized standpipes within the Harbor Tunnel making up the tunnel's fire suppression system. The project, which involved two phases including both the north and southbound chambers, was completed in September, 2020.

The 1.4-mile, four-lane Harbor Tunnel opened in November 1957. Designated I-895, the facility crosses under the Patapsco River and connects major north/south highways and many arterial routes in Baltimore City's industrial sections. Considered an "engineering marvel" when dedicated in 1957, the tunnel was the 5th longest underwater vehicular tunnel in the world.

"The MDTA specifications called for a Class IV structural restoration of their fire suppression lines which operate at a pressure of 250 PSI", states Jeremy Bowman, President of US Pipelining. "The system required CIPP materials able to meet very high tolerance levels. Working with our manufacturing partner, MTC, we were able to deliver a world class pressure rated Cured-In-Place lining product."

The Glass-Reinforced-Pipe lining system, (GRP) was designed for the Harbor Tunnel project using materials from Manufactured Technologies Corporation, (MTC) of Chesterfield, MO., a subsidiary of Aegion. To meet operating pressure requirements a project-specific liner was designed and manufactured by MTC using two layers of glass reinforcement.

"This was an extremely technical project from both a materials and construction viewpoint", states Mark Wetzel, Senior Director of MTC. "A Class IV restoration with high operating pressure requires a great deal of advanced planning. To complicate the installation further, the line locations are within the tunnel bore chambers and are extremely difficult to access," continued Wetzel. "The conditions are far from ideal, and require experienced CIPP contractors such as US Pipelining."

Based in Langhorne, PA, U.S. Pipelining, LLC is a leading U.S. provider of pipelining services, including large diameter projects for storm sewer, sanitary sewer, pressure pipe, under-slab lining, and vertical pipe lining for industrial, municipal, commercial and military applications.

Manufactured Technologies Corporation, Chesterfield, MO, specializes in the manufacture of high-quality CIPP & PPL liners available for wet or dry delivery. They can accommodate water or air inversion and handle the demands of steam curing for optimal installation and long-term performance.

Project Name
Baltimore Harbor Tunnel
Tunnel Fire Suppression System

Application:
Structural Restoration 14,000'/LF
High Pressure Fire Suppression Standpipes
Operating Pressure 250PSI

Method:
ASTM F-1216 Cured-In-Place Pipe
Reinforced Pressure Pipe Lining (RPP)
ASTM F-1473 Pulled-In-Place Steam Cure
Epoxy Resin

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