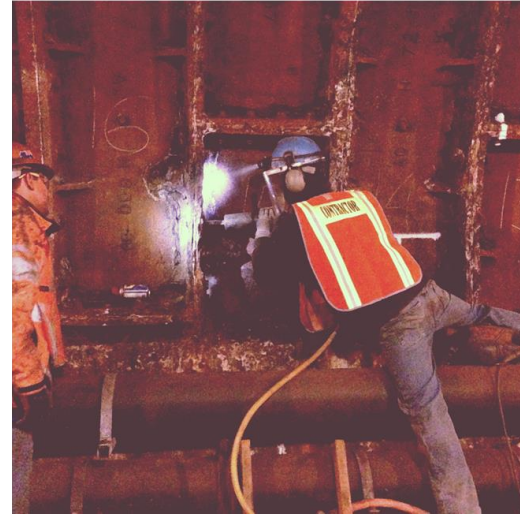


2014 NYCT Montague Tube Rehabilitation



Highlights

- Selected sections of tunnel treated in 6 months
- Use of patented injectable bolts to deliver NOH2O® through cast iron tunnel liner joints
- Exceeded client specified dryness criteria

Project Overview

The Montague Tunnel, opened to service in 1920, is a New York City Subway tunnel the under the East River between Manhattan and Brooklyn. The R-Line uses the tunnel at all times, the N-Line uses it during late nights, and during rush hours, several W-Line trains per day in each direction use the tunnel.

The Tunnel is approximately 12,000 LF long, includes elements of cast-in-place liner as well as cast iron segments with an inner cast-in-place concrete protective lining. Leaks in the cast iron segments were addressed by replacing standard bolts from the cast iron segments with patented, stainless steel injectable bolts. These bolts were injected with NOH2O® to seal the segment joints. The NOH2O® injected through the bolts equally sealed adjacent leaks in the segment joints.

Strategy

Sovereign engineered, manufactured and tested injectable replacement bolts connecting the flanges of the tunnels cast iron segments.

Results

The application of injectable replacement bolts of this magnitude was the first use of this type of water sealing method for a NYCT owned and operated facility. This method has been utilized at several other similartype tunnels.