CASE STUDY
SOIL STABILIZATION
LEAK SEAL

Stormwater System Void Fill

Clearwater, Florida public works administrators faced a critical stormwater infrastructure issue. A junction box was leaking through multiple pipe penetrations, compromising system integrity. City officials invited local infrastructure repair specialists to address the situation. This project showcases an innovative solution to a common urban infrastructure challenge, enhancing stormwater management capabilities for municipalities.

Powerful Polymers

The technicians chose AP Fill 700 as the primary repair material. This polymer offers several advantages for stormwater system repairs. Firstly, it's ideal for point grouting, allowing for precise application. Additionally, the polymer features a quick reaction time, enabling rapid repairs. Perhaps most importantly, AP Fill 700 excels at filling voids. These voids, created around the junction box due to ongoing leaks, needed to be addressed to ensure a comprehensive repair.

Physical Properties - Cured

AP Fill 700		
Tensile Strength	(ASTM D-1623)	45 psi (3,102 mb)
Tensile Elongation	(ASTM D-1623)	2.9%
Shrinkage	(ASTM D-1042/D-756)	Negligible
Compressive Strength (with fine sand)	(ASTM C-39)	2,050 psi (141,343 mb)
Pre-activated mix viscosity	110 -130 cP	

Properties will vary depending on application conditions.

Painless Procedures

Injection rods were utilized to deliver the polymer solution. These rods were pushed down from the surface to the depth of the leak, ensuring targeted application. As the injections progressed, they served multiple purposes. The polymer filled existing voids, stabilized the surrounding roadbed, and effectively cut off the leaks. To ensure complete coverage, the injection rods were raised in stages. At each stage, additional injections were performed. This methodical approach guaranteed thorough treatment of the affected area.

Rapid Results

The repair operation proved remarkably efficient. In just two hours, the entire job was completed. More impressively, the leaks were sealed immediately upon application of the polymer. This rapid resolution minimized disruption to the city's infrastructure and daily operations. As a result of this swift and effective repair, city administrators expressed high satisfaction with the outcome.

Alchatek

About Alchatek

Alchatek is an international leader in the manufacture and supply of chemical grouts and construction products for Geotechnical, Leak Seal, and Seawall Repair applications. Providing solutions from its headquarters in Tucker, Georgia and its manufacturing facility in Reno, Nevada, Alchatek specializes in advanced construction technologies for sealing leaks, stabilizing soils, lifting concrete, and protecting infrastructure and seawall structures. To best serve its customers, Alchatek is organized onto three divisions:

The Leak Seal Division combines a full system offering of polymer chemical grouts and equipment with perhaps the most experienced technical team in the industry. It specializes in preventing water ingress through concrete infrastructure including parking garages, culverts, basements and foundations, and sewer manholes.

The Geotechnical Division offers a complete line of single component products for soil stabilization as well as two component polyurethane foams for concrete lifting, void filling, and stabilization of infrastructure. This includes lifting sunken structures such as warehouse floors, back into place.

Seawall Repair Network® is the only national network of certified contractors in the repair, preservation, and protection of Seawalls waterfront barriers. Its proprietary methods and materials are environmentally friendly and safe for use in all marine environments and provide a non-destructive solution for seawall repair at 80% less than the cost of replacement.

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