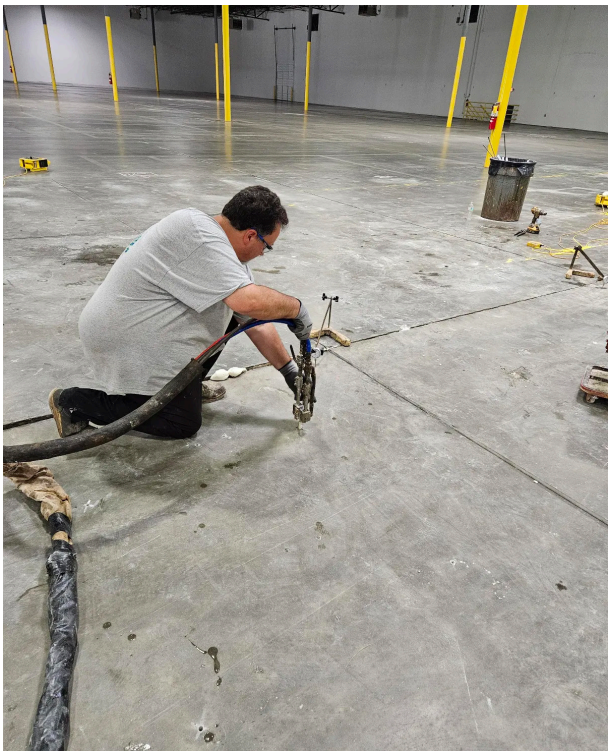
CASE STUDY
SLAB LIFTING

Warehouse Concrete Leveling

Initial Assessment

Prologis, a real estate and supply chain logistics company, faced significant challenges with their large warehouse, where uneven concrete slabs ranged from 0.5 to 2.5 inches below level. This unevenness led to foundation instability, wall cracking, and compromised usability of the facility. A local slab lifting company was contracted to perform void filling and slab lifting to restore the warehouse floor.



Proposed Solution

The technicians recommended using AP Lift 475, a two-component polyurethane foam designed for lifting and stabilizing concrete slabs. This material was selected for its high strength, controlled expansion, and ability to effectively fill voids while lifting sunken slabs to the desired elevation. The approach included using a large concrete cutting machine to clear joints, ensuring precise preparation without extensive disruption to warehouse operations.

Procedures

1. Established a grid pattern for injection points based on the extent of slab settlement on the warehouse floor.
2. Used a large concrete cutting machine to clear joints, ensuring unobstructed access for injections.
3. Drilled holes through the concrete slabs at predetermined injection points to access voids beneath.
4. Injected AP Lift 475 polyurethane foam into the drilled holes to fill voids and lift slabs, monitoring elevation in real-time to raise slabs up to 2.5 inches.
5. Performed multiple injection passes in areas with significant settlement to ensure even lifting.
6. Patched drilled holes to restore the surface integrity of the concrete slabs.

Results

The slab lifting project at the warehouse was a complete success. The application of AP Lift 475 effectively filled voids and raised all uneven slabs to a uniform level, eliminating foundation issues and wall cracking. The restored warehouse floor enhanced the facility's functionality, enabling the real estate company to rent out the space, thereby maximizing its commercial potential.

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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