



Demineralizer Floor Repair

PROBLEM:

A Mid-West Utility had installed an “acid resistant” tile floor in their demineralizer room to resist attack from concentrated sulfuric acid and caustic spills. In 1983, much of the tiled floor exposed to chemical spills was failing due to the attack on the grout and subsequent undercutting which resulted in release of the tile and attack on the concrete subfloor. Water leaking through the floor also added to the problem.

SOLUTION:

The entire floor was high pressure water washed to remove any chemical deposits, loose grout and old concrete. Grit blasting was not allowed in the area to profile the “good” tile to be left in place, but the excellent bonding strength of the **Chemcrete Flooring** was deemed sufficient to hold it onto the tiled surfaces. **Chemcrete Flooring** was therefore used to repair and reprofile the floor areas where the tile was missing and coat the surface of the remaining tiled areas (60-120 mil DFT). Trowels and “no nap” rollers were used to obtain a flat finish.

In the acid areas, a single 30 mil coat of **HPL-4320** was applied over the **Chemcrete Flooring** including the inside and outside of the sulfuric acid tank. The caustic area was lined with 30 mils of **HPL-2201**. The areas away from the acid and caustic tanks did not require any additional protective linings as the **Chemcrete Flooring** has sufficient chemical resistance to resist any occasional chemical contact.

RESULTS:

The project was completed on schedule, and all corrosion and water damage was repaired, and the acid and water leaking was stopped.

CURRENT STATUS:

The repair is still in excellent condition. Based on this performance, all the damaged demineralizer floors throughout the Utility system have been repaired using these **DUROMAR** products.

COMMENTS:

DUROMAR products were selected for this application because of their overall chemical resistance, ease of application, and the safety offered to both the applicators and plant personnel due to the solvent and carcinogen free formulations used by **DUROMAR**.

These products were selected due to the extensive damage existing at that time. For areas less damaged but needing complete corrosion protection, **DUROMAR HPL 1301** and **HPL 3320** could be used.



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