



CASE HISTORY



BEFORE



AFTER

MICROSILICA CEMENT LINERS Prove Successful in Sanitary Sewer Manholes

The Best Cement Liner for Repairing Sewer Manholes Comes to Houston

America's Sewer Manholes are failing faster than they can be repaired. In a recent study it is estimated that more than \$40 billion dollars is needed to restore the nation's wastewater collection system. Since early 1995, both the municipal manager and the wastewater engineer are coming to face this crisis in large cities and small towns alike. It's because of this problem that new, better and improved methods have been adopted to perform repairs on these structures.

In the spring of 1989, the City of Houston's Technical Engineering Section leaders began working with local business, to identify, analysis and repair the structural reliability of the wastewater system. Later, this work and a practical program grew to become the country's largest repair market for the next 10 years. As a result, their desire to use trenchless methods inspired the use of a non-conventional rehabilitation technique and our **RELINER MSP™ CEMENT**. Today, this cement and shotcrete repair method have gained in popularity and evolved to replace the more dominant destructive dig and replace alternatives. The capital investment in Houston was divided about 19.5% in manhole rehabilitation and 58% in pipeline related maintenance.

More recently, the Reliner MSP™ Cement and their successful expectations is the current solution for restoring structural integrity and protecting the manhole against corrosion. The Reliner MSP™ Cement contains a dry microsilica powder admixture (used in Europe for 50 years) that produces a dense concrete with improved dimensional stability, compressive and flexural strengths, lower permeability and increased resistance to chemical attack. This packaged high strength cement contains a blend of finely divided cementitious and pozzolanic materials, a dry microsilica-based powder ingredient and polypropylene fibers to reduce cracking and other additives that impart better workability.

Time tested for 15 years and 5MM ft in service nationwide, the microsilica cement liner has become the industry's newest standard for making structural repairs and stopping water infiltration in manholes, sewerage environments, lift station chambers, pipelines and joints, and industrial containment applications.

For information call 888 278-1337 or visit our website at www.standardcement.com.

