

SAUERBROSCH

Protection and Restoration of Municipal Wastewater Infrastructures



SAUEREISEN: MATERIAL SPECIALISTS SINCE 1899

Sauereisen's roots run deep in the field of protective linings and restorative materials. We bring decades of experience in preserving assets of the wastewater industry. Our tradition of innovation, dating to 1899, continues today.

Our mission is to deliver quality products and services that add value to the stakeholders of municipal & industrial infrastructure. In doing so, we serve facility owners, engineers and contractors relying on dependable solutions to aggressive environments. Ultimately this benefits both taxpayers and the environment.

At Sauereisen, we're not constrained by a limited scope of technology. Our engineered systems approach to each project distinguishes us. This approach has proven successful in both the collections realm and the treatment arena. Basically, where there are aggressive conditions that threaten the longevity of concrete, brick or steel infrastructure, there is at least one Sauereisen system to offer protection...and security.

Our solutions aren't limited to any single chemistry or method of application. This is the type of credibility that lasts generations.

Stopping Water Infiltration and Preventing Corrosion

Whether it's restoration or new construction, Sauereisen has the substrate repair materials and corrosion barriers for your specific application. Likewise, we provide products to solve water inflow and infiltration (I&I) problems. Sauereisen's polymer linings are the proven solution to combat Microbiologically Induced Corrosion (MIC). From collection systems to treatment facilities, our systems have a successful, well-established reputation among contractors, municipalities and engineering firms coast to coast.

This lift station in Louisiana has over 20 years continuous service proving the capability of Sauereisen chemical-resistant linings for maintenance applications.



A Specialized, Corrosion-Resistant Lining

Sauereisen's renowned SewerGard™ No. 210 is a unique polymer lining system proven in the field. It is specifically formulated for municipal wastewater environments and offers an economical solution to MIC.

SewerGard™ resists high concentrations of sulfuric acid and treatment chemicals due to its very low permeability. It also exhibits moisture tolerance allowing it to bond directly to damp concrete.



Sauereisen materials resist sulfuric acid and abrasion that is prevalent in the treatment process.



Patching of voids in new concrete ensures success of the SewerGard lining.

Application Minimizes Downtime

SewerGard™ No. 210 is available in four versions. Each variation is engineered for specific structures and application methodology.

SewerGard™ Sprayable is fiber-reinforced for a high degree of durability. The sprayable formulation allows for quick installation of a single coat of at least 60-mils when applied by standard airless equipment. Ideal for large-scale applications.

SewerGard™ Trowelable is an aggregate-filled epoxy. Its non-sagging consistency makes it the material of choice for vertical and overhead surfaces where access is limited. Standard application thickness is 1/8 inch (125 mils).



Application by spray accelerates production rates, especially for large projects.

SewerGard™ Rotary Spray is a pumpable grade of SewerGard™ specifically designed to line the interior of manholes from street level in less than 20 minutes. SewerGard™ Rotary Spray is typically applied at a thickness of 125 mils using a recommended pump and spincasting nozzle.

SewerGard™ Glaze is a two-component, chemically resistant epoxy to be used as an optional finish coat. This coating forms a smooth surface that is easy to clean and cosmetically appealing. Application is performed by rolling or spraying. May also be used independently as a 20-mil thick lining over steel or concrete.

Restoring Structural Integrity

Where concrete deterioration is severe, structural integrity may need to be restored prior to application of protective lining barriers. Sauereisen's Underlayment No. F-120 and SubstrateResurfacer™ No. F-121 are the ideal substrate repair materials for the job. For patching small bug-holes and minor irregularities, Epoxy Filler Compound No. 209 offers a fast, efficient repair method.

Underlayment F-120 is a fast-setting, high early strength, resurfacing material. It is composed of Portland cement and modified calcium aluminate. Applied by gunite, trowel, or cast-in-place, its benefit is a quick cure devoid of out-gassing which permits a top-coat of SewerGard after five hours. Material selection is dependent upon concrete condition and whether application is on vertical, horizontal, or overhead surfaces.



Sauereisen's substrate repair materials fortify underground infrastructure.

SubstrateResurfacer™ F-121 is a Portland-based, cementitious repair material that is pumpable for a wet-spray application. Applied up to 1/2 inch (250 mils) thick, SubstrateResurfacer™ may be applied at from street level in accordance with the same equipment utilized by SewerGard™ Rotary Spray.



How to Deny I&I

Of course, wastewater collection systems don't have to be depleted by sulfuric acid to require attention. The costs associated with treating the inflow and infiltration of groundwater can be staggering. Sauereisen offers five primary products to reduce I&I.

SewerSeal™ F-170 is a high strength, calcium aluminate-based product to be used as a waterproofing and corrosion-resistant lining for sewage collection structures. This material prevents infiltration and resists mild acids and alkalis on concrete, brick, and steel structures. SewerSeal™ is designed for rotary and straight shot spray applications and can be applied at various thicknesses in one pass.

InstaPlug™ F-180 is a rapid-setting, hydraulic water plug material applied by hand for sealing active water leaks. It also fills small voids prior to application of waterproofing, structural repair, or corrosion-resistant barriers.



Manhole ChimneySeal prevents inflow through various joints.

H₂OPruf™ F-190 is a lining applied by brush, spray, or spincaster to prevent seepage of moisture into below grade surfaces. Two 1/16-inch coats will withstand water pressure up to 69 feet of head, and three coats will seal a substrate exposed to 100 feet of water head pressure.

Hydroactive Polyurethane Grout F-370 is a catalyzed hydrophobic injection liquid that expands in the presence of moisture. It bonds tenaciously to wet or dry concrete, effectively

sealing cracks or voids and stabilizing soil erosion.

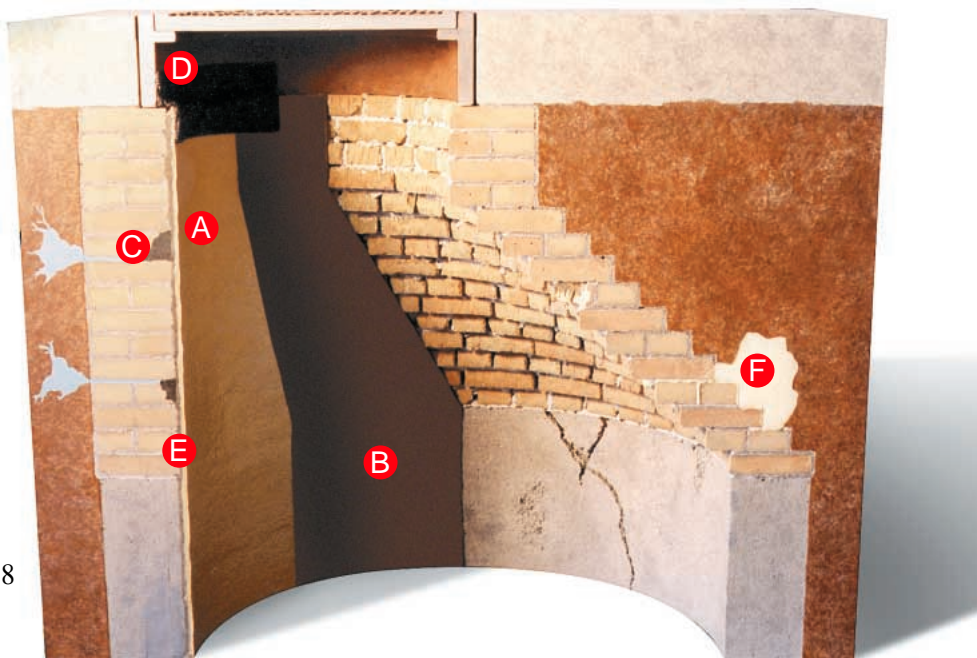
Manhole ChimneySeal™ F-88 is an elastomeric lining composed of fiber-reinforced, asphalt-modified urethane. It is applied by hand onto the chimney sections of manholes to prevent water inflow. As a high solids elastomer, ChimneySeal maintains excellent elasticity and adhesion over a temperature range of -30°F to 250°F. It accommodates environmental stresses in almost all climates.

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Manhole Restoration Solutions

A combination of Sauereisen products are commonly used to restore manholes. This cross-section illustrates:

- A) SewerGard™ 210
- B) SewerSeal™ F-170
- C) InstaPlug™ F-180
- D) Manhole ChimneySeal™ F-88
- E) SubstrateResurfacer™ F-121
- F) Hydroactive Grout F-370



Preparing & Protecting Manholes with Minimal Downtime

Sauereisen has successfully formulated the materials and harnessed the application method to revolutionize manhole repair. Sauereisen's approach is a three phase system by which manholes can be quickly and safely cleaned, rehabilitated and protected with either a cementitious water infiltration barrier or corrosion-resistant

polymer lining. With this system, 8-10 manholes can be cleaned and lined per day; the majority of the work accomplished with minimal entrance into the manhole. This is a tremendous improvement over conventional methods that involve a crew spending up to eight hours a day in one manhole.



Phase I Hydrojetting



Prior to using the Manhole Restoration System, a rapid process of cleaning the entire inside perimeter is available. This phase of Sauereisen's process involves a specialized hydrojetting unit that performs this very function from ground level. The rotation of its hydrojet nozzle utilizing 4,000 to 7,000 psi water pressure cleans and abrades the entire inside surface of a standard 4-foot diameter by 8 to 10 foot high manhole in approximately 15 minutes.

Phase II Substrate Repair/Waterproofing



This phase may involve installation of Substrate-Resurfacer™ to address extensive deterioration. Alternatively, SewerSeal™ is the choice where water infiltration is the primary concern.

Conventional methods require that a worker enter the manhole and apply materials by trowel. This is both time consuming and dangerous. Sauereisen's process involves specialized materials, equipment and a special "spinning nozzle" that allows for application from street level.

Phase III Corrosion Barrier



This final phase involves an application of SewerGard™ 210, the optional chemical-resistant epoxy barrier.

SewerGard™ Rotary Spray is fed through the same specialized pump and nozzle used in Phase II and applied at a thickness of 60-125 mils. This is also done from street level, without anyone having to enter the manhole. As with the previous step, a standard manhole can be coated in approximately 20 minutes.



We've Got You Covered

Consider Sauereisen a
single source of materials for the
Municipal Wastewater Industry.
For corrosion or infiltration, collection
systems or treatment plants,
new construction or restoration,
Sauereisen remains the
"Municipal Authority."

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