



SAUEREISEN

THE ULTIMATE CORROSION CATALOG



**ENGINEERED
SOLUTIONS.**

**ULTIMATE
PROTECTION.**



**125TH
ANNIVERSARY
EDITION**

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PROCESSING FACILITY
Key Lake, Canada



WASTEWATER
TUNNEL
Columbus, Ohio



CENTRAL TUNNEL
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Mexico City, Mexico



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SCRUBBERS
Beijing, China



SULFUR PITS
Jeddah,
Saudi Arabia



NITRIC ACID PUMP
BASES
Moura, Queensland

Sauereisen's manufacturing facilities in North America, Europe and the Pacific Rim provide worldwide product distribution. A global network of agent representatives, in conjunction with numerous pre-qualified Sauereisen applicators, help make our engineered systems work for you.

PROVEN HISTORY

in MATERIAL ENGINEERING



OUR BEGINNING

Sauereisen Cements was founded in 1899 with the introduction of a line of high-temperature inorganic adhesives by C. Fred Sauereisen. In time, the heat and acid resistant properties of the cements suggested expansion into corrosive applications.

Sauereisen Cements first entered industrial markets after modifying its specialty cement formulations to be used as chimney mortars in the power industry. Further developments led to monolithic refractories followed by organic coatings and linings.

SAUEREISEN TODAY

Sauereisen is positioned as an inclusive supplier of corrosion-resistant materials of construction. Our product lines offer engineered solutions for nearly all chemical concentrations, temperature ranges and application methods. We're not content to simply sell you a construction product. We want to provide you the most appropriate chemical-resistant system for each application along with the broadest selection of corrosion-resistant materials anywhere. We continue our tradition of innovation today, as we have **since 1899**.



GOT CORROSION?

We've got you covered.

CAUSES OF CORROSION



Contact with corrosive chemicals or aggressive substances (See below)



Wide temperature variations with extreme heat or cold cycles



Harsh environmental conditions, such as high humidity or pollutants



Microbial activity in wastewater environments



Inadequate or deteriorating protective coatings



High levels of dissolved salts, chlorides, or other contaminants in water sources

COMMON CORROSIVE SUBSTANCES

Ammonium Hydroxide

Hydrochloric Acid

Sulfuric Acid

Nitric Acid

Phosphoric Acid

Sodium Hypochlorite

TYPES OF CORROSION

Erosion

Chemical attack

Galvanic

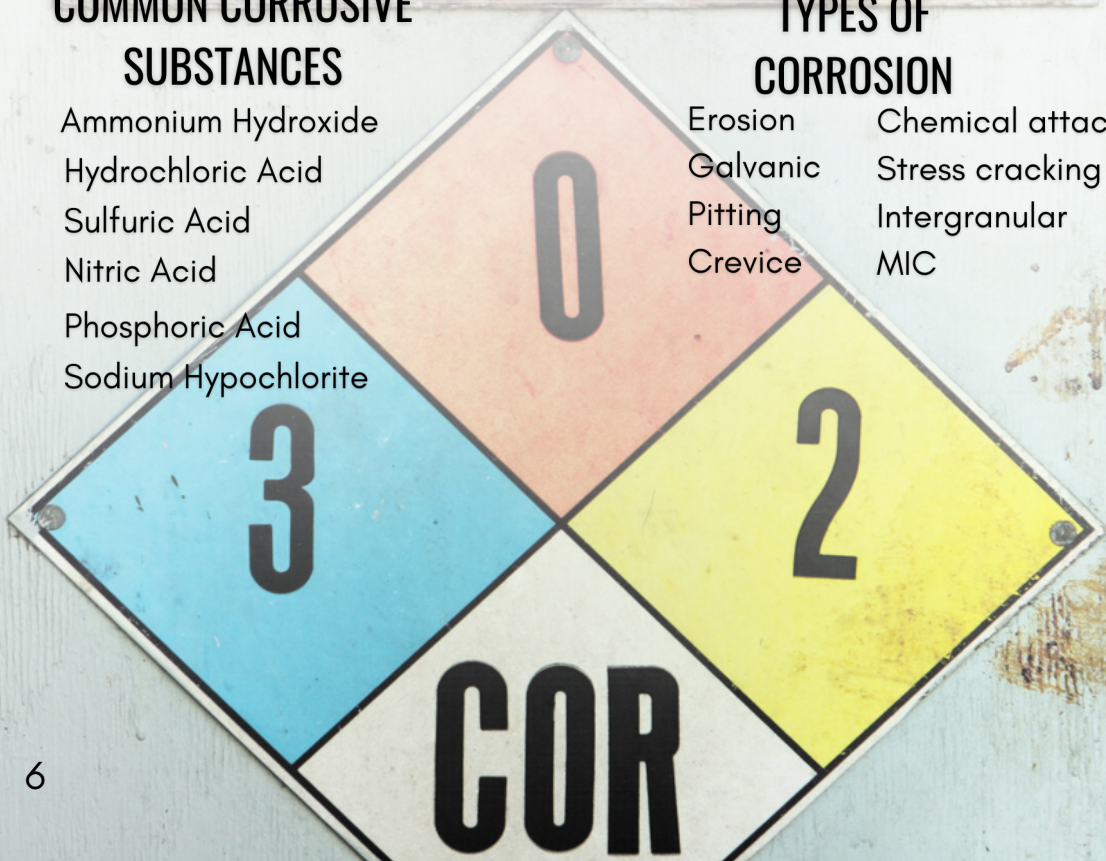
Stress cracking

Pitting

Intergranular

Crevice

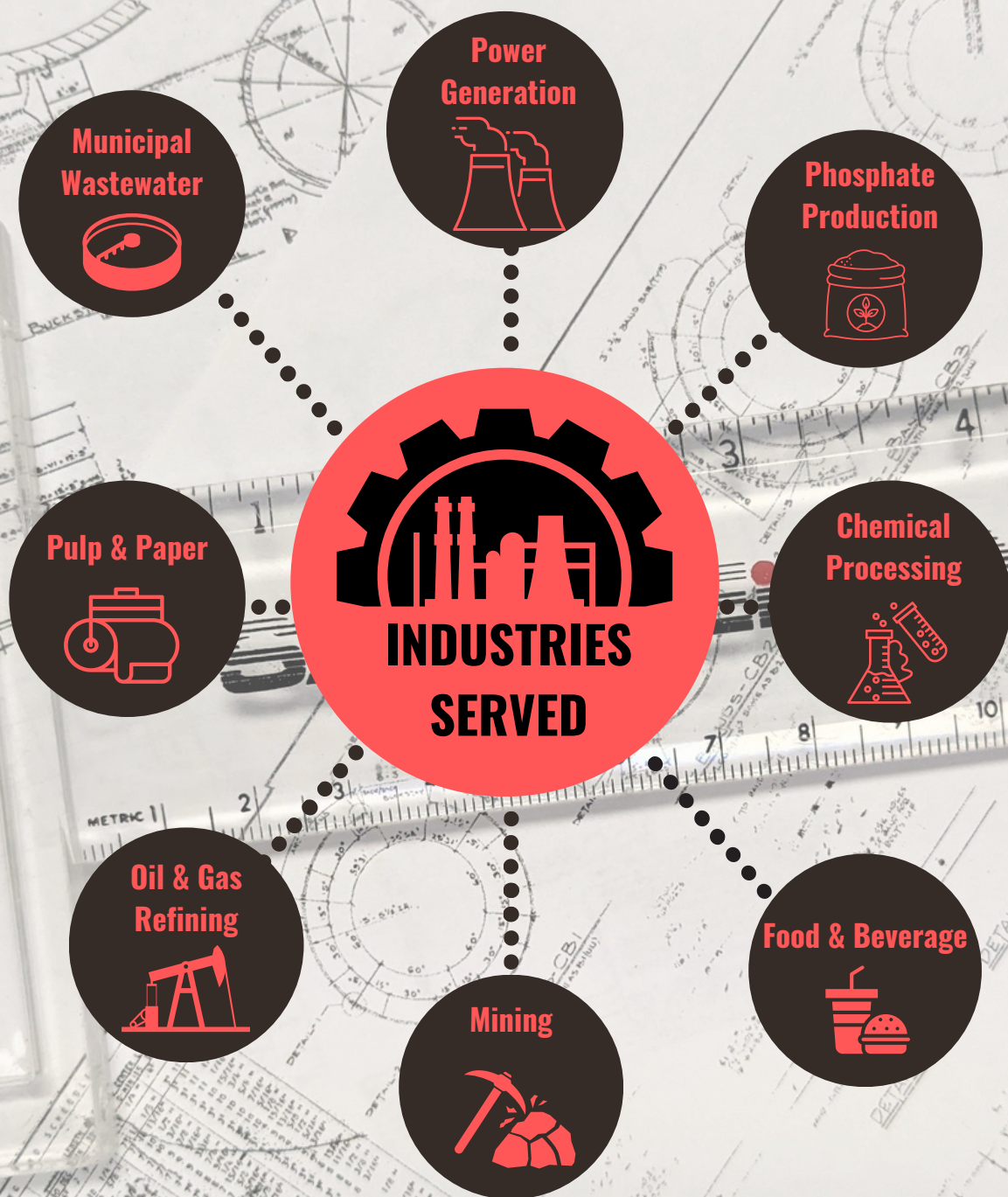
MIC



ECONOMIC DRAIN. ENVIRONMENTAL STRAIN - A Corrosion Crisis

Each year, over **\$2.5 trillion** is spent each year on corrosion repairs globally, a significant portion of which is attributed to environmental contamination. On top of asset losses and operational disruptions, corroded infrastructure can result in chemical leaching as well as soil, water, and air contamination. Addressing this challenge is crucial for owners and operators from both an economic and environmental standpoint. Choosing an adequate corrosion control system **effectively reduces maintenance costs by up to 40%** and minimizes the risk of costly remediation efforts. Explore the imperative role corrosion control plays in protecting assets, safeguarding environmental resources, and optimizing operational efficiency with Sauereisen's engineered solutions.





CorrosionResistant

MATERIAL SELECTION GUIDE*

	Epoxies*	Vinyl Esters*	Silicates	Urethanes
Chemical Resistance	-Acetone -Sulfuric Acid -Water -Sodium Hydroxide -Hydrochloric Acid	-Sulfuric Acid -Water -Sodium Hydroxide -Sodium Hypochlorite	-Benzene -Acetone -Sulfuric Acid -Water -Hydrochloric Acid -Nitric acid	-Acetic acid -Activated sludge -Ammoniums -Boric acid
Temperature Resistance	150°F - 180°F (65°C - 74°C)	350°F - 400°F (177°C - 205°C)	1600°F (871°C)	-40°F - 200°F (-40°C - 93°C)
Flexural Strength	Excellent	Excellent	Excellent	Moderate
Bond Strength	Concrete failure	Concrete failure	N/A	Minimum 300psi
Compressive Strength (@7 days)	up to 21,425psi*	up to 17,700psi*	4,100psi	N/A

*Please consult your local Sales Representative for the most appropriate product line.





SUBSTRATE REPAIR

At Sauereisen, we understand the nuances of intercoat adhesion. We're also sensitive to the urgency of minimizing construction downtime. Our repair materials and underlayments enable substrate repair to proceed rapidly - whether its new construction or rehabilitation. Our products are formulated to exhibit rapid strength development, fast cure, and compatibility with other Sauereisen protective topcoats.

F120 RestoKrete® Underlayment

Fast-curing, high early strength, Portland/calcium-aluminate-based resurfacing material. Available in trowelable, castable, gunite, and fast-set versions. Excellent freeze- thaw durability.

No re-coat window

Topcoat in 5-8 hours

F121 RestoKrete® SubstrateResurfacer

High strength, rapid-set, economical substrate repair material designed for deterioration greater than small voids or irregularities in concrete or brick. Can be spray (wet shotcrete) and trowel applied.

No re-coat window

Rapid application

149 ConoCrete Fast Patch

Fast setting, epoxy system designed for patching cracks and holes. This material provides a fast turn-around and is ideal for use on high traffic areas.

Sets in 2 hours

Skid-resistant

F180 InstaPlug

Rapid setting, hydraulic water plug for sealing active water leaks, filling small voids and special anchoring applications.

Bonds to damp surfaces

No odor

208 RestoKrete® Epoxy Modified Cement

Substrate repair material designed to fill voids and air pockets in concrete and brick substrates.

Moisture tolerant

F370 Hydroactive Polyurethane Grout

Expanding hydrophobic chemical grout for cracks and voids.

Bonds to wet surfaces

20x expansion

209 RestoKrete® Series (209, 209FS, 209HB)

Epoxy for filling irregular surfaces and bugholes.

Quick set

Bonds to SSD surfaces

F190 H20Pruf

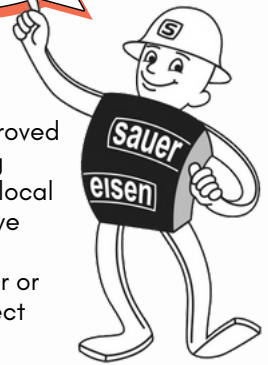
Crystalline water proofing coating for use on the positive or negative side of concrete or masonry structures to prevent water seepage. Withstand up to 30psi of hydrostatic pressure.



COATINGS

**Did you
know?**

We offer a comprehensive Manufacturer Approved Applicator Training Program. Ask your local Sales representative how to become a certified applicator or how we can connect you with one!



Applied by spray or roller, these thin-film, resin-based corrosion barriers are used as stand-alone coatings or as a wear coat over other materials. Typical application thickness is 10 mils or less. Systems available include epoxies, vinyl esters, and urethanes.

201 ConoGlaze Series (201, 202, 207, 228)

High-gloss epoxy and epoxy NovolaK coatings available in four grades of chemical resistance.

Acid and alkali resistant

USDA Approved

310 Urethane Glaze

Coating/sealer matching the performance of baked finishes with excellent gloss and color retention.

UV stable

USDA Approved

472 VEGlaze

Vinyl ester polymer coating specifically formulated to accommodate vertical and overhead applications.

Fast chemical set

Low porosity

LININGS



Unlike conventional hand lay-up fiberglass mat systems, our resins are pre-mixed with reinforcing fibers - saving time and money.



Sauereisen linings offer advanced reinforcement that are a step above coatings. Our linings are able to withstand significant physical abuse with the added benefit of low permeability, making these corrosion barriers a stand-alone system. Applied at a thickness of **40 to 300 mils**, binder systems include epoxies, novolak epoxies and vinyl esters available in spray and trowelable versions.

210 SewerGard Series

Polymer linings formulated for municipal and industrial wastewater applications.

H₂S and MIC resistant

Zero VOCs

SEWERGARD® **210**
ULTIMATE CORROSION PROTECTION

203 Fibrecrete Series (203, 204, 215, 218)

Spray applied fiber-reinforced epoxy linings available in four grades of chemical resistance

Inter-locking fiber matrix

USDA Approved

381 ConoFlex

Aromatic polyurethane lining with excellent flexibility and chemical resistance. Available in NSF 61 and USDA Bio-Preferred formulas.

Highly impermeable

USDA BioPreferred

440 Vinyl Ester FibreLine

Fiber-reinforced vinyl ester lining specifically formulated to applications on concrete and steel.

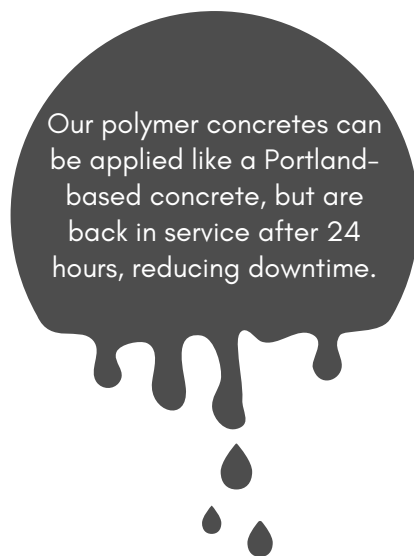
High-temp resistant

Fast chemical set



POLYMER CONCRETES

Heavy-duty castables with a chemical-resistant matrix make Sauereisen's polymer concretes the perfect solution for areas where more than a surface overlay is required. Application and reinforcement techniques are similar to working with Portland concrete with the added advantage of an extremely chemically-resistant infrastructure completed in a fraction of the time. Our polymer concretes offer impressive physical strength and very low permeability. Ideal for the construction of sumps, dikes, containment pads, trenches, walls and other structural support columns or bases.



Our polymer concretes can be applied like a Portland-based concrete, but are back in service after 24 hours, reducing downtime.

465 Epoxy NovolaK Polymer Concrete

Resistant to solvents, oils, acids and acid salts within a pH range of 0.0 to 14.0 with a maximum service temperature of 250°F. Engineered for more aggressive chemical resistance than standard epoxies.

35SG Chemical-Resistant Castable Structural Grade

Hydraulic-setting, calcium aluminate cement recommended for protection from high-temperatures, thermal shock, abrasion and chemical attack by mild acids or alkalis.

Hydraulic set

Thermal shock resistant

54SG Acidproof Concrete Structural Grade

Potassium silicate castable polymer concrete with outstanding performance as a chemical-resistant liner for the most severe acidic environments.

Max service temp 1400°F

pH range of 0.0-7.0

165 Epoxy Polymer Concrete

Standard epoxy resistant to a wide range of solvents, oils, and acids between a pH range from 0.0 to 14.0 with a maximum service temperature of 200°F.

Low porosity

Fast chemical set

265 Epoxy NovolaK Polymer Concrete

Resistant to solvents, oils, concentrated acids and acid salts within a pH range of 0.0 to 14.0 with a maximum service temperature of 250°F. Engineered for more aggressive chemical resistance than standard epoxies.

Fast chemical set

Low porosity



REFRACTORIES

With more than a half century of installations, our chemical-resistant refractories are well known for their thermal insulating characteristics and speed of application. This material is resistant to high acid concentrations and temperatures up to 2100°F. Using anchors as reinforcement, Sauereisen refractories are applied at a nominal 2-inch thickness for such typical applications as stack linings, wastewater infrastructures and sulfur pits. Binder systems include potassium silicates and calcium aluminates.

Our acid-proof cements were first put in service in 1936!



54LW Acidproof Concrete

The original acid-resistant gunite material made for applications that require a lower K factor, lightweight materials, and/or higher temperature resistance.

Water and vapor resistant

Fast chemical set

35 Chemical-Resistant Castable

Gunitable, hydraulically-setting calcium aluminate for dry gas environments.

pH range of 4.5-12.0

Thermal shock resistant

54GUN Acidproof Gunite

Potassium silicate resistant to full concentrations of most acids between a pH range of 0.0 to 7.0.

Sulfuric acid resistant

High-temp resistant

A person wearing blue jeans and brown sneakers with blue soles is painting a floor. They are using a roller with a red handle and a grey roller head. The floor is a light grey color and has a glossy finish. The person's legs and feet are visible, and they are standing on the painted surface. The roller is positioned vertically, and the person is holding it with their right hand. The floor is reflecting light, and there is a drain cover visible in the bottom right corner.

FLOORING



Our resin-rich composition and unique filler systems are what set our materials apart. Sauereisen flooring systems are known for their skid-resistance, appearance, and ease of sanitizing. These systems are ideally suited for process areas, aisles, containment dikes and other areas subject to forklift traffic and spillage of corrosives. Sauereisen products also meet the requirements of the Meat and Poultry Inspection Program of the **USDA** for use in federally inspected food plants.

201SL Self-Leveling Epoxy Series (201SL, 228SL)

Self-leveling coating system offering low viscosity for expedient flooring applications.

100% solids

Zero toxic odors

256 ConoSpread Series (256, 264)

Flowable epoxy "slurry coats" that may be customized by broadcast preferences.

Thermal shock resistant

101 ConoCrete Series (101, 115, 118)

100% solids, aggregate-filled epoxy and novolak epoxy flooring available in increasing grades of chemical resistance.

USDA Authorized

Skid-resistant

230 Arctikure

Epoxy flooring designed for cold room applications and will cure at temperatures as low as 35°F.



MORTARS

Sauereisen's extensive selection of mortars range from silicate mortars for high acid/high temperature environments to organic mortars for broad chemical resistance. Typical installations are completed by either the brick layer's or tile setter's method of application.

21C Furan Resin Mortar/Grout

100% carbon-filled bonding material for chemical resistant masonry units and quarry tile. Capable of withstanding temperatures up to 450°F.

Low-odor Hydrofluoric acid resistant

25 Epoxy Novolak Mortar/Setting bed

Used for bonding chemical-resistant masonry units. A versatile mortar and bed joint with low temperature application capability.

USDA Authorized Sulfuric acid resistant

33M Acid-Alk Mortar

Chemical setting, inorganic, modified silicate-based cement. Resists most solvents, oils and acids (except fluorides) between a pH range of 0.0 to 9.0.

Max service temp of 1750°F Weather resistant

65 Corrosion-Resisting Mortar

Potassium silicate mortar particularly recommended for installations handling all concentrations of sulfuric acid and strong oxidizing acids such as nitric and chromic.

Rapid set pH range of 0.0-7.0

400 Vinyl Ester Mortar

Silica and carbon-filled mortar resistant to strong oxidizing agents, acids, alkalis, and bleaches to a maximum temperature of 250°F.

Low absorption High tensile strength

600 Basolit Sulfur-based Mortar

Silica-filled mortar manufactured in flakes for a rapid melt. Sets within minutes and meets most production requirements.

Rapid melt Sets in minutes



MEMBRANES

PRO TIP:

Use a membrane as a last line of defense for refractories.

Sauereisen's comprehensive approach to any project is also evident in our line of membranes. In many cases, these materials are used to prolong the life of a structure in combination with other materials. Selecting the right membrane can help minimize the vulnerability of substrate imperfections, expansion rates and long-term chemical exposure. Chemistries include asphalts, urethanes, and synthetic rubber.

47/85 Asphaltic Membrane

Hot-applied membrane system that forms a barrier between acid brick or monolithic sheathing and concrete substrates.

pH range of 0.0-12.0 Water resistant

90/92 Sheet Membrane

Impervious synthetic elastomer of uniform quality and thickness supplied in rolls.

Puncture resistant Simple installation

88 Fib-R-Thane

Asphalt modified urethane with fiber reinforcement that maintains excellent elasticity and adhesion with a temperature range between -30°F to 250°F. Also exhibits 100% recovery under mechanical stress.

Permanent flexibility Easily applied

F88 Manhole ChimneySeal

Elastomeric lining formulation of fiber-reinforced, urethane-modified asphalt. A flexible chemical-resistant membrane or gasket seal for the prevention of water infiltration.

Excellent elasticity Hand applied

89 High Temperature Membrane

Asphaltic mastic used under refractories. Maintains excellent elasticity and adhesion within a temperature range between -60°F to 300°F.

Low permeability Acid and alkali resistant



ACCESSORY PRODUCTS

Joint Compounds

69 Elastomeric Joint Compound

Flexible expansion joint for general caulking and sealing where flexibility is required. Excellent resistance to mineral acids and alkalis.

Non-shrinking

Temp. range of -40°F to 250°F

220/221 Epoxy/Novolac Epoxy Expansion Joint Compound

100% solids, pourable epoxies designed to absorb the shock and impact of heavy loads over narrow joints and provide chemical resistance.

Self-leveling

Absorbs heavy loads

Chip resistant

Primers

500 PenePrime

Specifically formulated to penetrate deep within concrete substrates to ensure maximum adhesion. Can also be used to mitigate outgassing of concrete substrates.

Water-based

Low VOCs

560 Hi Temp Primer

Single-component, moisture-cured urethane primer used to ensure a tenacious bond with epoxy, vinyl ester, and urethane topcoats for concrete and steel.

Max. service temp of 400°F

Fast set

501 ConoWeld

Used in conjunction with Sauereisen's line of epoxy coatings, linings, and flooring materials applied by spray, brush, or roller over concrete and steel.

100% solids

Seals porous substrates



A photograph of a wastewater treatment facility. In the foreground, there are several rows of aeration tanks with yellow concrete walls and blue diffusers. Above the tanks, there is a metal walkway with railings and a large array of solar panels mounted on a metal frame. In the background, a body of water and a city skyline are visible under a clear blue sky.

PROJECT PROFILES

PROJECT:

Rotem Sulfur Pit #11

LOCATION:

Tel Aviv, Israel

OWNER:

Rotem Amfert

ENGINEER:

In-house

APPLICATOR:

Sealtec Construction
Company

SAUEREISEN REPRESENTATIVE:

Israel Paycher

PRODUCTS:

89 High Temperature Membrane
35 Chemical Resistant Castable

METHOD OF APPLICATION:

Spray application of the 89 membrane
and the 35 was applied via gunite.

ENVIRONMENT:

Molten sulfur with a pH
between 0-14.

01. PROJECT PROFILE

Sulfur Pits

PROJECT DETAILS:

Rotem is the largest producer of sulfuric acid in Israel. Rotem has experienced aggressive corrosion in their sulfur pits and existing linings were failing in less than 12 months.

Rotem's sulfur pits experience a higher pH than typically seen in a sulfur pit so potassium silicate technology is not a feasible option.

Sauereisen developed & tested a dual component lining system consisting of a flexible membrane 89 and a chemical resistant castable liner 35.



PROJECT:

Secondary containment for sodium hypochlorite and sodium bisulphite storage areas

LOCATION:

Tulsa, Oklahoma

OWNER:

Tulsa Municipal Utility
Authority

ENGINEER:

Black & Veatch- Kansas City

SAUEREISEN REPRESENTATIVE:

Steve Kelso and Pete Jansen

PRODUCTS:

381 Conoflex

METHOD OF APPLICATION:

381 Conoflex was spray and roll applied.

ENVIRONMENT:

Chemical feed room at a wastewater treatment plant.

02. PROJECT PROFILE

Secondary Containment

PROJECT DETAILS:

5,000sf of secondary containment linings for new chemical storage and pump rooms. Lining system utilized a 80-mil thick ConoFlex 381 Urethane lining with slip resistant grit surface and glass-reinforced ConoPrime 502 primer.

Also utilized was a corner detail designed and tested specifically for the unique requirements of the floating floor construction used at the plant. The Convex Corner Detail was tested to withstand $\pm\frac{1}{2}$ " movement without failure or loss of containment.



03. PROJECT PROFILE

Manhole Rehabilitation

PROJECT:

Manhole rehabilitation

LOCATION:

Brookline, MA

OWNER:

Town of Brookline

ENGINEER:

BETA Group, Inc.

APPLICATOR:

National Water Main Cleaning
Company

SAUEREISEN REPRESENTATIVE:

KDS Corrosion
Solutions

PRODUCTS:

F-180 Instaplug Hydraulic Cement

F-170 Fast Set

210XHB Sewergard Epoxy

METHOD OF APPLICATION:

F-180 was hand applied to stop active water leaks followed by minor and deep hand patching using F-170 Fast Set. A single, 250 mils coat of 210XHB was applied using a plural components spray application.

ENVIRONMENT:

Over 250 municipal wastewater manholes with significant water infiltration and high levels of hydrogen sulfide gases. Variety of original construction methods from brick to concrete block and precast concrete.

PROJECT DETAILS:

Specifications called for 250 mils of 100% solids epoxy with no cementitious underlayment to rehabilitate over 250 manholes in a densely populated area. Sauereisen's 210XHB SewerGard epoxy met or exceeded all specification requirements and was applied up to 250 mils in a single coat with each manhole completed in a single application saving labor and material costs.



PROJECT:

Wheatland Tube Pickling Rinse Line

LOCATION:

Wheatland, PA

OWNER:

John Maneely Company

ENGINEER:

Wheatland Tube Engineering

APPLICATOR:

Hudson Construction Company

SAUEREISEN REPRESENTATIVE:

Kust Industrial Products

PRODUCTS:

501 Conoweld Epoxy Primer

265 Epoxy NovolaK Polymer Concrete

69 Joint Compound

METHOD OF APPLICATION:

Formed walls and poured in place floors

ENVIRONMENT:

15-98% Sulfuric Acid at 150°F

Caustic cleaning materials

04. PROJECT PROFILE

Pickling Line

PROJECT DETAILS:

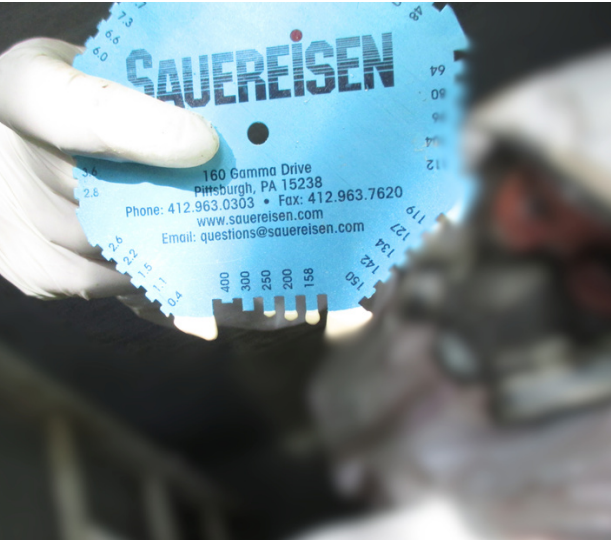
Batch rinsing operation for steel pipe with sulfuric acid splash and spill. Approximately 98,000 lbs of 265 Polymer Concrete was poured at a 2-inch thickness into a containment pit measuring 65' x 52' x 3' deep. The 265 Polymer Concrete replaced an existing thermoplastic liner system. Six 55' pickling rinse tanks were placed directly on the 265 Polymer Concrete.

Since 2005 Wheatland Tube has installed approximately 315,000 lbs of 265 and 144,000 lbs of 54 Polymer Concretes. Protective coatings and linings have been replaced with Polymer Concretes to maximize life expectancy and minimize downtime. Expansion joints were installed and protected with Sauereisen's 69 Joint Compound.



QUALITY ASSURANCE

By providing engineered systems to our customers, Sauereisen offers a high standard of quality. Our documented Quality Assurance system assures the highest quality in every step of our manufacturing process—from inspection of raw materials to production and shipping of finished goods. As an added benefit, Sauereisen's highly skilled laboratory and technical services staff frequently assist in the field where needed. A worldwide network of agent representatives, in conjunction with numerous pre-qualified Sauereisen applicators, help make our engineered systems work for you.



**WE
ARE
HERE
TO
HELP.**

CONTACT US FOR:



Product Recommendations



Qualified Contractor Referrals



Design Data



Specification Preparation





LEGAL NOTICE

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160 Gamma Drive, Pittsburgh, PA 15238 | info@sauereisen.com | 412-963-0303