

SAUEREISEN

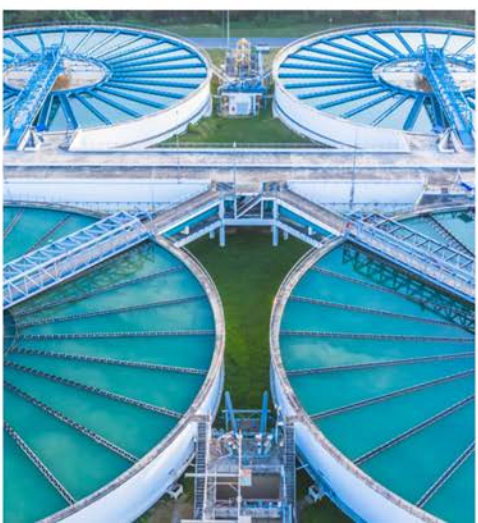
THE ULTIMATE CORROSION CATALOG





ENGINEERED SOLUTIONS.

ULTIMATE PROTECTION.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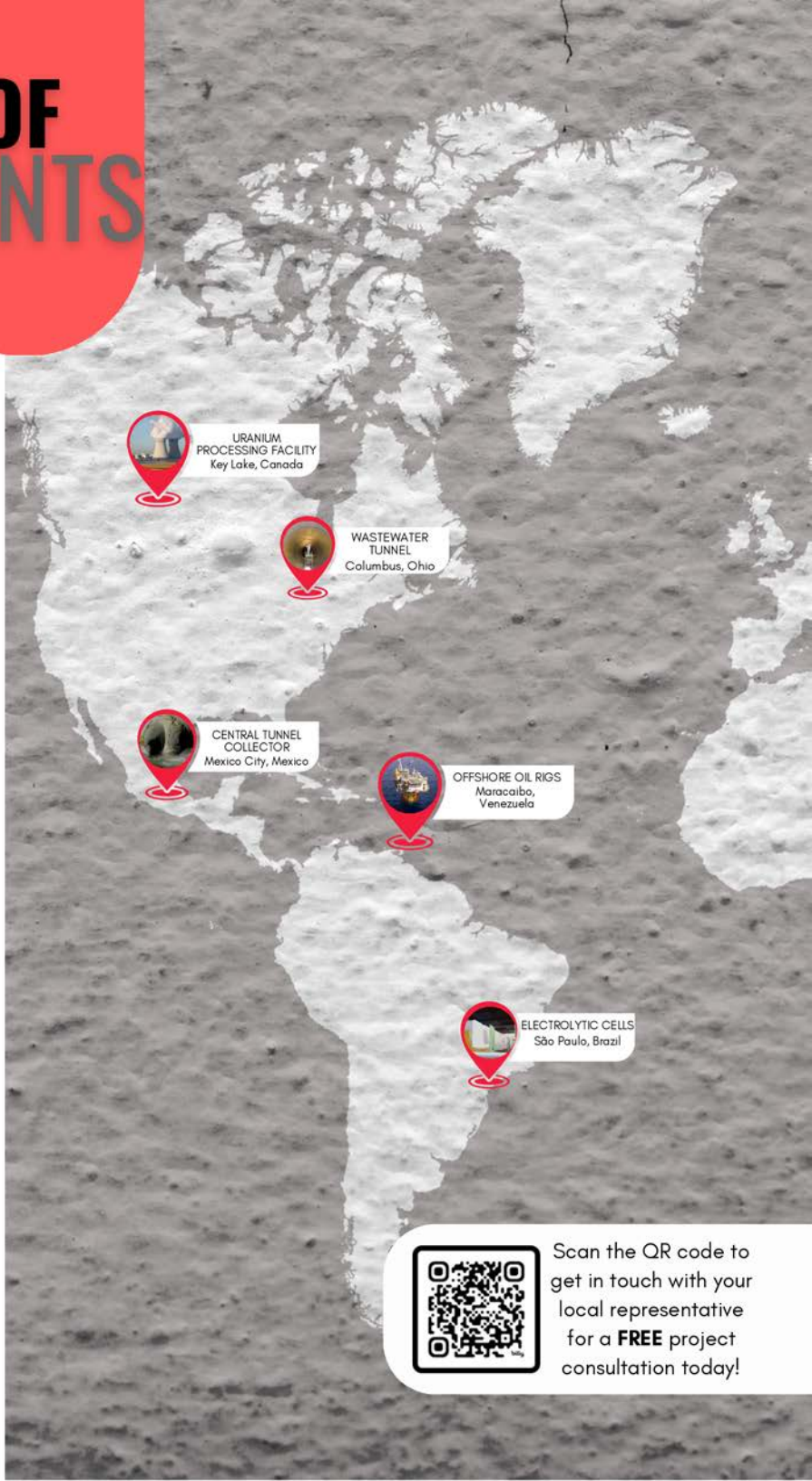


Scan the QR code to get in touch with your local representative for a **FREE** project consultation today!

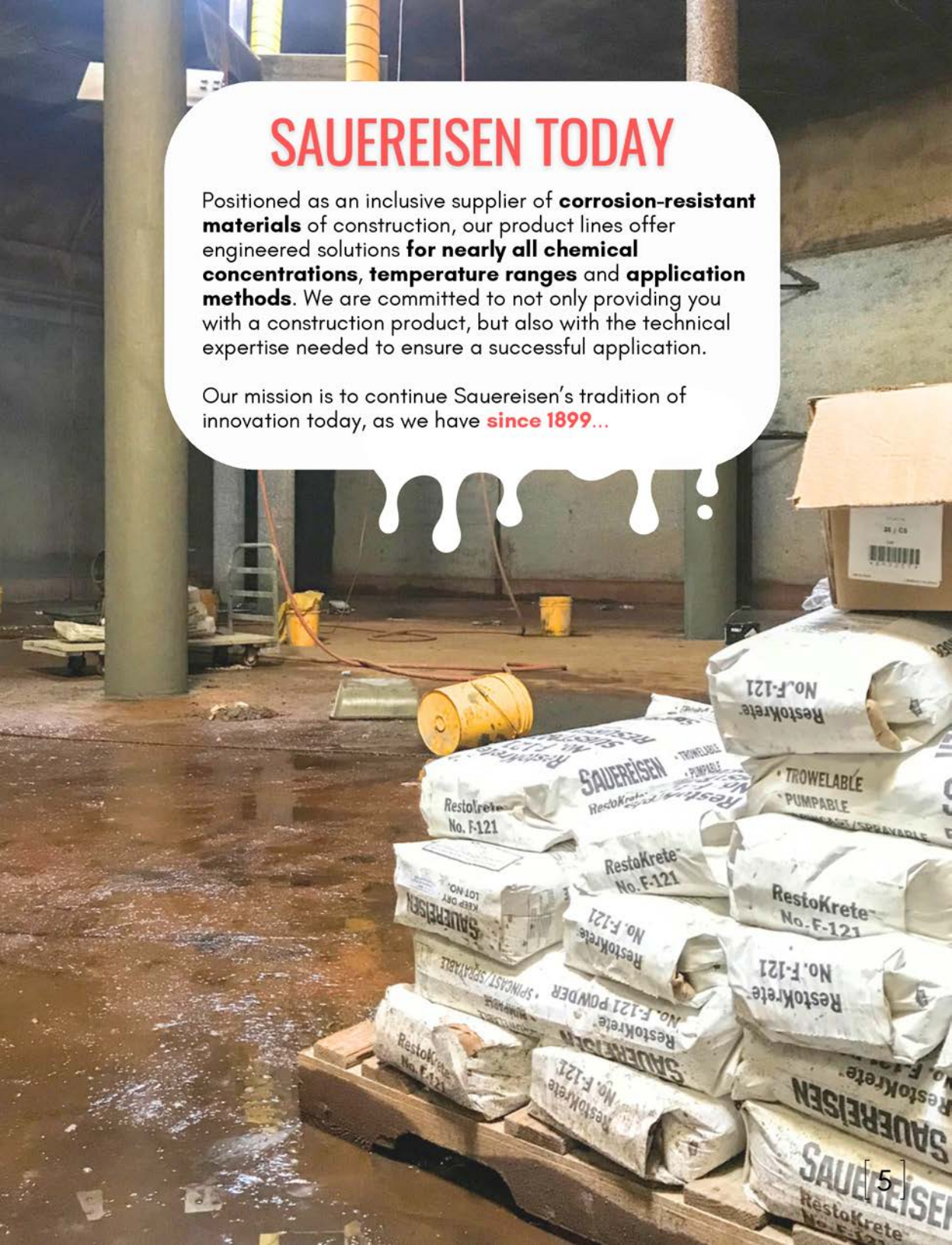
Sauereisen's manufacturing plants in North America, Europe, and the Pacific Rim facilitate **worldwide product distribution**. Supported by a global network of agent representatives and numerous pre-approved Sauereisen applicators, our engineered systems are tailored to suit your needs.

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 further expanded into industrial markets as a result of innovative formula modifications that enabled the specialty cements to be used as chimney mortars in the power industry.

Continuing advancements have also led to monolithic refractories and organic coatings and linings **designed to withstand extreme environments**.



SAUEREISEN TODAY

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 are committed to not only providing you with a construction product, but also with the technical expertise needed to ensure a successful application.

Our mission is to continue Sauereisen's tradition of innovation today, as we have **since 1899**...

GOT CORROSION?

COMMON CORROSIVE SUBSTANCES

Hydrogen Sulfide	Sodium Hypochlorite	Hydrochloric Acid
Sulfuric Acid	Phosphoric Acid	Potassium Hydroxide
Ammonium Hydroxide	Nitric Acid	Chlorine

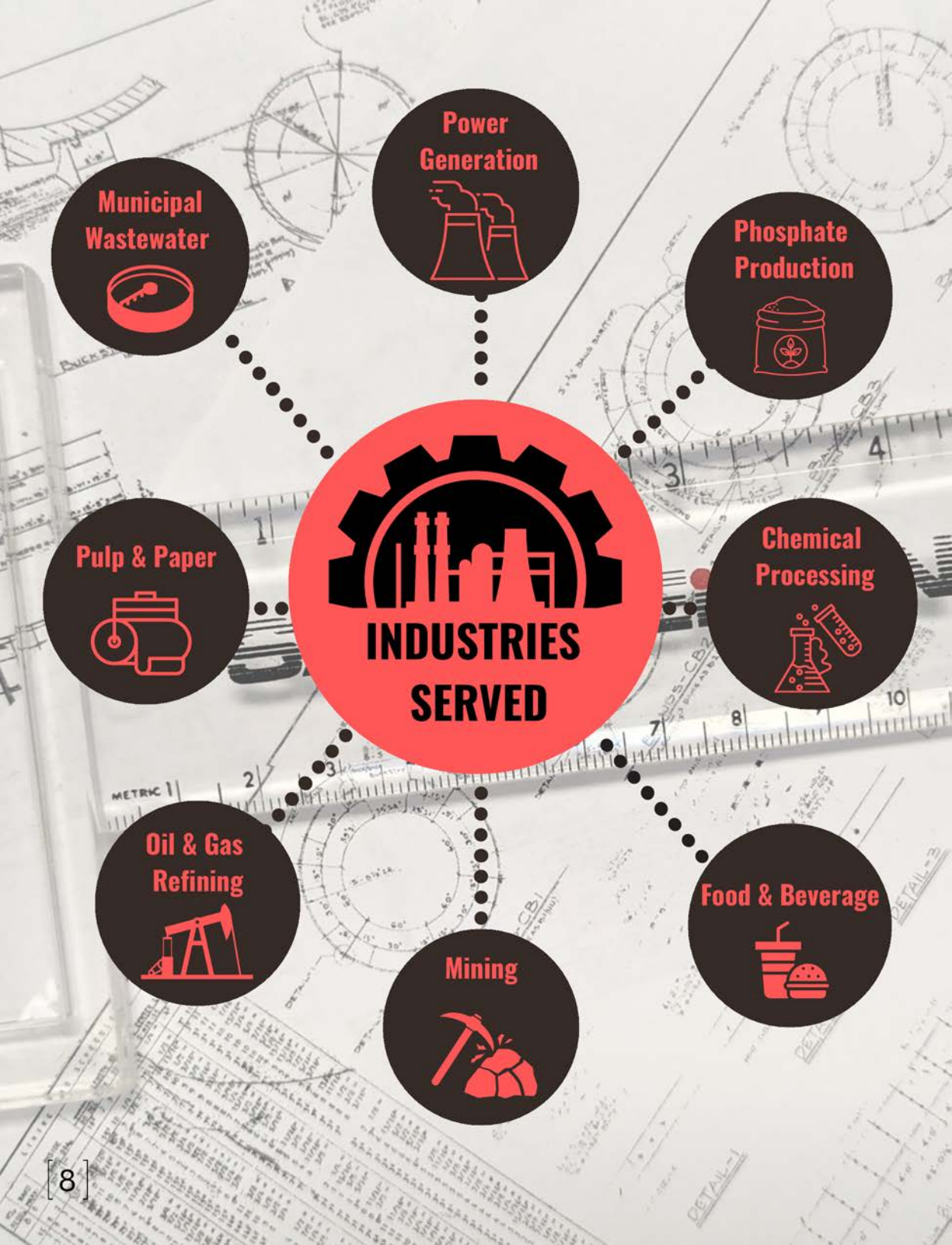
CAUSES OF CORROSION

- Contact with corrosive chemicals or aggressive substances
- 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

ECONOMIC DRAIN. ENVIRONMENTAL STRAIN: A Corrosion Crisis

Each year, over **$2.5 trillion is spent 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.


Power Generation
Municipal Wastewater
Phosphate Production
Pulp & Paper
INDUSTRIES SERVED
Chemical Processing
Oil & Gas Refining
Mining
Food & Beverage

CorrosionResistant

MATERIAL SELECTION GUIDE*

	Epoxies*	Vinyl Esters*	Silicates	Urethanes
Chemical Resistance	-Acetone -Sulfuric Acid -Water -Sodium Hydroxide -Hydrochlorite Acid	-Sulfuric Acid -Water -Sodium Hydroxide -Sodium Hypochlorite	-Benezene -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

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.

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

208 RestoKrete® Epoxy Modified Cement

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

Moisture tolerant

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

Epoxy for filling irregular surfaces and bugholes.

Quick set | Bonds to SSD surfaces

F120 RestoKrete® Underlayment

Fast-curing, high early strength, Portland and 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 sprayed (wet shotcrete) or trowel applied.

No re-coat window | Rapid application

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

F370 Hydroactive Polyurethane Grout

Expanding hydrophobic chemical grout for cracks and voids.

Bonds to wet surfaces | 20x expansion

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

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 **Cono**Glaze Series (201, 202, 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.

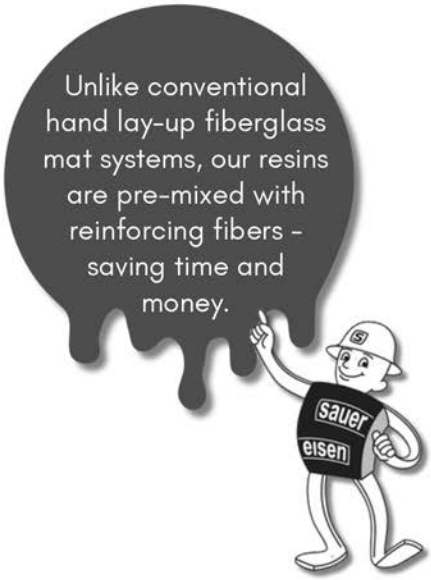
UV stable | USDA Approved

472 **VE**Glaze

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

Fast chemical set | Low porosity

LININGS



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.

- H_2S and MIC resistant
- Zero VOCs

SEWERGARD® 210
ULTIMATE CORROSION PROTECTION

203 **Fibre**Crete 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 **Cono**Flex

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 **Fibre**Line

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.

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

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 alkalies.

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.

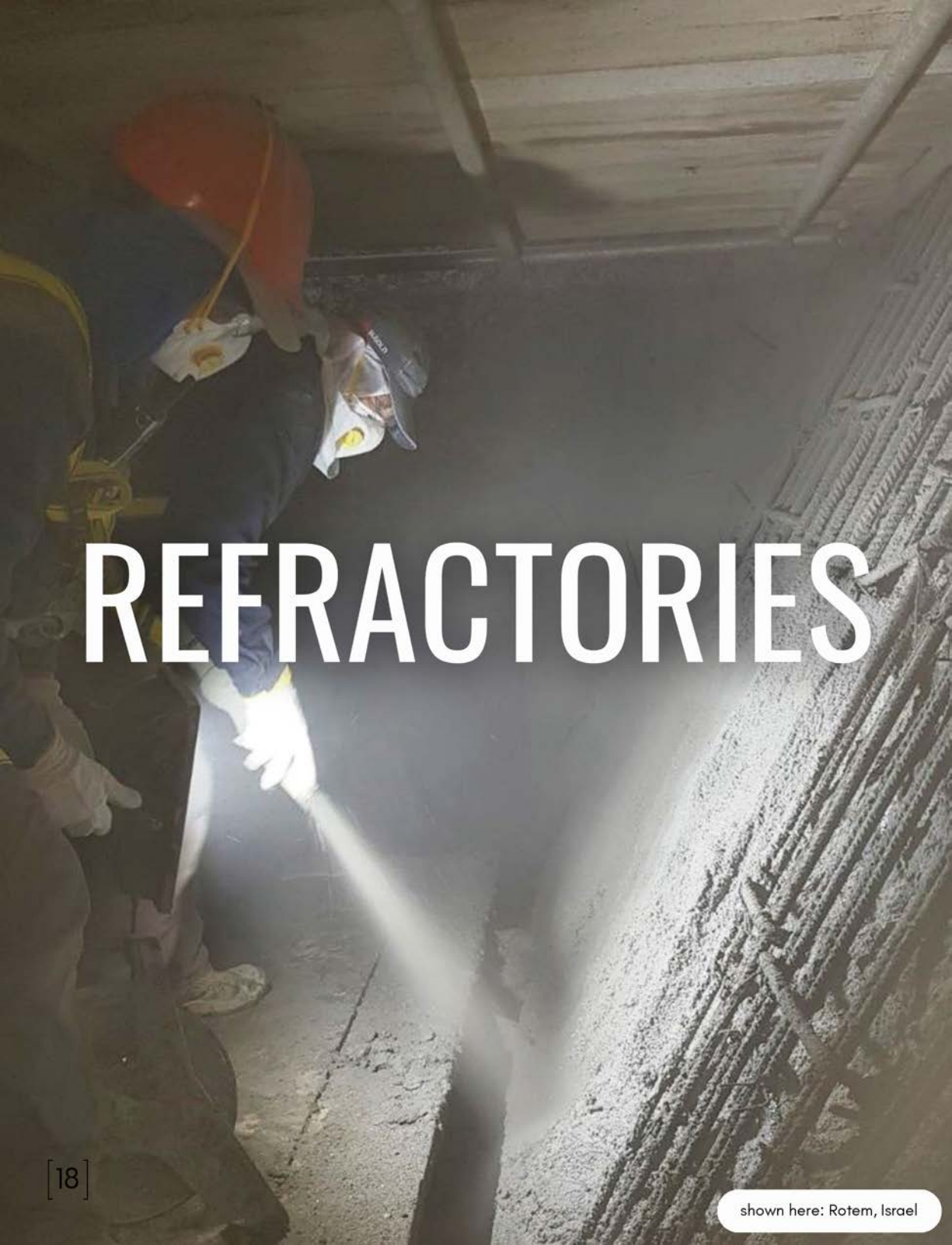
Low porosity | Fast chemical set

465 NovolaK Vinyl Ester Polymer Concrete

Vinyl ester polymer offers superior chemical resistance with a fast chemical set, meaning less down time.

Max service temp 350°F | Low porosity

REFRACTORIES



shown here: Rotem, Israel

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

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.

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

FLOORING

ANY INDUSTRY, ANY APPLICATION.

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.

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

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

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 (excpet 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, alkalies, 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 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.

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

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

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

90/92 Sheet Membrane

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

Puncture-resistant | Simple installation

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 alkalies.

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 | Aborbs 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

PROJECT PROFILES

01. PROJECT PROFILE
Sulfur Pits

PROJECT:
Mishor Rotem Sulfur Pit #11

LOCATION:
Israel

ENGINEER:
In-house

SAUEREISEN REPRESENTITIVE:
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.

PROJECT DETAILS:

One of the largest producers of sulfuric acid in Israel was experiencing aggressive corrosion in their sulfur pits and existing linings were failing in less than 12 months.

Their 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.

02. PROJECT PROFILE
Secondary Containment

PROJECT:

Secondary containment for sodium hypochlorite and sodium bisulphite storage areas

LOCATION:

Tulsa, Oklahoma

ENGINEER:

Black & Veatch- Kansas City

SAUEREISEN REPRESENTITIVE:

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.

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 ±½" 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 REPRESENTITIVE:
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.

04. PROJECT PROFILE
Pickling Line

PROJECT:
Wheatland Tube Pickling Rinse Line

LOCATION:
Wheatland, PA

ENGINEER:
Wheatland Tube Engineering

APPLICATOR:
Hudson Construction Company

SAUEREISEN REPRESENTITIVE:
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

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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