

POWERFUL SOLUTIONS FOR POWER PLANTS



CORROSION-RESISTANT MATERIALS

SAUEREISEN

Corrosion-Resistant Materials

Environmental regulations compel power plants and other fossil-fuel-burning industries to limit the escape of harmful acidic gases into the atmosphere. In response, Flue Gas Desulfurization (FGD) technology has given power plants the means to restrict pollutants from entering our air and water. However, using chemical admixtures to extract acid from sulfur-laden gases places additional demands on the power-generating facility.

The infrastructure for containment, collection, and disposal of FGD effluents is a highly corrosive environment. Protecting the interior of stacks, scrubbers, ducts, and treatment equipment can be costly. Increasingly stringent emissions standards continue to test the

environmental and financial efficiency of industry.

As a world leader in manufacturing corrosion-resistant materials of construction, Sauereisen applies a half century of power industry experience to offer cost-effective solutions.

A Wide Range of Applications

The demands on protective linings are constantly changing within each stage of the power-production process. Sauereisen has engineered potassium silicate, epoxy novolak, and vinyl ester products to meet the requirements of each operating environment.

Ducts

Bypass ducts routed around scrubbers contain hot acidic gases, making chemical-resistant, high-temp refractories a necessity. The cooler temperatures of gases in ducts downstream of scrubbers allow the use of vinyl ester and epoxy novolak linings.

Scrubber Modules

The vessels in which sulfur dioxide and other contaminants are removed from flue gases offer a unique challenge. Alkaline chemicals neutralize the acid-laden flue gases, creating an abrasive and corrosive environment. Impermeable novolak epoxy and vinyl ester coatings provide the most economical protection for these areas.



Applying Vinyl Ester FibreLine by spray.

Stack Liners

Most liners within chimneys require either a guniting refractory or a brick and mortar system. In each case, potassium silicate materials will resist the temperatures, chemicals, and abrasion of the exiting gases. Depending on gas temperatures, organic coatings may be another alternative.

Sauereisen materials are suitable for plant-wide corrosion resistance.



In addition to protecting high-profile corrosion areas, Sauereisen products also provide power stations with cost-effective help behind the front line. Our materials assure compliance with chemical and wastewater storage, treatment and disposal regulations.

Water Treatment

Wastewater from the FGD process collects in basins to be purified. All collection tanks, trenches, and treatment areas require protection. Clarifiers that separate solids are well-suited for epoxies. Neutralization basins may use a furan

mortar and brick system or a thinner coating barrier.

Chemical Storage

Storage tanks holding treatment chemicals must withstand their highly corrosive contents. The level of chemical exposure determines the type and thickness of the coating.

Secondary Containment

Process and storage tanks must be accompanied by secondary containment as required by law. Epoxy linings provide an economic means of protecting these concrete structures.

A Single Source

As power stations enhance facilities to meet environmental regulations, Sauereisen is the single source for all corrosion-resistant materials of construction.

Vinyl Ester

Sauereisen's fibre-reinforced linings and resin-rich coatings offer temperature resistance to 250°F and low permeability. Spray application of our linings afford superior installation benefits compared to competitive mat-reinforced systems.

Epoxy Novolak

Fibre-reinforced, sprayable linings are also available in epoxy novolak formulations. With a wide range of chemical resistance, these 100% solids coatings provide economical options for ducts, tanks, and containment areas.

Potassium Silicate

Sauereisen acid-resistant materials withstand continuous temperatures to 1600°F. Ideal for stacks and ducts containing hot gases, these refractories resist full concentrations of most acids. Depending on



Gunited refractories are a solution where aggressive acids are combined with high temperatures.

requirements, potassium silicates are available in mortar, polymer concrete or gunite grades.

Sauereisen is constantly developing new formulations to adapt to the ever-changing needs of the power industry. We are dedicated to providing the highest-quality, long-lasting products that help the industry keep up with an increasingly tough regulatory and competitive environment.



Exterior view of a protected scrubber module.

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