



PENNGUARD™ BLOCK LINING SYSTEM

The original proven system to protect power plant chimneys and ducts from corrosion.





PENNGUARD™ BLOCK LINING SYSTEMS

One brand is recognized as the most reliable and acknowledged leader in corrosion-resistant chimney linings for the power generation industry—PENNGUARD Block Lining System from ErgonArmor.

Since the earliest field trials in the late 1970s, the use of PENNGUARD Block Lining System expanded from a few small chimneys and duct trains in the USA to its position today—a cornerstone of the largest power plant chimneys in the world.

For wet flue gas desulfurization (FGD), reheat, or high-temperature bypass, whether new construction or retrofit, PENNGUARD Block Lining System offers the most cost effective and reliable corrosion protection for its field of use in the market today.

PENNGUARD Adhesive Membrane

1/8 in (3 mm) thickness

PENNGUARD Block

1 1/2 – 2 in (38 – 50 mm) thickness depends on application

Acidic Flue Gas Condensate

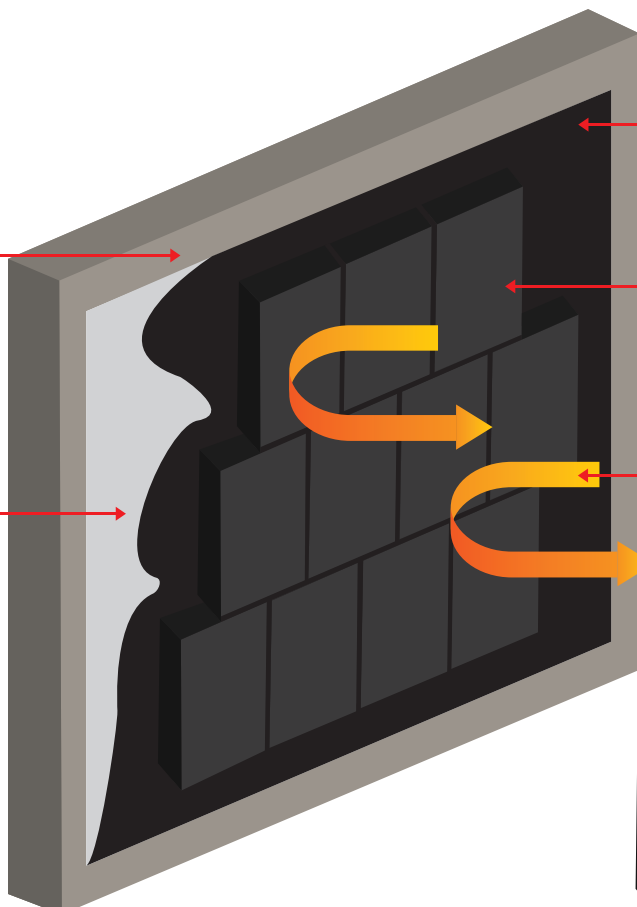
Closed cell borosilicate block does not allow any penetration of acid gas or acid condensates even under positive pressure conditions.

Substrate

- Steel
- Concrete
- Ceramic Brick
- Fiber Reinforced Plastic (FRP)

PENNGUARD Primer

3 types depending on substrate



Height: 9 in (228 mm)
Width: 6 in (152 mm)
Thickness: 1 1/2 – 2 in (38 – 50 mm)

FEATURES

VERSATILE

A PENNGUARD Block Lining System is suitable for new construction, directly bonded to either steel or concrete. It is also suitable for retrofits, where it can be bonded to an existing brick liner, direct to the concrete windshield, or over flake glass coatings, FRP or pitted alloys.

CHEMICAL RESISTANCE

PENNGUARD Block Lining System is suitable for a wide range of fuels (coal, oil, petcoke, lignite, biofuels) and operating conditions, from low-temperature wet flue gas to high-temperature, untreated flue gas, even with high SO₃ content.

TEMPERATURE RESISTANCE

Suitable for a wide variety of operating conditions, including continuous cycling typical in peaking plants, PENNGUARD Block Lining System will perform in normal operating temperatures up to 350°F (175°C) and even higher temperatures short-term, such as in the event of an air preheater failure.

LIGHT WEIGHT

An installed PENNGUARD Lining weighs just 2.5 –3 lbs/sq ft (12.2 –14.5 kg/sm) and does not require anchoring.

LONG SERVICE LIFE

PENNGUARD Block Lining System is highly resilient and durable. Many PENNGUARD Block Lining System installations are still in use after 20 years, with virtually no maintenance or repair.

FIRE RESISTANT, FM APPROVED



The PENNGUARD Block Lining System is the only Factory Mutual approved chimney lining that has been tested and approved to protect the chimney structure from irreparable damage in the event of a chimney fire. Besides potential insurance premium savings, this benefit shortens costly postfire downtime associated with repairs, allowing your plant to get back on line much sooner.

PROVEN IN ACTIVE SEISMIC ZONES

Chimneys lined with the PENNGUARD System have survived real-world earthquakes without incurring damage. This capability makes the system an obvious chimney lining candidate in seismically active zones.





The PENNGUARD™ Block Lining System has been used to solve a variety of complex problems. Whether your issues are corrosion, thermal cycling, gas exit velocities, chimney spitting, retrofit logistics, or new construction cost savings, we can provide valuable input and direction. Call us to review your situation. We're sure you'll agree the PENNGUARD™ Block Lining System is the obvious choice.

Specializing in surface protection solutions, ErgonArmor is a division of Ergon Asphalt & Emulsions, Inc., and a subset of Ergon, Inc. Ergon began its legacy of delivering dependable, high-performing products with exceptional service more than 60 years ago. Today, the company encompasses seven leading business segments and global operations to serve customers worldwide.

ergonarmor.com | pennguard.com

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