

FlueGard™-225

Corrosion Protection Coating for Flue Gas Systems



Kiln Baghouse



Process Ductwork



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Corrosion in baghouse

Corrosion is Worse When...

- There is high condensation inside the equipment
 - Lower gas temperature due to new EPA requirement
 - Seasonal external temperatures
 - Frequent shut downs and start ups
- High sulfur in the fuels or limestone
- Use of alternative fuels
- High efficiency filters, less alkaline dust

What is FlueGard™-225S?

A high temperature corrosion protection system, highly resistant to acid and alkali attacks, and fine particle dust abrasion up to 225°C (437°F) continuous exposure, with short term excursions to 300°C (572° F).

- Polymer-based, hybrid organic/inorganic material
- Supplied as a 2 component package
- Mixed in 1:1 ratio
- Gel time of several hours
- Applied by spray or by trowel
- Initial cure for 24 hours at 70°F
- Final cure at 160°C (4hrs) or 180°C (1hr)



Corrosion in a duct



Completed installation of FlueGard™-225S

Benefits of FlueGard™-225

- Increased reliability of equipment
- Lower maintenance cost
- Reduce environmental leaks
- Pay back can be less than a year



Application of FlueGard™-225S in stack

Where Can FlueGard™-225 Be Applied?

Any surface exposed to corrosive environments, especially:

- Baghouses
- Electrostatic Precipitators
- Stacks
- Ducts



FlueGard™-225S test plate in baghouse



Test Plate

Why Does FlueGard™-225 Work So Well?

- High temperature resistance
 - Reinforcing inorganic components in the system
- Hot acid resistance
 - Highly cross-linked organic matrix
- Strong bonding to steel
 - Chemical reaction with steel substrate
- Fine particle abrasion resistance
 - Elastomeric backbone in the structure



New baghouse coated, one year later

Why is FlueGard™-225 Cost Effective?

- Eliminate repairs of walls/hopper
- Eliminate repairs of tube sheets and thimbles
- Increase reliability of equipment
- Postpone the cost of new, replacement dust collector
- Reduce kiln downtime
- Eliminate environmental non-compliance fines
- Reduce exposure to safety hazards



Test sample after five months in a baghouse



Test sample cleaned after five months in a baghouse

Application of FlueGard™-225

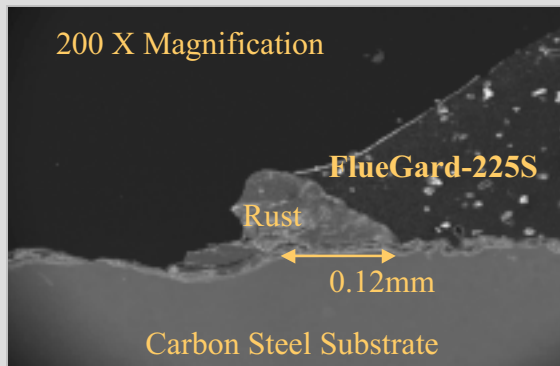
- Surface preparation
 - Sandblast to NACE #2 (SSPC-SP10 Near-White blast) with >3.0 mil profile
- Coating application options (one coat)
 - Solvent spray to 20 dry mils
 - Hot spray plural component to 20 mils
 - Trowel to 20 mils
- Two stage cure
 - Initial cure at 70°F for 24 hours, allows inspection
 - Final cure at 140°C for eight hours or 170°C for one hour
- Useful life and repair
 - Expected life up to 10 years, depending on service
 - Repairs bond to steel and to itself, recoat as needed



Left side corroded, right side coated



Test sample slice
no delamination



Cross section of test sample

Contact Penta Industrial for your installation!

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