

PRODUCT LIST & SERVICES



OXISTOP

SPECIALIZED COATING SYSTEMS

SM



SERVICES OFFERED

SANDBLASTING:

Services include, professional state-of-the-art equipment operated by certified technicians. We offer competitive pricing and complete jobs to the exact specifications of our clients and to our own standards, primarily in conjunction with the application of OXISTOP LLC products and services.

HIGH TEMPERATURE INSPECTION SERVICES:

OXISTOP LLC'S High Temperature Inspection Services features a fully radiometric, dual spectral range thermal imager with built-in visible light camera. The imaging technology also includes a high temperature range, specialized infrared filtering capabilities, radiation shield, and protective window assembly, which allows the imager to be used to measure temperature of the tube walls inside a furnace without the interference from combustion flames. This High Temperature Inspection Services can be combined with the Thermal Image Processing, Analysis and Report-Writing

SOFTWARE:

• Advanced Image Analysis • Easy-to-use OLE-2 Compliant • Saves files in Microsoft™ Word Format • Built-in Lens/Distance Calculator • Built-in Heat Loss Calculator • Thermal/Visual Image Blending



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PRODUCT LIST



MC 19-GRP



PROCERA™ MC19-GRP is a premium grade coating ceramic material that provides protection against tube corrosion and slagging in the power generation markets. Boiler tubes coated with PROCERA™ MC19-GRP coatings will maintain optimum heat transfer. MC19-GRP is non-catalytic, resulting in a significant decrease in residue and slag buildup on tube surfaces. PROCERA™ MC19-GRP coatings are non-hazardous, non-toxic, are water-soluble, and discharge no fumes when applied.

PROCERA™ MC19-GRP materials will:

- reduce the oxidation of metals at high temperatures
- improve the temperature uniformity of boiler water wall tubes
- reduce the abrasive wear of fly ash on boiler tubes
- reduce the build-up of combustion by-products in pulverized coal burning boilers
- improve the heat absorption rate into boiler water wall tubes
- demonstrate excellent corrosion and acid resistance at high temperatures

Application:

MC19-GRP can be used anywhere inside the boiler. There are no limits regarding substrate requirements. The coatings can be installed over alloy and carbon steels, old or new tubes. The coatings are applied onsite during a maintenance outage by certified applicators. New tube panels can be coated then cured off-site, minimizing the outage time needed for protective coating applications.

Surface preparation and heat cure:

The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile.

After heat cure, the thickness will vary depending on the purpose of the application, 6 - 8 mils for corrosion and slag control, 7 - 9 mils for erosion resistance.

Limitations:

MC19-GRP coatings are rated for 1900°F/1038°C use. However it is installed on water-cooled tubes, normally 700 - 800°F/371 - 427°C in the radiant zone of power utility boilers and up to 1000 - 1100°F/538 - 593°C in superheat areas. The temperature range is governed by the tube/ steam temperature.



REF30-GY

Protective Ceramic Refractory Coating



PROCERA™ REF30-GY is a dense refractory coatings, with greater than 0.90 emissivity efficiency. This increased emissivity reduces thermal gradients, increases production and improves quality while at the same time reducing energy consumption up to 30%. After properly curing the refractory, this coating forms a chemically bonded, non-wetting, inert surface that has a very low porosity. This surface sealer prevents the diffusion of oxides, fluxing agents, and atmospheres that normally penetrate and destroy the refractory. PROCERA™ REF30-GY dense refractory coatings are non-hazardous, non-toxic, is water-soluble, and discharges no fumes when applied.

PROCERA™ REF30-GY dense refractory materials will:

- save energy (up to 30% reduced energy consumption)
- increase production (faster heat-ups and cool downs)
- demonstrate highest quality (provides temperature uniformity, assures evenly heat treated parts)
- extending refractory substrate life
- prevents fluxing surface and surface reactions to 2700°F/1482°C
- reduces downtime and decreases maintenance

Application:

REF30-GY applications include all types of dense refractory, burner blocks, furnaces, ladles, coke ovens, burners, hoods, crucibles, kilns, and troughs. In power utility boilers,

REF30-GY is utilized on access doors and burner throat refractory in conjunction with MC19-GRP to eliminate "eyebrow" formation.

Surface preparation and heat cure:

The surface preparation for applying the coating may require sand blasting, completely removing all slag and combustion by-products to achieve a clean solid surface.

Curing must be done during heat up of the coated component.

Limitations:

The maximum operating temperature of the ceramic coating is 3000°F/1649°C.

THERMBOND® REFRACTORIES: PROCERA™ REF30-GY coating is often applied exclusively to Thermbond® Refractory manufactured by Stellar Materials. This technique allows for refractory repairs and an anti-slag coating to be applied in a one step process before heat curing of the refractory and coating. This is specialty desirable in boiler outage circumstances. Thermbond® utilizes the Stellar Binder System™, a patented quick setting two-part system that incorporates a blended dry aggregate and a liquid activator. PROCERA™ REF30-GY coating is applied over the refractory and completely bonds to the refractory during heat curing. This is an excellent repair plan for burner repairs during outages where "eyebrowing" of the burners is an issue.

THERMBOND® REFRACTORIES will:

- resists breakdown and penetration by molten metal, dross, and slag
- allows the refractory to bond to itself or other refractories with virtually no cold-joints
- promotes high strength and abrasion resistance
- creates a bonded aggregate system that is very resistant to thermal shock
- save energy (up to 30% reduced energy consumption)
- reduces downtime and decrease maintenances.

Application:

THERMBOND® REFRACTORIES uses a technique that allows for refractory repairs and an anti-slag coating to be applied in a two step process before heat curing of the refractory and coating. The system applications include all types of dense refractory, burner blocks, furnaces, ladles, coke ovens, burners, hoods, crucibles, kilns, and troughs.

Surface preparation and heat cure, for refractory repairs or restoration:

The surface being bonded to must be structurally sound and clean. When repairing an existing lining, make sure that the refractory lining is chipped back to solid, clean refractory.

Remove all deteriorated refractory and dust including any refractory penetrated by metals or other foreign matter.

The surface being bonded to must not be wet.

Curing of PROCERA™ REF30-GY can be accomplished during heat up of the THERMBOND®.



REF30-GY



PRODUCT LIST



MC23-BLK



PROCERA™ MC23-BLK metal coatings for gas-fired furnaces. MC23-BLK is specially formulated with very high emissivity for heat transfer.

PROCERA™ MC23-BLK coatings are non-hazardous, non-toxic, water-soluble and discharge no fumes when applied.

PROCERA™ MC23-BLK materials will:

- reduce the oxidation of metals at high temperatures
- improve the absorption rate efficiency
- improve the temperature uniformity
- improve heat transfer with very high emissivity (0.94)
- increase tube service life

Application:

MC23-BLK is black in color and can be used anywhere inside the furnace. The coatings can be applied onsite during a maintenance outage by certified applicators.

Surface preparation and heat cure:

The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile. After heat cure, dry thickness will be 6 - 8 mils.

Limitations:

MC23-BLK coatings are rated for 2300°F/1260°C use. Coating can wear in a harsh abrasive environment.



PROCERA™ GREENSTONE has the same characteristics of MC19-GRP premium with a custom formulated mixture that is approximately ten (10) times stronger against abrasion or erosion. The GREENSTONE line is design to approximate the strength of thermal sprays. This provides economic, cold applied alternatives to thermal spray technology where the strength of thermal sprays are appreciated but bonding integrity has proved to be difficult to consistently attain. PROCERA™ GREENSTONE is non-catalytic, resulting in a significant decrease in residue and slag buildup on tube surfaces. GREENSTONE coatings are non-hazardous, non-toxic, are water-soluble, and discharge no fumes when applied.

PROCERA™ GREENSTONE materials will:

- reduce the abrasive and erosion wear
- reduce the oxidation of metals at high temperatures
- improve the temperature uniformity of boiler water wall tubes
- reduce the build-up of combustion by-products in pulverized coal burning boilers
- improve heat transfer into boiler water wall tubes
- demonstrate excellent corrosion and acid resistance at high temperatures

Application:

PROCERA™ GREENSTONE can be used any where inside the boiler. There are no limits regarding substrate requirements, the coatings can be installed over alloy and carbon steels, old or new tubes. The coatings can be applied onsite during a maintenance outage by certified applicators. New tube panels can be coated then cured off-site, minimizing the outage time needed for protective coating applications.

Surface preparation and heat cure:

The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile.

After heat cure, the thickness will vary depending on the reason for the application, 6 - 8 mils for corrosion and slag control, 7 - 9 mils for erosion resistance.

Limitations:

PROCERA™ GREENSTONE coatings are rated for 1900°F/1038°C use. However it is installed on water-cooled tubes, normally 700 - 800°F/371 - 427°C in the radiant zone of power utility boilers and up to 1000 - 1100°F/538 - 593°C in superheat areas.

The temperature range in governed by the tube/steam temperature.



MC19-GRX

PROCERA™ MC19-GRX has the same characteristics of MC19-GRP premium with a custom formulated mixture with a blocking agent. Much like the power industry has evaluated our coating technology, we have learned that specialization is required to meet the unique and varied needs of our customers.

We have a coating that has a blocking agent to reduce the heat absorption rate. PROCERA™ MC19-GRX is non-catalytic, resulting in a significant decrease in residue and slag buildup on tube surfaces. MC19-GRX coatings are non-hazardous, non-toxic, are water-soluble, and discharge no fumes when applied.

PROCERA™ MC19-GRX materials will:

- reduce the heat absorption rate, with custom formulated blocking agent
- reduce the oxidation of metals at high temperatures
- improve the temperature uniformity of boiler water wall tubes
- reduce the build-up of combustion by-products in pulverized coal burning boilers
- demonstrate excellent corrosion and acid resistance at high temperatures

Application:

PROCERA™ MC19-GRX can be used anywhere inside the boiler. There are no limits regarding substrate requirements, the coatings can be installed over alloy and carbon steels, old or new tubes. The coatings can be applied onsite during a maintenance outage by certified applicators. New tube panels can be coated then cured off-site, minimizing the outage time needed for protective coating applications.

Surface preparation and heat cure:

The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile.

After heat cure, the thickness will vary depending on the reason for the application, 6 - 8 mils for corrosion and slag control, 7 - 9 mils for erosion resistance.

Limitations:

PROCERA™ MC19-GRX coatings are rated for 1900°F/1038°C use. However it is installed on water-cooled tubes, normally 700 - 800°F/371 - 427°C in the radiant zone of power utility boilers and up to 1000 - 1100°F/538 - 593°C in superheat areas.

The temperature range in governed by the tube/steam temperature.



PRODUCT LIST



OXISTOP THERMAL SPRAY COATING SYSTEM



SURE GUARD™ COATING SYSTEM combines SURE GUARD™ thermal spray material with the PROCERA™ sealer coatings. SURE GUARD™, is a refined thermal spray, featuring abrasion resistant technology that is mechanically bonded to the metal substrate while reducing oxide inclusions and micro cracking. PROCERA™, ceramic coating that forms a corrosion resistant surface, provides a protective layer that is mechanically bonded that stops or minimizes the damage caused by slag, oxidation, and erosion, while providing a non-catalytic surface to the coating system. The system inhibits oxidation in the alloy during the application, and the sealer completes and insures the impervious barrier against severe corrosion and erosion attacks.

SURE GUARD™ COATING SYSTEM will:

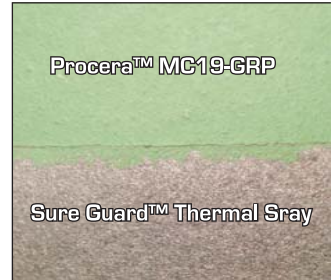
- inhibit oxidation in the alloy during the application
- complete and insure the impervious barrier against severe corrosion and erosion attacks
- improve the temperature uniformity of boiler water wall tubes
- reduce the build-up of combustion by-products in pulverized coal burning boilers
- improve heat transfer into boiler water wall tubes

Application:

The thermal spray applied an abrasion and corrosion resistant material is mechanically bonded to the metal substrate. PROCERA™, ceramic coating is applied as a sealer and forms a corrosion resistant surface, providing a protective layer that is chemically and mechanically bonded to the thermal spray to stop or minimizes the damage caused by slag, oxidation, and erosion, while providing a non-catalytic surface to the coating system. The coatings are applied onsite during a maintenance outage by certified applicators.

Surface preparation:

The surface preparation required for applying the coating is a white metal finish with a 2 - 3 mil profile.



DELTA T INDUSTRIAL² is a composite ceramic & silica based insulation coating that provides an insulating barrier, protects personnel and blocks corrosion all in one application.

DELTA T INDUSTRIAL² is specifically designed to be a multiple purpose coating solving painting and insulating problems.

DELTA T INDUSTRIAL² features:

- excellent thermal insulation at low thicknesses
- excellent personnel protection
- eliminates Corrosion Under Insulation (CUI)
- provides anti-condensation protection
- allows for inspection ability without removal
- easy application to irregular surfaces

Delta T Industrial² Thermal Insulating Coating



Application:

An initial tack coat is recommended of 10 mils. This tack coat will help to eliminate sag on vertical wall applications. Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 20-22 mils wet. Coating can be reapplied after each coat is thoroughly dry. Hot (>140°F, >60°C): Application of Delta T Industrial should be applied as per detailed hot application instructions.

Surface preparation and heat cure:

The coating can be applied directly to non-ferrous surfaces. Surface should be clean and free of oil, dirt or any other foreign matter.

Ferrous Surfaces should be primed prior to application of Delta T Industrial. Since the coating is water-based, it is important to have a boundary layer of protection to eliminate flash rusting.

Limitations:

Applications of DELTA T INDUSTRIAL should not exceed 400°F/200°C. Do not subject wet coating in pail format to freezing conditions.

AEROGEL technology and materials used in conjunction with the Delta T Industrial will extend temperature limitations to 1200°F/649°C.

DELTA~dB Sound Damping Coating is a flexible, adhesive, environment-friendly coating that bonds directly to a wide range of surfaces. It reduces excessive sound from structural or mechanical noise and is comprised of noise suppressants encased in an acrylic binder. The coating can be applied directly to most surfaces to effectively lower noise prior to airborne release. Where noise level safety is concerned, DELTA~dB offers a very cost effective solution with minimal effort. DELTA~dB can easily be applied to carbon and stainless steel (carbon steel requires a primer), aluminum, brass, fiberglass, plastic, and many other surfaces. DELTA~dB is a Class A (1) fire retardant coating approved for use on large industrial complexes.

DELTA~dB Sound Damping Coating features:

- noise level safety at very cost effective solution
- class A (1) fire retardant
- fast drying and curing
- excellent damping to weight ratio
- applies to most any surface
- no harmful organic compounds



Sound Damping Coating



Application:

An initial tack coat is recommended of 10 mils. This tack coat will help to eliminate sag on vertical wall applications. Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 40 mils (1.0) wet. Coating can be reapplied after each coat is thoroughly dry. Hot (>140°F, >60°C): Application of Delta~dB should be applied as per detailed hot application instructions.

Surface preparation and heat cure:

Surface should be dry and free of foreign matter. Ferrous Surfaces should be primed prior to application of DELTA~dB.

Since the coating is water-based, it is important to have a boundary layer of protection to eliminate flash rusting.

Limitations:

Sustained temperatures should not exceed 300°F/150°C or peak areas above. Do not subject wet coating in pail format to freezing conditions.