



Elliott Pos-E-Coat® 523

Product Description

Pos-E-Coat® 523 is a heavy-duty metallic protective coating system intended for application on centrifugal compressor components in corrosive gas services. It also functions as a durable anti-fouling coating system for hydrocarbon gas compressors where aggressive cleaning practices, such as oil washing, water injection, solvent or detergent cleaning, and steam purging, are routinely required. This system has proven to be an effective alternative in those environments where the durability of organic antifouling coatings is unsatisfactory.

Made of a specially formulated nickel-phosphorus alloy, Pos-E-Coat® 523's unique amorphous microstructure gives it superior corrosion resistance and makes it less susceptible to stress corrosion cracking (SCC). The phosphorus content makes the coating naturally lubricious and non-stick. The coating is hard and resistant to both abrasion and liquid erosion, which enhances its in-line injection durability.

Pos-E-Coat 523 is applied by a plating process followed by a proprietary surface conditioning treatment. It has excellent bond strength to both alloy and stainless steels, and provides a smooth surface finish to improve aerodynamic performance of turbomachinery components.



Advantages

Pos-E-Coat 523 can help to:

- ◆ Prevent corrosion related damage and maintain integrity of the components
- ◆ Retard the fouling process and prolong productive runtimes of compressors
- ◆ Minimize fouling related vibration and enhance rotor reliability
- ◆ Improve efficiency
- ◆ Reduce cleaning and turnaround costs
- ◆ Allow for in-line injection cleaning without deteriorating the coating system

Applications

Pos-E-Coat 523 is designed for application on centrifugal compressor rotors and diaphragms. Typical applications include:

- ◆ Chlorine gas compressors
- ◆ Cracked gas compressors at ethylene plants
- ◆ Refinery compressor applications
- ◆ Natural gas compressors

Properties

- ◆ Typical thickness:
0.002-0.003 in. (0.05-0.08 mm)
- ◆ Typical surface finish on new components:
Ra ~ 45 micro in. (0.001 mm)
- ◆ Hardness: ~ 45 HRC
- ◆ Max operating temperature:
550°F (290°C) continuous
- ◆ Safe pH range: 2 to 12

Repair Services

Elliott's global network of full-service repair centers, which are registered to ISO 9001 or have structured quality management systems, provide comprehensive service for Elliott and non-Elliott rotating equipment. Service teams consist of experienced, dedicated engineers, metallurgists, technicians, welders, machinists, and mechanics. We offer rotor balance and storage, and we repair and remanufacture all rotating and stationary components including blades,

Field Service

Our experienced on-site project management and skilled field service crews provide emergency repairs and scheduled turnarounds at job sites around the world. Compressors can be modified and rerated in the field to increase reliability, efficiency, and capacity. Elliott Rerate Services enhance the performance and extend the life of critical rotating equipment from any manufacturer. Service programs range from routine preventative maintenance and emergency assistance, to performance audits and comprehensive long-term service agreements.

Technical Services

Elliott's regionally-based engineering teams assist customers daily with technical questions and troubleshooting, root cause failure analysis, material analysis, finite element and rotor dynamics analyses, vibration analysis, and field performance testing. We also provide customer training classes at any Elliott facility or at customer sites.

Service Parts Network

Our ISO 9001 registered Service Parts organization delivers the quality OEM parts and rapid turnaround necessary to maintain equipment performance and reliability. Knowledgeable customer care representatives are available 24/7 to support customers with:

- ◆ Parts and service for Elliott and non-Elliott rotating equipment
- ◆ Parts management programs and customer inventories
- ◆ Quick action machining center to produce urgently needed parts
- ◆ Regional parts depots with same-day shipping on most stock items
- ◆ Technical manuals and comprehensive engineering files on every unit we manufacture



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T H E W O R L D T U R N S T O E L L I O T T



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