EEC-SH

Stationary Turbomachinery Component Coating

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Dresser-Rand Engineered Equipment Coating, EEC-SH, was developed primarily for enhancing surface smoothness to reduce frictional product flow losses through non-rotating components. Aerodynamic studies of turbomachinery components have shown that the greatest losses occur in the stationary components. EEC-SH reduces the final surface finish on new components to below 15 Ra to provide minimal frictional losses. It also acts as a sealer to provide an additional hardened barrier to impede erosive deterioration of the stationaries. This top coat can be added as part of a multi-layer metallic-ceramic system to reduce corrosive attack of the components.

The base coating provides a galvanic, sacrificial second line defensive layer to protect process equipment. This multilayer combination extends the operating life of unit components and increases on-line availability. The SH top coat presents a smoother surface to the process media which can also reduce the ability of foulants to adhere to the unit's internals.

Applications

EEC-SH is designed to be used on industrial compressor and steam turbine non-rotating components. The coating provides an improved surface finish and protection from harsh operating environments in the operating range of 3-9 pH. Components eligible for application* of the coating include but are not limited to:

- Compressor diaphragms
- Inlet guides
- Guide vanes
- Diffusers
- Turbine diaphragms
- Cases

*All coating applications will be reviewed by Dresser-Rand Engineering for applicability to the design and service conditions of the unit.

Typical Coating Properties

Average thickness: .8 - 1.5 mils
Surface roughness: <15 Ra (on new surfaces)
Max continuous operating temp: 500ºF
Peak operating temp: 600ºF
Coating adhesion (ASTM D2247): Excellent, no pickoff
Salt spray (ASTM B117 & CASS): No coating failure
Thermal shock, impact survival, abrasion resistance: Excellent

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