SermeTel® Process 725 Coating System

PRODUCT DESCRIPTION

The SermeTel Process 725 coating system is a multi-layer inorganic overlay. The basecoat consists of an aluminum-filled galvanically sacrificial coating. The topcoat is a chromate/phosphate chemically inert sealant. The sealant retards corrodents from penetrating to the base metal, thus significantly extending the useful life of the coating system in the harsh environments found in gas turbines and industrial processing equipment.

USING SERMETEL 725

Although the recommended thickness range of SermeTel 725 is 2.0-4.0 mils, the coating system can be applied in precise thicknesses ranging from 0.5 mils and up. SermeTel 725 provides protection against cyclical erosion and corrosion. It also can provide a smooth finish, which enhances engine efficiency.

SUMMARY

When used in gas turbine engines, SermeTel Process 725 has yielded cost savings from extended component life and reduced maintenance costs. The coating system is generally used on components such as steel compressor blades, vanes, disks, hubs, shafts, cases, and bearing supports.

SermeTel topcoated coating systems have recorded highly successful service experience in gas turbines, including many years of operation in a wide range of both industrial and flight turbine engines.

Physical Properties

Thickness	0.5 mils (12.5 µm) to as required, typically 2.0 mils (50 microns)
Surface Profile (Typical)	avg. 40 µ inches at .030" cutoff (.89 micron @ 0.8 mm)

Performance Data

(2 mil coating on 1010 steel)

TEST	RESULTS
Salt Spray (ASTM B117)	No red rust after 2500 hrs.
Abrasion Resistance (ASTM D968)	>150 liters/mil
Tensile Bond Strength (ASTM C633) (measured on basecoat alone)	8,000 psi (70 MPa) strain rate: 0.1 inch per minute

Specifications

SermeTel Process 725 coating system is specified as Bill of Material by over ten major industrial turbine manufacturers.

SERMATECH® International

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