

Advanced Coatings for Aerospace Applications

**CURTISS
WRIGHT** _____
Surface Technologies



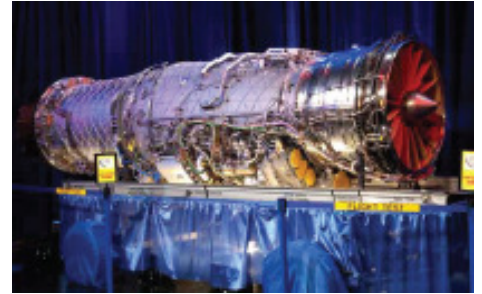
Coating Solutions from Development to Production

Aerospace

Serving both the OEM & Overhaul market segments of aviation.

Curtiss-Wright Surface Technologies (CWST) offers aircraft engine coating solutions for the complete engine from the compressor to the turbine. CWST coatings can provide corrosion, wear, erosion and oxidation protection, along with thermal and sealing management.

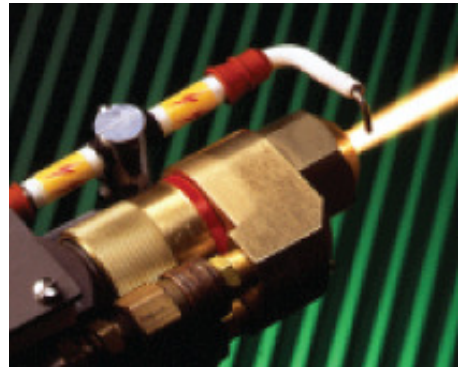
We provide solution-based coating applications for engine components. Also, CWST offers coatings for flaptracks, landing gear and various actuators.



Capabilities

Designed and applied to enhance surface performance.

- Thermal Spray
- HVOF (High Velocity Oxygen Fuel)
- Peening
- Coating Removal
- Heat Treat
- Cold Spray
- Dry Film Coatings
- Aluminum Paints
- Vibratory Finishing
- NDT (non destructive testing)
- Lab Evaluations



Qualifications

Approvals across a broad spectrum of aerospace manufacturers.

- General Electric
- Rolls Royce
- Sikorsky
- Goodrich
- Bombardier
- Pratt & Whitney
- Honeywell
- Boeing
- Messier Dowdy
- Various Military Specs



- NADCAP, ISO 9001, SAE – AS9100
- FAA / EASA Approval at our Connecticut Facility

Center for Advanced Coatings

Application development focused on solving customer surface problems.

The Center is designed for applications development, parameter studies, coatings qualification and prototype work. Our coating experts work directly with customers to diagnose problems and devise solutions. Our approach is to couple materials, spray equipment and robotic software to produce an efficient solution.



Applications

Vanes and “Hot Section” Components

Advanced tight tolerance controlled plasma sprayed Thermal Barrier Coatings (TBC) and HVOF bondcoats, applied to turbine vanes and combustion components, providing accurate and repeatable coating control (thickness, porosity, structure) on the most challenging configurations. Primarily used for thermal management to reduce thermal fatigue, distortion, oxidation and base metal cracking.



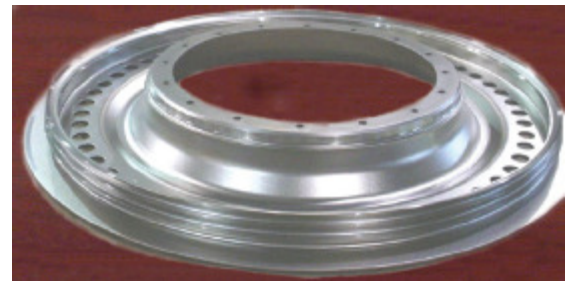
Turbine Shrouds and Rings

Turbine clearance control HVOF coatings, and alternates to Low Pressure Plasma Spray (LPPS) coatings. These coatings are enhanced by providing a portion of the coating diffused to the interface. This is supported by an improved interfaced condition prior to the diffusion process. Primarily used for high temperature clearance control and oxidation protection.



Outer Casings, Knife Edge Seal and Clearance Fits

Clearance control abrasadable coatings are used on various compressor casings, mating disk surfaces, and abrasive knife edges. A key element of these coatings is controlling the hardness and thickness requirements to assist in the final coating profiles and machining requirements. These coatings can contribute to improving the efficiency of the engine.



Landing Gear, Structures, Actuators

Chrome plate replacement utilizing HVOF tungsten carbide coatings. These coatings deliver superior wear and corrosion prevention. The coating can finish grind to less than 4 Ra. These coatings have been shown to extend component life as compared with chrome plating.



Manufacturing Sites

Total of 140,000 square feet of manufacturing space with 40 production booths and dedicated R&D facility.



East Windsor, CT



Duncan, SC



Wilmington, MA

Curtiss-Wright Surface Technologies (CWST) and the affiliated companies of Metal Improvement Company provide surface treatments for demanding industrial applications including specialty coatings, shot peening, laser peening and heat treating from 68 facilities located in North America, Europe and Asia. Curtiss-Wright Surface Technologies is a wholly-owned subsidiary of the **Curtiss-Wright Corporation** (NYSE: CW), a diversified global provider of highly engineered products and services in the areas of metal treatment, motion control and flow control. The company applies its capabilities in the aerospace, agricultural, automotive, chemical processing, general industrial, marine, medical, military, mining and power generation markets.

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