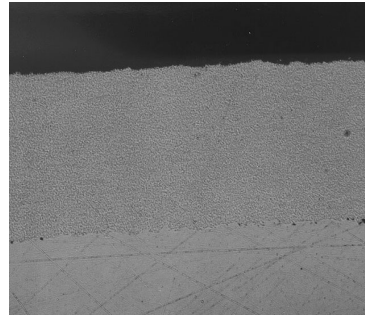


Service Information

Curtiss-Wright Surface Technologies (CWST) High Velocity Oxygen Fuel (HVOF) tungsten carbide coatings can replace hard (electrolytic) chrome plate in demanding applications, such as aerospace landing gear, actuators and jet engine bearing applications.



Tungsten carbide coating



Landing gear

CWST HVOF tungsten carbide coatings are proven in demanding applications:

- Approved PWA military engines.
- Used in the Joint Strike Fighter.
- Various landing gear and actuator applications.
- Off angle spray applications. Coatings are applied to inside diameters up to 2.5 X the diameter size. For example, a cylinder ID 2 inches in diameter can be coated 5 inches deep.

Clear Advantages

CWST HVOF tungsten carbide coatings deliver superior value as compared to hard chrome plate.

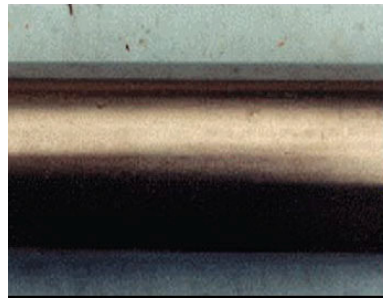
- Superior wear prevention performance.
- Superior corrosion protection performance.
- More environmentally friendly.
- Improved life performance over time.
- Can be more cost-effective.

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.

Coating Characteristics		
Description	HVOF tungsten carbide coating	Hard chrome plate
Macrohardness (Rc)	> 70	60-70
Microhardness (DPH 300)	> 1050	750-850
Bond strength	> 10,000 *	~ 6,000
Porosity	< 1%	Inherently cracked
Coating thickness (in)	> .003	< .005
Surface finish (Ra)	< 4	< 4

*Results exceed strength limit of epoxy needed for tensile test

Performance Characteristics		
Description	HVOF tungsten carbide coating	Hard chrome plate
Corrosion Test – ASTM B117 (hours)	720	55
Surface temperature limits (F)	1025	750



HVOF tungsten carbide coating



Hard chrome plate

Curtiss-Wright Surface Technologies

12 Thompson Road
East Windsor, CT 06088
Telephone: 860-623-9901
Fax: 860-623-4657
FAA Repair Station #G2PR726J
EASA.145.4482

Curtiss-Wright Surface Technologies

201 Ballardvale Street
Wilmington, MA 01887
Telephone: 978-658-0032
Fax: 978-658-0572

Curtiss-Wright Surface Technologies

199 Ridgeview Center Drive
Duncan, SC 29334
Telephone: 864-486-9311
Fax: 864-486-9307