

Curtiss-Wright Surface Technologies business offers a selection of thermal spray coating solutions that can increase the life and improve the performance of turbine buckets and blades.

## Service Information

### Increased Life

Curtiss-Wright Surface Technology's (CWST) HVOF (High Velocity Oxy-Fuel) thermal spray coatings are dense, smooth overlays that can impede hot corrosion. Significant life extension can be realized even under challenging conditions.

### Improved Performance

CWST can improve the performance of turbine buckets by providing a corrosion resistant overlay. Coating material selection by varying the aluminum content tailors coatings to meet operating conditions.

### No Surface Finishing Needed

CWST overlay process includes a smooth MCrAlY with no surface finishing needed when moderate surface roughness is specified.

### Center for Advanced Coatings

Our Center for Advanced Coatings offers customers superior thermal spray process capabilities. It is designed for applications development, parameter studies, coatings qualification and prototype work. Our experts work directly with customers to diagnose problems and devise solutions. We can fully quantify coatings by analyzing composition and evaluating structure.



7EA type buckets

### Applications

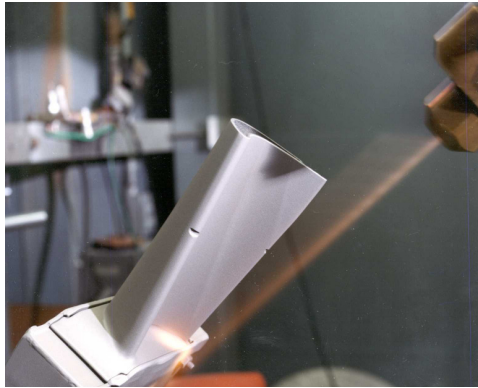
CWST HVOF MCrAlY coatings can be used on turbine components in many applications including:

- Frame 6B type buckets
- Frame 7EA type buckets
- 501D type blades
- 501F type blades
- Turbine shrouds
- Turbine tiles
- Turbine ring segments

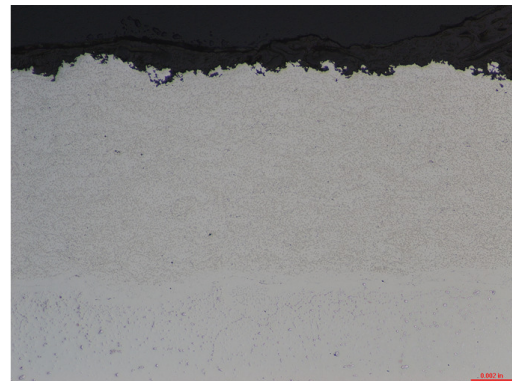
### Results

The superior performance of turbine buckets coated with one of CWST's thermal spray coatings can help to decrease downtime and maintenance costs.

| GPX system | Nominal chemistry | Aluminum content | Description  | Macro hardness | Thickness                 | Bond Strength | Max. Temp |
|------------|-------------------|------------------|--|----------------|---------------------------|---------------|-----------|
| 1570HP     | CoNiCrAlY         | 6%               | Cobalt-based MCrAlY for high-temperature corrosion               | RB 95          | Per customer requirements | > 10,000      | 2,200°F   |
| 1568HP     | NiCoCrAlY         | 10%              | Nickel-based MCrAlY for high-temperature oxidation and corrosion | RB 95          | Per customer requirements | > 10,000      | 2,200°F   |



HVOF Coating of Buckets



HVOF MCrAlY 200x

**Curtiss-Wright Surface Technology's** (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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