

Curtiss-Wright Surface Technologies offers a selection of thermal spray coating solutions that can increase the life and improve the performance of metal valves.

Service Information

Increased Life

Curtiss-Wright Surface Technologies (CWST) thermal spray coatings are hard, wear resistant overlays that can impede erosion and corrosion. Significant life extension can be realized even under challenging conditions.

Improved Performance

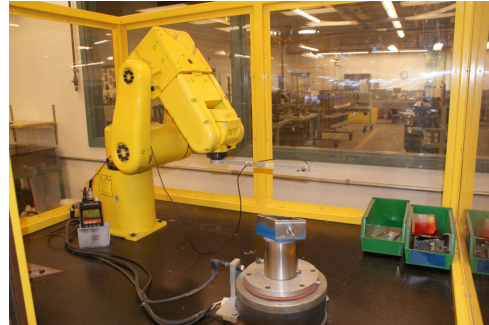
CWST can improve the performance of metal valves by providing a hard, resistant overlay which can help a customer achieve zero leakage with proper valve design. These dense coatings can be finished to an 8-16 microinch Ra, creating a tight seal.

No Corrective Finish Needed

The typical overlay process can distort the work piece and require post-heat treatment to restore substrate hardness. With CWST coatings, no corrective finishing is needed because CWST thermal spray processes do not raise the temperature above 300°F.

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.



Automated testing helps ensure superior process control.

Applications

CWST thermal spray coatings can be used on valves in many applications including:

- Chemical processing
- Mining Slurry
- Oil & Gas
- Pulp & Paper
- Steam (e.g. turbine)
- Synfuel

Results

The superior performance of metal valves coated with one of CWST thermal spray coatings can help to increase productivity, decrease downtime and reduce maintenance costs.

GPX system	Nominal chemistry	Description	Macro hard	Micro hard	Best finish	Bond strength	Max. temp
1208PP	Co Mo Cr Si	Cobalt superalloy for high-temperature wear	RC 36	600 DPH ₃₀₀	4	8,000	1,500
1700PP	Ta	Tantalum for severe corrosion protection	RC 36	600	N/A	5,000	375
2170HP	Proprietary	High-temperature sliding wear resistance	RC 38	650	2	6,000	600
2176PP	Cr ₂ C ₃ /NiCr	Hard carbide for hot wear and erosion	RC 54	800	4	>10,000	1,500
2177HP	Cr ₂ C ₃ /NiCr	Tough carbide for extreme particulate erosion	RC 58	875	4	>10,000	1,500
2651PP	WC Co	Tungsten carbide for severe wear resistance	RC 60	950	3	7,000	900
2658HP	WC Ni	Carbide with nickel matrix for exceptional wear service	RC 62	1,000	1-2	>10,000	1,000
2660HP	WC Co	Maximum resistance to abrasive wear	RC 65	1,100	2	>10,000	1,000
3101PP	Al ₂ O ₃	Pure alumina as dielectric or to resist corrosive wear	RC 66	1,100	4	4,000	1,800
3151PP	Cr ₂ O ₃	Chrome oxide for corrosion and abrasion applications	RC 72	1,200	3	5,000	1,300

PP=Plasma HP=HVOF AW=ARC wire CP=Combustion powder CW=Combustion wire

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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