

HVOF Special Process Capability

High Velocity Oxygen Fuel (HVOF) Coatings extend component life. As the “World Leader in Fuse Pin Technology™” RBC Sonic Industries offers the capability to provide HVOF coatings to complex machined parts and the Sonic core offering of specialty fasteners.

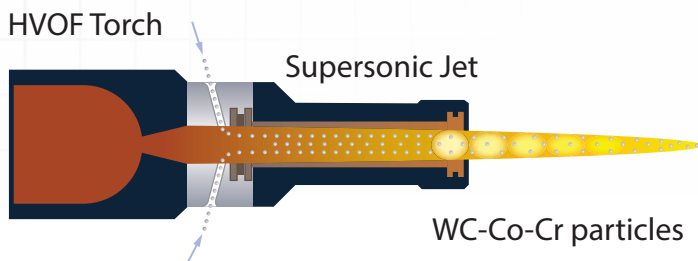
HVOF Tungsten Carbide Coatings are used in a variety of commercial engine and airframe components (like flap tracks, landing gear and engine components). This coating provides improved wear (4X), impact and & fatigue resistance, and equal or better corrosion resistance than conventional hard chrome plating. The HVOF coating is ground to meet the dimensional and surface finish desired.

Technical Features

- ✓ **Size range capabilities:** Up to 8" OD x 32" Length
- ✓ **Full coating and finishing (Grind & Polish) capabilities**
- ✓ **Coatings:** Tungsten Carbide/BAC 5851/AMS 2448
- ✓ **HVOF applied to AMS 2448 specification**
- ✓ **Materials:** Titanium, Inconel, 15-5PH, others
- ✓ **Approvals:** Boeing D1-4426, SAFRAN PCS 2560

REACH Compliant

NADCAP Approved



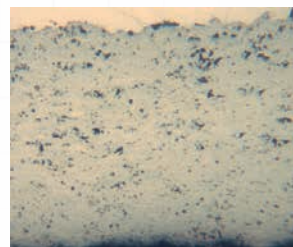
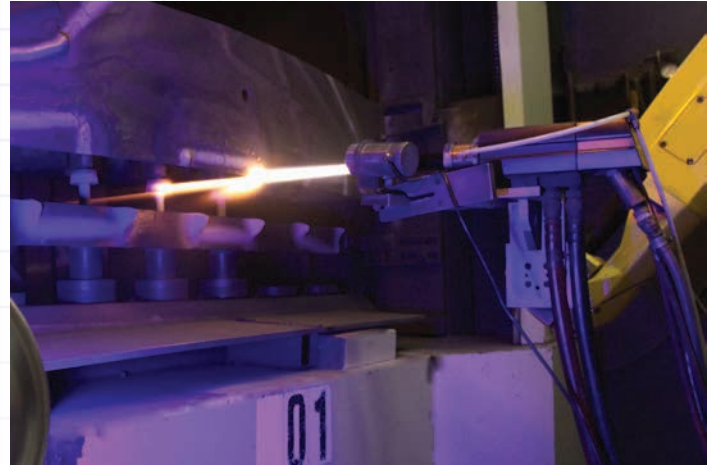
HVOF Coating Properties

- ✓ **Material (most popular):** 86% WC- 10% Co -4% Cr
- ✓ **Porosity:** <1% (Very dense coatings)
- ✓ **Hardness:** > 1100 HVN (>70 Rc)
- ✓ **Bond Strength:** >10,000 psi

Inquiries:

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HVOF Microstructure at 200X



**“Exceptional
alternative
to traditional
Hard Chrome
Plating”**



Innovation. Commitment. Quality.

RBC Bearings® has been producing bearings in the USA since 1919. In addition to unique custom bearings, RBC Bearings® offers a full line of standard industrial and aerospace bearings, including:



Spherical Bearings

- MS approved to AS81820 (formerly MIL-B-81820)
- Self-lubricating • Metal-to-Metal
- Loader slots • High temperature
- Low coefficient of friction
- Special configurations and materials



Thin Section Ball Bearings

- Standard cross sections to one inch
- Stainless steel and other materials are available
- Sizes to 40"
- Seals available on all sizes and standard cross sections
- Super duplex configurations



Journal Bearings

- MS approved to AS81934 (formerly MIL-B-81934)
- Plain and flanged • Self-lubricating
- High temperature • High loads
- Available in inch and metric sizes



Airframe Control Ball Bearings

- MS approved to AS7949 (formerly MIL-B-7949)
- Single and double row
- Radial, self-aligning, and pulley series
- 52100 Cad plated and 440C stainless
- Zinc Nickel plated



Ball Bearing Rod Ends

- MS approved to AS6039 (formerly MIL-B-6039)
- Various shank configurations
- Low coefficient of friction
- Advanced AeroCres® materials available



Rings and Seals

- Solutions for any pneumatic and hydraulic applications
- Seals from .5" to 55" diameter
- Cast Iron to Rene 41
- Precision machined & wire rings to tight tolerances



Specialty Fasteners

- Hollow Bolts, Fuse Pins, Solid Bolts (Standards), Custom Machined Parts & Nuts
- Hot Headed, Thread Rolled, HVOF Coated
- Large Diameter over 3/4"



Hydraulic Actuators

- 2-Position Fluid Hydraulic
- Auto or Manual Mechanical Locking
- Lock Sensing/Position Sensing
- Flow/Directional Control Valves; Solenoid/Manual



Rod End Bearings

- MS approved to AS81935 (formerly MIL-B-81935)
- Self-lubricating • Metal-to-Metal
- Loader slots • High temperature
- Low coefficient of friction
- Special configurations and materials



Track Rollers

- MS approved to AS39901 (formerly MIL-B-3990)
- ATF single row and ATL double row
- Sealed with lube holes and grooves
- Heavy duty cross sections
- Advanced AeroCres® materials available



Cam Followers

- MS approved to AS39901 (formerly MIL-B-3990)
- Advanced AeroCres® materials available
- Maximum corrosion resistance
- Superior lubricants & seals to reduce maintenance



Load Slot Bearings

- Spherical and rod end designs
- Superior ball-to-race conformity
- Reduced maintenance cost
- Variety of race materials available



Specials

- Many specialty bearings, custom-designed and configured for diverse aerospace applications
- Capability for advanced aerospace specialty corrosion resistant and high temperature materials



Control Rods

- Swaging up to 14' length and 4" diameter
- Nadcap and customer special process approvals including NDT
- Surface treatments, CNC Machining, Flash Welding, Aluminum Heat Treat
- Design and build to print



Ducting Solutions

- Solutions for pneumatic ducting
- Patented couplings
- Temperatures 450° to 1,500°F
- Engines, Aircraft, APUs



Machined Components

- Exotic materials • 3, 3.5, 4 and 5 Axis
- Horizontal and Vertical Milling
- Lathes, Hot Head, Gearing, Heat Treat, Special Processes

