



thermal spray coatings
metallurgical laboratory
machining
grinding



Precision Machining, Grinding & Thermal Spray Since 1960



MACHINING, GRINDING & THERMAL SPRAY SOLUTIONS

Full service manufacturing, thermal spray coatings and finishing.

ENGINEERED SOLUTIONS

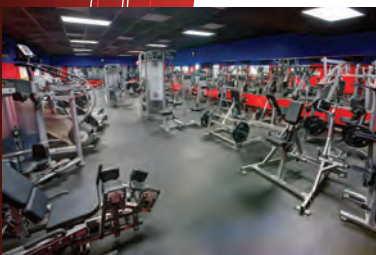
- THERMAL SPRAY COATINGS
- METALLURGICAL LABORATORY
- MACHINING
- GRINDING

Precision Machining, Grinding & Thermal Spray Coatings Since 1960



ABOUT US

What began as a small shop in 1960 is now a full-scale coating, machining and grinding operation. We know coatings—our founder James Watson was instrumentally involved in the development of High Velocity Oxygen Fuel (HVOF) coatings. Today we use automated systems to apply our thermal spray coatings. We save our customers time and money because we do everything in-house—from our automated thermal spray facility, and CNC machining & grinding to our own Metallurgical Laboratory! For more than 50 years we've provided consistent, quality service.



WHY WORK FOR WATSON GRINDING?

We take pride in our loyal and skilled workforce, and know that in order to produce the best work, we must obtain the best talent. Some of the benefits of working at Watson Grinding include: Employer Paid Health Benefits, 401K Plan, Long-term Disability, Life Insurance, A/C Shop, Overtime and an on-site Company Fitness Facility!



SINCE 1960, QUALITY REMAINS CONSTANT.

GRINDING

We perform O.D., I.D., spherical and flat grinding. We have capabilities for flat and O.D. lapping, and can lap a flat surface to zero light bands! Our ball grinding equipment can handle up to 53" diameter. We perform ball lapping & seat grinding up to 100" diameter.



MACHINING

Our CNC machining capabilities produce consistent quality every time, whether you order 10 pieces or 10,000. We are continuously expanding our CNC department and we specialize in CNC turning and milling. We are capable of handling large parts.



GRINDING EQUIPMENT

- 2 VERTICAL GRINDER
- 4 SURFACE GRINDING MACHINES
- 7 CYLINDRICAL GRINDING MACHINES
- 5 INTERNAL GRINDING MACHINES
- 6 BALL GRINDING MACHINES
- 1 HONING MACHINE
- 2 TOOL & CUTTER GRINDERS

MACHINING EQUIPMENT

- 12 CNC LATHES
- 3 CNC MACHINING CENTERS
- 12 MANUAL ENGINE LATHES
- 3 CNC MACHINING CENTERS
- 9 MILLING MACHINES
- 6 RADIAL ARM DRILL
- 4 LAPPING MACHINES
- SHAPER
- DRILL PRESS
- HYDRAULIC DRILL PRESS



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Technology at work for you

THERMAL SPRAY COATINGS

We provide engineered solutions for components with abrasion, corrosion and wear resistance needs. Our extensive experience with HVOF and Plasma thermal spray coatings, and fully automated thermal spray facility allows us to handle large volumes of thermal spray work with precision quality. We utilize an encyclopedic number of exotic alloys. Both the metal powder and final coatings are tested in-house at our A2LA ISO 17025:2005 Metallurgical Lab.

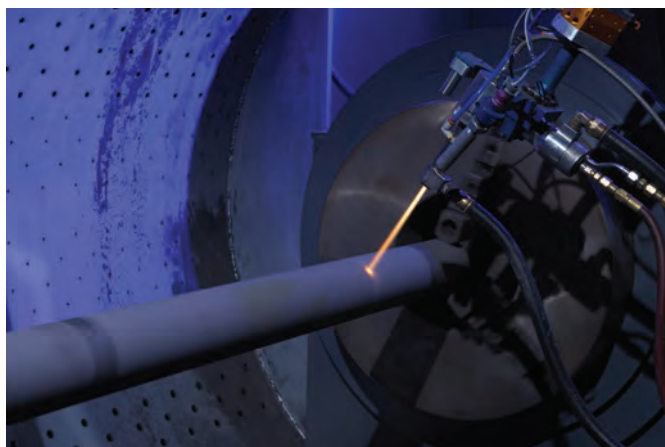
COATINGS APPLIED

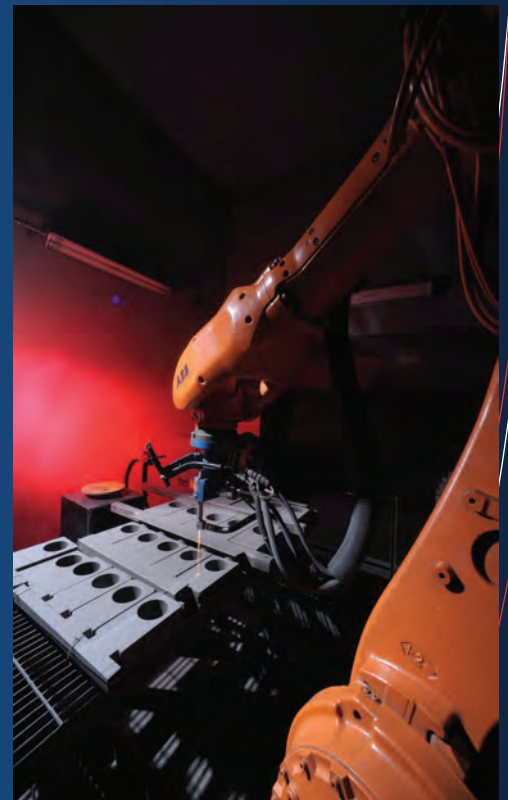
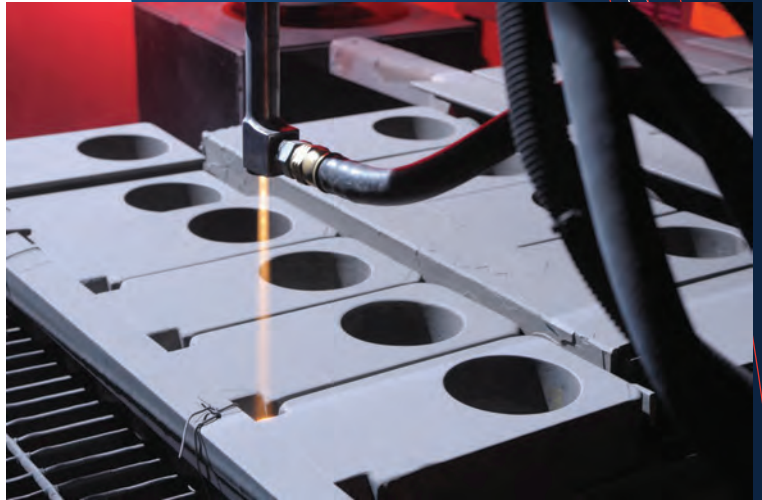
- TUNGSTEN CARBIDE
- CHROME CARBIDE
- CHROME OXIDE
- HASTELLOY
- INCONEL
- MONEL
- TANTALUM
- STELLITE
- COLMONOY
- AND MANY OTHERS



EQUIPMENT LIST

- 10 THERMAL SPRAY BOOTHS WITH LATHES
- 10 TOTAL 6-AXIS ROBOTS
- 7 JET-KOTE HVOF SYSTEMS
- 5 MACH II HIGH ENERGY PLASMA SYSTEMS
- COLMONOY J3 SPRAY METAL RIG
- 2 MILLER 300 AMP HELIARC WELDERS WITH WIRE FEEDERS
- LINCOLN 300 AMP WELDER





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QUALITY CONTROL/QUALITY ASSURANCE

Our in-house inspection specialists measure the quality of our work throughout the manufacturing process, as well as final product testing.

ASNT NON DESTRUCTIVE TESTING

MAG-PARTICLE MT TESTING
ULTRA-SONIC UT TESTING
LIQUID PENETRANT LP TESTING



METALLURGICAL LABORATORY

One of our unique strengths is our in-house metallurgical laboratory which we use for research & development, quality assurance and failure analysis. We pride ourselves in supplying the best quality coatings and manufactured products in the industry and our A2LA Accredited ISO 17025:2005 laboratory allows us to ensure the quality and consistency our customers demand.

A2LA ACCREDITED ISO 17025:2005 TESTING

Thermal Spray Powders

Apparent Density ASTM B212
Flow Rate ASTM B213
Sieve Analysis ASTM B214

Hardness

Knoop & Vickers (100g, 300g, 500g, 1Kg, 2Kg) ASTM E384
Rockwell (B and C) ASTM E18

Thermal Spray Coatings

Adhesion ASTM C633; QSLP 01
Area Percentage Porosity ASTM E2109; QSLP 03
Metallographic Preparation ASTM E1920
Bondline Contamination QSLP 05
Coating Thickness ASTM B487



NON-ACCREDITED TESTING

Shear Strength Tensile Test ASTM C633
Taber Abrasion Testing ASTM F1978, 18508-1
Valve/Coating Failure Analysis
Thermal Spray Coatings R&D



COMMON COMPONENTS SERVICED

Pump cases, impellers and heads

Pump shafts, sleeves and plungers

Pistons and Piston Rods

Centrifugal Pump products

Rotating Elements

Cylinders

Ball Valve components

Gate Valve components

Mixing Equipment: blades, vessels and agitators

Bearing Housings

Seal Sleeves

Heat Exchangers

Steam and Gas compressor rotors

Compressor rods, shafts,

Compressor pistons and compressor cylinders

And many more!

INDUSTRIES SERVED

Oil & Gas

Mining

Chemical

Pulp & Paper

Power Generation

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Thermal Spray Coatings

HVOF, Plasma and Spray & Fuse



Machining

Complete CNC machining capabilities
Turning and milling specialists



Grinding

O.D., I.D., spherical and flat grinding



Metallurgical Lab

Hardness Testing, Metal powder testing,
Thermal Spray Coating Testing, R&D, Failure Analysis

Precision Machining, Grinding & Thermal Spray Coatings Since 1960



Thermal Spray Coatings
Machining
Grinding Services
Metallurgical Laboratory

We understand our customers' precise needs and strict deadlines. That's why we provide an array of services in-house saving valuable time and money. We have stood the test of time because our greatest strength is our people and we know they always deliver a quality product.



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