



Thermal spray solutions

Whether you need **thermal spray** equipment, materials, fully automated coating systems or technical support and assistance, Praxair Surface Technologies, Inc. and TAFE Incorporated has the **solution** you can rely on. Merging over 60 years of equipment, applications and coatings **experience**, Praxair and TAFE applies hardware and consumable **expertise** to provide you with coatings technology **unparalleled in industry**. Application by application, we offer the appropriate thermal spray process – Arc Spray, Plasma Spray, HVOF, Combustion Spray – and the right material to do the job properly and **cost-effectively**. Add it up and you'll find that Praxair and TAFE is your **single source** solution for thermal spray excellence.



The JP-5000 High Pressure HVOF system sprays with the highest velocities of any HVOF system. This improves coating quality density and bond strength.



The 8830 (shown) and 8835 arc spray systems are recognized industry-wide for their reliability and consistent performance.



For applying protective coatings to combat corrosion, the 8860 arc spray system features a lightweight gun and high coverage rates.

Committed to excellence

excellence

The PlazJet system provides outstanding coatings using ceramics, carbides or metals.



At Praxair and TAFE, we are determined to drive thermal spray coating technology forward by enhancing today's performance while striving to develop the next generation of coatings. How do we tackle such an ambitious goal? By continuously improving the performance and safety features of our equipment, powders, and wires and ensuring consistency and repeatability in the coatings you produce every day. At the same time, application-focused materials and coatings engineering continues in our research facilities to "push the envelope" and develop Thermal Spray Technology for the New Millennium™.

Our efforts are focused on customer satisfaction; we will:

- Deliver value in the products we supply, the service and assistance we provide, and the teamwork we cultivate;
- Maintain the highest standards in the thermal spray industry for powder and wire consistency and performance;
- Engineer, build and support the most reliable, safest thermal spray systems available;
- Provide superior automation integration equipment, designed for high productivity and safety.

The SG-100 plasma spray system offers unmatched versatility to produce excellent coatings from almost any type of powder.



Excellent wear-resistant coatings can be produced wherever they are needed with the affordable, portable TJ-4000 HVOF system.

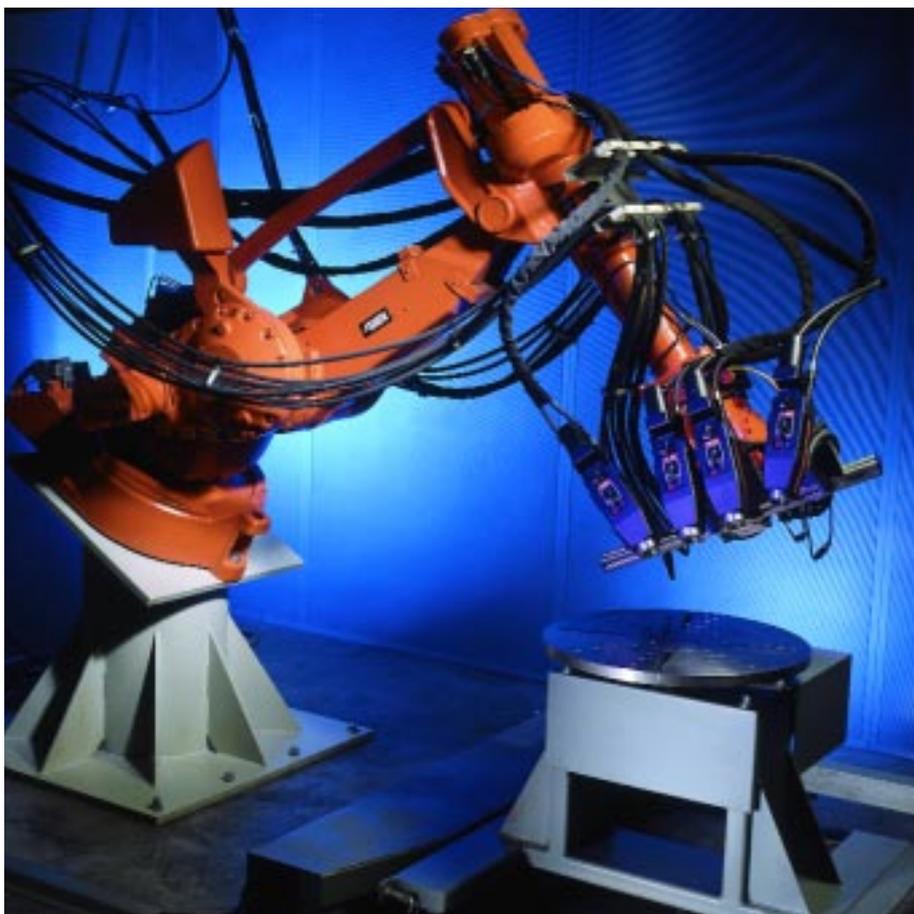
Systems for every application

systems

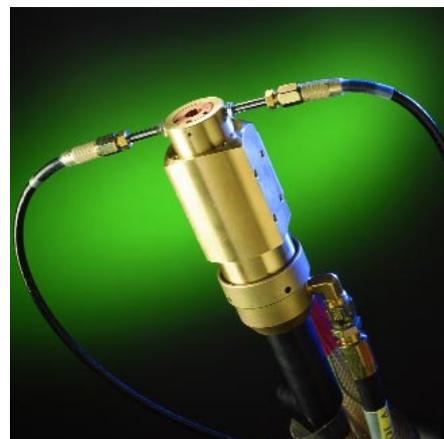
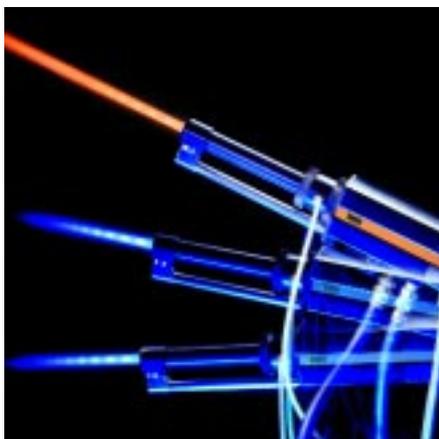
Our systems engineering group integrates thermal spray automation, such as this robot-mounted multiple gun arc spray booth developed for a large automotive OEM.

Our wide variety of thermal spray devices affords you the option of selecting the precise system to match your applications. Praxair and TAFE provides multiple options for Arc Spray, Plasma Spray, HVOF, Combustion Spray, and even WaterJet coating removal. And our systems engineering group can integrate your thermal spray equipment with gun manipulation and part handling equipment, while ensuring safe operation in your facility through responsible dust collection, sound attenuation, and operator protection.

Our flagship thermal spray systems continue to provide superior value. For general part restoration and wear properties, turn to the arc spray workhorses: Praxair and TAFE's reliable 8835 and BP-400. Where the highest hardness and unparalleled wear-resistance is required, the JP-5000 high pressure HVOF system is industry's proven leader. And when it comes to plasma spraying everything from superalloys to chrome oxide to sophisticated, graded thermal barrier coatings, our SG-100 and PlazJet offer optimal coating quality and efficiency.

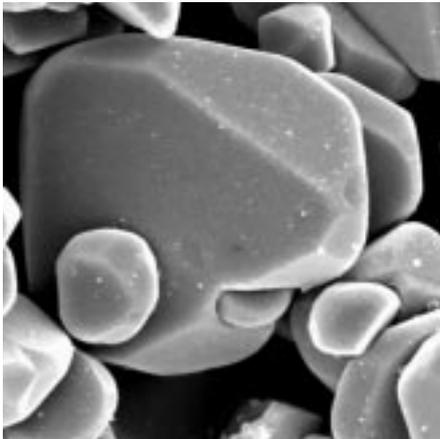


*High Velocity Systems:
The JP-5000 HP/HVOF (left) is recognized as the industry leader for wear-resistant carbide coatings applied reliably and cost-effectively. The new PlazJet gun produces high density coatings of all types with exceptional efficiency.*



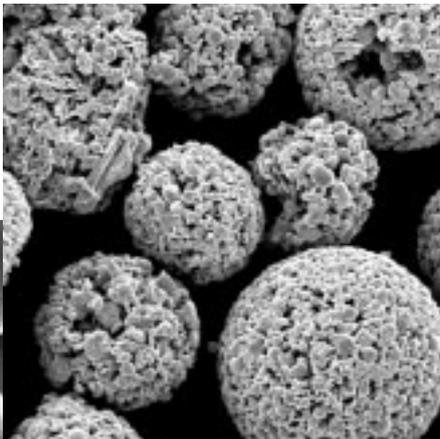
A multitude of materials

materials



A proprietary process for manufacturing Chromium Oxide produces chrome-free powder with a unique, blocky shape for consistent coatings with excellent finishing characteristics.

Utilizing multiple production methods, including inert gas atomization and spray-drying and sintering, we make a variety of powder compositions, shapes, and sizes to fit the exacting needs of each particular thermal spray process.



If your needs include thermal spray materials, Praxair and TAFE's product line is second to none. Our powder manufacturing facility in Indianapolis, IN – the largest thermal spray powder plant in the world – boasts over 300,000 ft² of manufacturing floor space, dedicated solely to thermal spray materials.

We design and develop powders for high volume production but also are equipped for small scale, R&D batches and customized compositions and sizes. Regardless of the quantity of material you need to solve your application challenge, Praxair and TAFE will work to develop a tailored powder with the characteristics required to help you produce a successful coating solution.

Most of the sophisticated, atomized MCrAlY powders utilized today were first produced and refined in our facility. And our powder expertise is broad based, ranging from high purity atomized alloys, to carbides in three varieties (cast-crushed, sintered-crushed, and spray-dried and sintered), to the finest oxide powders available including fully reacted, blocky chromium oxide and spherical zirconia TBCs.

In addition, Praxair and TAFE offers an extensive selection of thermal spray wires. Whether it's a basic composition like 420 stainless steel or a wire that changed the world of arc spray such as BondArc® 75B NiAl, you can count on Praxair and TAFE to have the perfect solution.

We have answers to all of your thermal spray powder and wire needs, and our obsession with quality, consistency and performance assures your satisfaction...every time you select Praxair and TAFE materials.



We offer only the finest powders and wires – engineered, specified, and manufactured to produce the best thermal spray coatings.

People make the
difference

people

We recognize that you expect more from Praxair and TAFE than quality equipment and consumables. That's why we take pride in providing outstanding customer service of all types. Whether you're inquiring about product availability or searching for a material recommendation, our engineering, applications and logistics experts are eager to help. Let us work in partnership with you to develop creative, cost-saving thermal spray solutions to your application challenges. Our people share a vision of growth and success for thermal spray and realize that the team approach is the best way to reach that goal. We encourage you to make use of the experienced staff of professionals at Praxair and TAFE...another of the many resources we provide to assist you in reaching your objectives.

Praxair and TAFE covers the globe with direct representation complemented by select, qualified thermal spray distributors. Our direct sales force and support organizations in North America, South America, Asia and Europe offer a wealth of thermal spray knowledge and experience to help you choose the right equipment and alloy to meet the demands of each application. Praxair and TAFE operates Customer Service offices in its strategic manufacturing and distribution facilities: Indianapolis, IN, Concord, NH, Wigginsbach, Germany, and Sao Paulo, Brazil. We believe in the value of local service and support, and the benefit of providing rapid response times to your orders, price and availability requests, and product inquiries.

If you have protective coating requirements, let us convince you to turn to the single-source thermal spray experts: Praxair and TAFE.

HVOF coatings of all types—alloys, carbides and oxides—are made possible by the versatile HV-2000 system, including this Corona roll being sprayed with Aluminum Oxide.



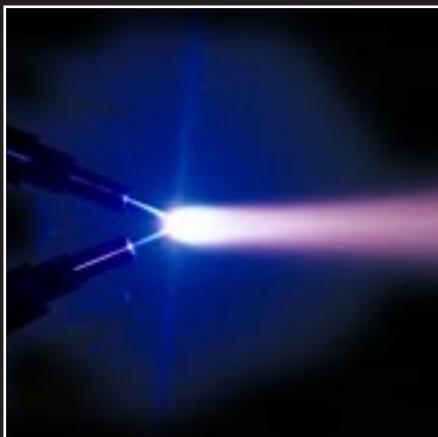
Simple to operate yet robust, the BP-400 arc spray system produces high quality metallic coatings either hand held or machine mounted.





Our staff of professionals is focused on customer satisfaction and delivering value: the highest quality materials and equipment, and unparalleled service and support.

A key component of the advantages offered by the SG-100 plasma system is the 2086A ID attachment, shown spraying a TBC onto the internal diameter of an aircraft engine burner can.



Like the energy generated by the arcing of two wires, Praxair and TAFE brings together the resources, capabilities, and history of several hallmark thermal spray companies to drive our industry ahead.



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Praxair Surface Technologies, Inc.
1555 Main Street
Indianapolis, IN 46224
USA

www.praxairthermalspray.com
psti-info@praxair.com

Telephone:
1-317-240-2650

Fax:
1-317-240-2596

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TAFE Incorporated
146 Pembroke Road
Concord, NH 03301
USA

www.tafa.com
psti-info@praxair.com

Telephone:
603-224-9585

Fax:
603-225-4342

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