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+ OEM

COATING SYSTEMS

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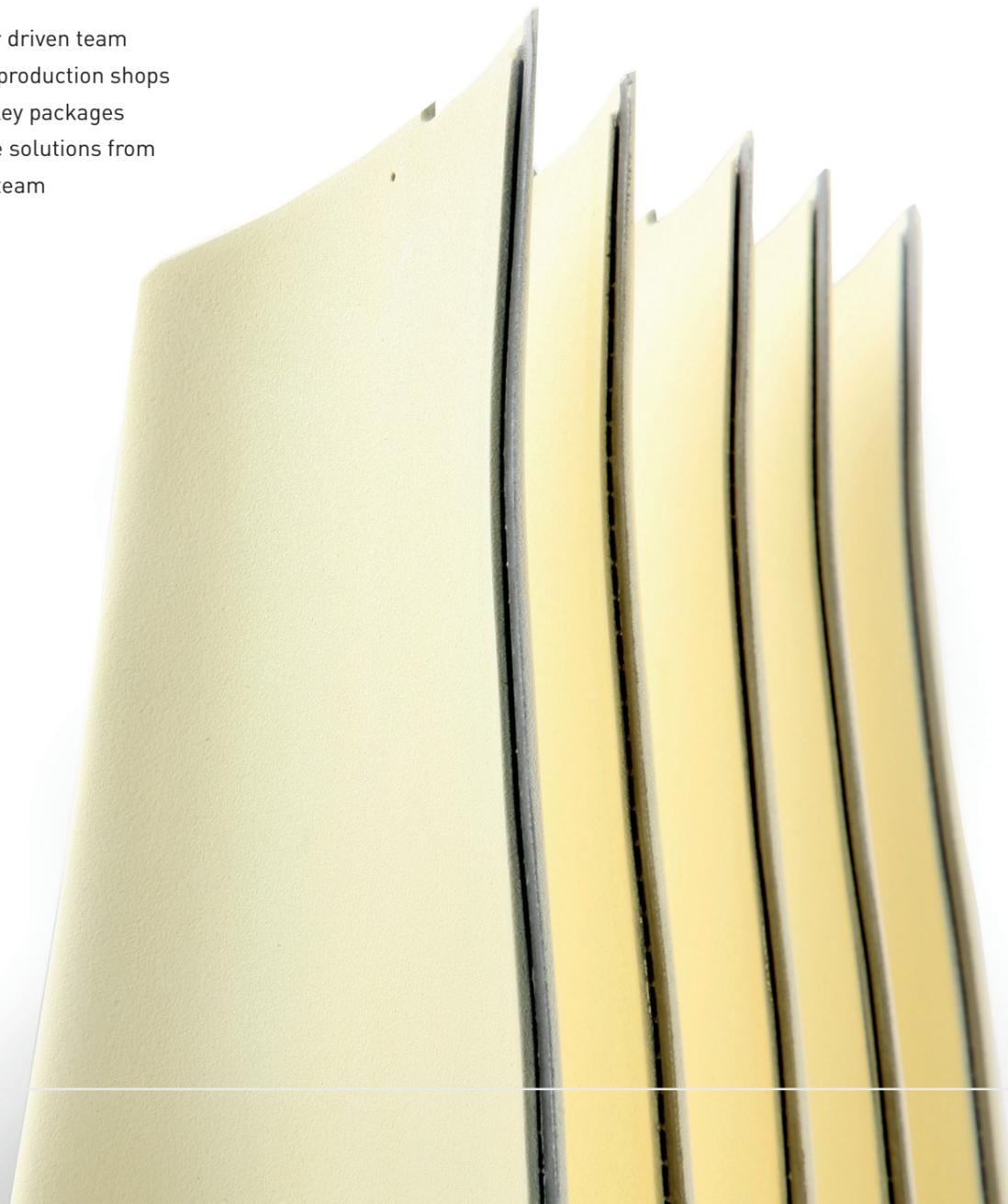
 ***Turbocoating***

Advanced Coating Service

PERFECTION IN SURFACE TREATMENTS

Our core business is the development and manufacturing of special processes, in particular **protective coatings** and **post-coatings treatments** for components used in Industrial Gas Turbines (IGT) and Aero engines.

- Customer driven team
- One stop production shops
- Full turnkey packages
- Innovative solutions from our R&D team



YOUR SUCCESS
IS OUR SUCCESS

OUR COMPANY

From four decades of experience in the thermal spray field Turbocoating.

Today, Turbocoating operates two facilities, one in north America (NC) and one in Europe (Italy), with the capability to provide coating and post-coating treatments for OEM land based gas turbine and aircraft engines.

We have developed throughout the years from a typical coating job shop to an excellence centre for manufacturing gas turbine parts in an engine ready configuration. In fact Turbocoating is able to provide all the treatments on turbine parts after casting and machining.



In 1999, Turbocoating initiated its development with a large investment to offer vacuum plasma spray, air plasma spray and heat treatment services serve OEMs.

In the following years further coating technologies were introduced such as HVOF and diffusion coatings to complete the range.

MUCH MORE THAN COATING

To further establish our position as a full service provider of coatings and post coating services, we included also LASER drilling, welding, vacuum brazing and NDT capabilities for advanced gas turbines to our services delivering to customers engine ready parts.

USA ESTABLISHMENT

In 2010, Turbocoating stepped into the US market by founding a branch located in Hickory, NC. This facility will support the OEM gas turbine market with a one stop shop concept, bringing the experience, expertise and know-how developed in the European site.

CERTIFICATIONS

Our commitment and philosophy to quality has earned the company numerous OEM approvals, while complying to ISO 9001 as well as ISO 14001 certifications.



DEVELOPMENT AND INNOVATION
IS OUR BUSINESS DRIVE

SURFACE TREATMENTS

LPPS technology for MCrAlY

The MCrAlY overlay or bond coating is applied by Turbocoating engineered LPPS process on IGT/Aero turbine blades and vanes. A large experience in spraying property and commercial powders is available to support your request.



LPPS MCrAlYs differentiate from other deposition methods in the high level of coating density and the absence of oxidation. This characteristics lead to outstanding functional performances. Turbocoating is able to offer this coating service at competitive conditions outclassing other methods for protecting turbine section parts.

APS technology for TBC coatings

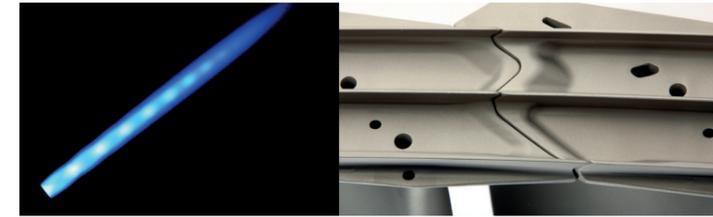
The Yttria Stabilized Zirconia ceramic thermal barrier coating is applied by Turbocoating own engineered process on IGT/Aero turbine blades, vanes and combustor parts. A wide range of different TBC characteristics are available to best suit your product. Smoothing of ceramics is an integral part of our coating process.



APS technology is also used to deposit abrasives or abrasive materials typically used in gas turbines to seal closing areas improving your turbine efficiency and performance.

HVOF technology for MCrAlY and hardfacing

The MCrAlY overlay or bond coating is applied by Turbocoating engineered HVOF process on IGT/Aero turbine blades and vanes. Turbocoating offers a unique HVOF+TBC process with superior characteristics and standards.



Turbocoating new concept and method to spray MCrAlYs by HVOF for hosting ZrO₂ coatings allows us to stay in front of the market. Turbocoating offers high levels of coating quality including process robustness and fast turnaround times of our full scheme of services.

CVD/Pack technology for Aluminizing

The Aluminide coating can be applied by Turbocoating green pack process or CVD to complex internal cavities as well as external surfaces of IGT/Aero blades and vanes of gas turbines. Turbocoating large experience in materials and thermal treatments makes its developments effective and competitive.

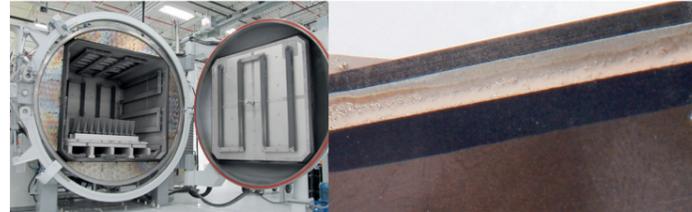


Engineering experience and continuous research through our R&D activities is offering enhanced quality standards, effective methods and environmental friendly solutions.

POST COATING TREATMENTS

Vacuum HT and Brazing

Turbocoating services for advanced materials with state of the art equipment matched with senior expertise to process a wide variety of superalloys of turbine engine components providing coatings with interdiffusion zones and required coating structure.



As part of the coating manufacturing scope we can procure and supply auxiliaries to be vacuum brazed to your products. Auxiliaries include plates, baffles, inserts, deflectors, covers and restrictors to be assembled to your turbine part.

Laser Welding and Ablation

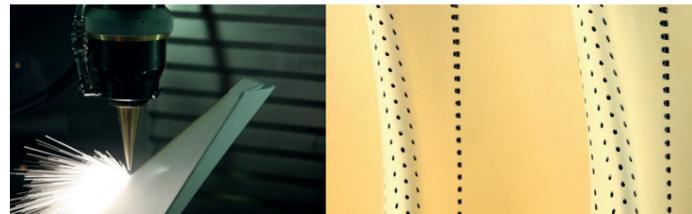
LASER technology is a core competence and is offered for drilling through non-conductive TBC coated products with a complex cooling geometry having for example a serpentine cooling scheme matched with a pattern of film cooling holes.



Our process can offer cylindrical or shaped (fan) hole drilling patterns through a fully coated part meeting your design requirements thanks to 3D modelling, probing and optical enhancements of process control. Airflow measurement is an integrated process to check designated flow rates of your products.

LASER Drilling and Ablation

When traditional TIG welding is not competitive, or alternative solutions are required to meet weld conditions such as low heat input, metallurgical aspects, deep penetration in a single pass, repeatability and thick plate welding; LASER welding is the solution.



Welding conditions are met with an increased overall productivity which may lead you to simplified designs resulting in stronger components, which can be produced at competitive conditions.

Surface Finish and Testing

- Controlled Shot peening
- Surface roughness reduction
- Chemical and Dry-Ice stripping
- FPI
- Ultrasonic measurements
- Airflow and waterflow
- Metallography
- Eddy current measurements
- SEM Microscopy, XRD and XP

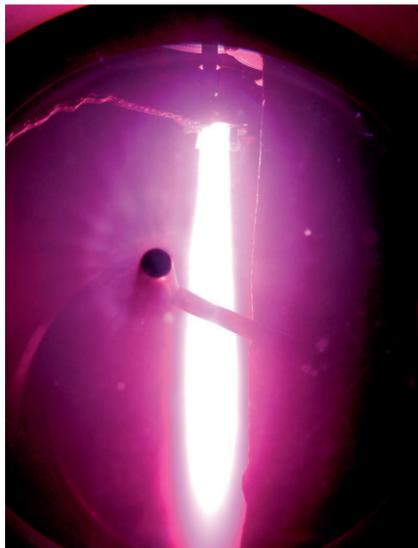


Turbocoating offers a full range of surface finish methods is at your service to improve performance and overall product quality. A wide variety of inspection schemes and qualified personnel is available to assess your products releasing them in an engine ready condition.

ONE STOP SHOP

Turbocoating has developed its technology and organisation in order to enhance the turbine component requirements while offering to OEM customers a full range process.

Lean manufacturing techniques, cellular manufacturing, rapid prototyping and off-line programming deliver to our customers effective and efficient services.



We are your one stop shop for providing competitive conditions for hot section turbine components. After casting and machining processes we are able to offer all the services for preparing the component to be installed in the engine: coating, post coating treatments (LASER drilling, welding, brazing) and NDT.

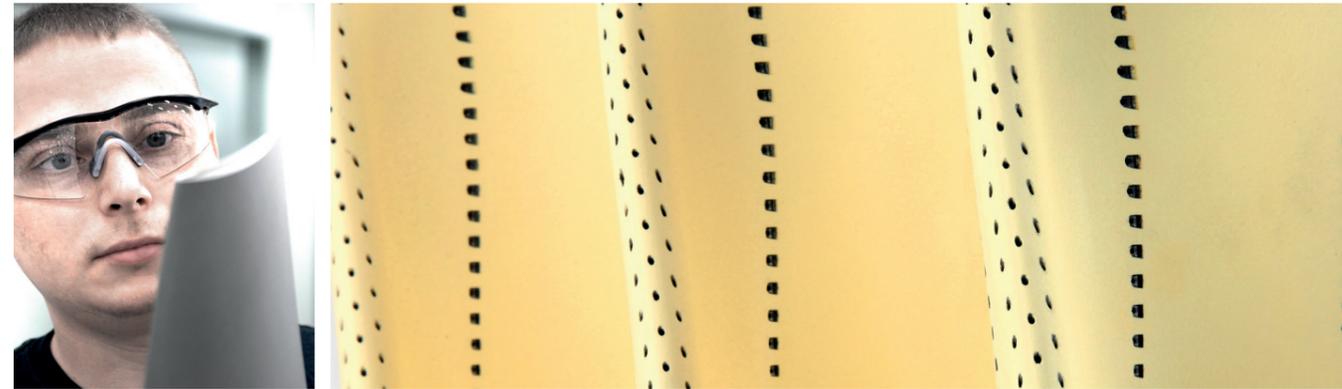
Our engineering and production department has the technical expertise to support complex turbine design and manufacturing services with the goal to produce quality parts at competitive conditions.

KNOW-HOW

Merging the expertise of coatings and typical post coating treatments we can offer effective iterations between each subsequent process step. This results in fast and effective lead developments, in-house project management and low overheads letting our customers be competitive.

YOUR CELL TEAM

A dedicated team will take lead on your programs through the entire development and manufacturing process until delivery.



One Stop Shop: hosting advanced technologies, automation and flexible people.



COATING



HEAT TREATMENT



LASER DRILLING



WELDING AND BRAZING



INSPECTION

ENGINE READY
PARTS

MARKET APPROACH AND DEVELOPMENTS

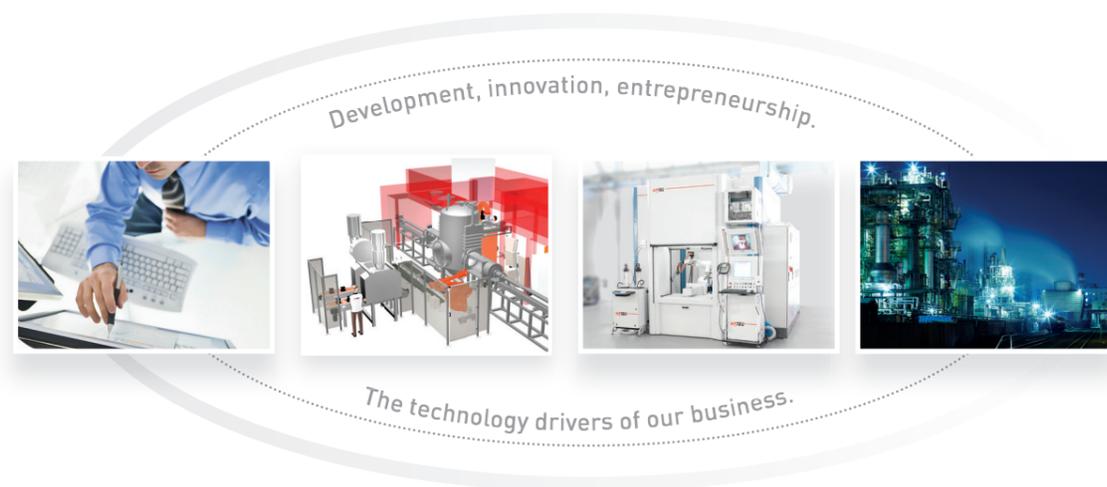
Turbocoating with two main facilities located in Europe (Italy) and USA (NC) is closely supporting OEM demands in the power generation industry. Development, Innovation and entrepreneurship have been the technology drivers of the business.

In an era of globalization Turbocoating is ready to follow you becoming your partner globally.



Unitedcoatings group was established including a group of companies, whereas Turbocoating and ARTEC (Equipments and Technologies) developed synergies from the financial and technological point of view.

Today, Turbocoating will be supporting you in these challenges by offering its services in a full turnkey package with multiple options. We are an international player being able to support OEM customers willing to expand and to develop new manufacturing sites, which require the technology, references, experience and determination to make plans become facts.



READY TO BE YOUR PARTNER
GLOBALLY

R&D AS A CORE VALUE

Investments in R&D and innovation are part of the core values to maintain Turbocoating at the highest technological level in the market.

Turbocoating R&D projects are managed from the technical side but also from legal and financial point of view. This structure is an integral part of our organization being made available for joint developments with our customers.



ACTIVITIES

- R&D activities driven by customer needs.
- R&D projects in partnership with OEMs.
- Joint research projects with the most advanced research institutes and university.

SCIENTIFIC APPROACH

Through our R&D structure we can offer to the customer:

- development of new materials, processes and equipments.
- management of R&D projects.
- production support for process development, problem solving, trouble shooting.

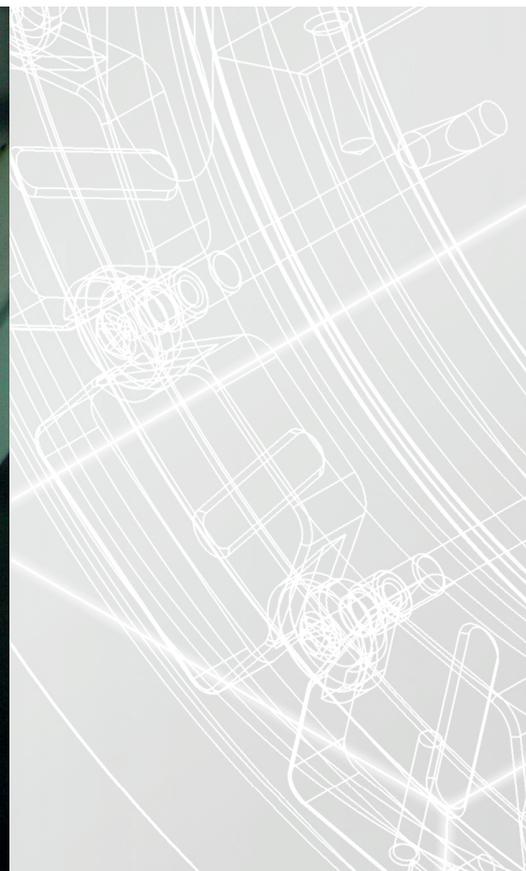
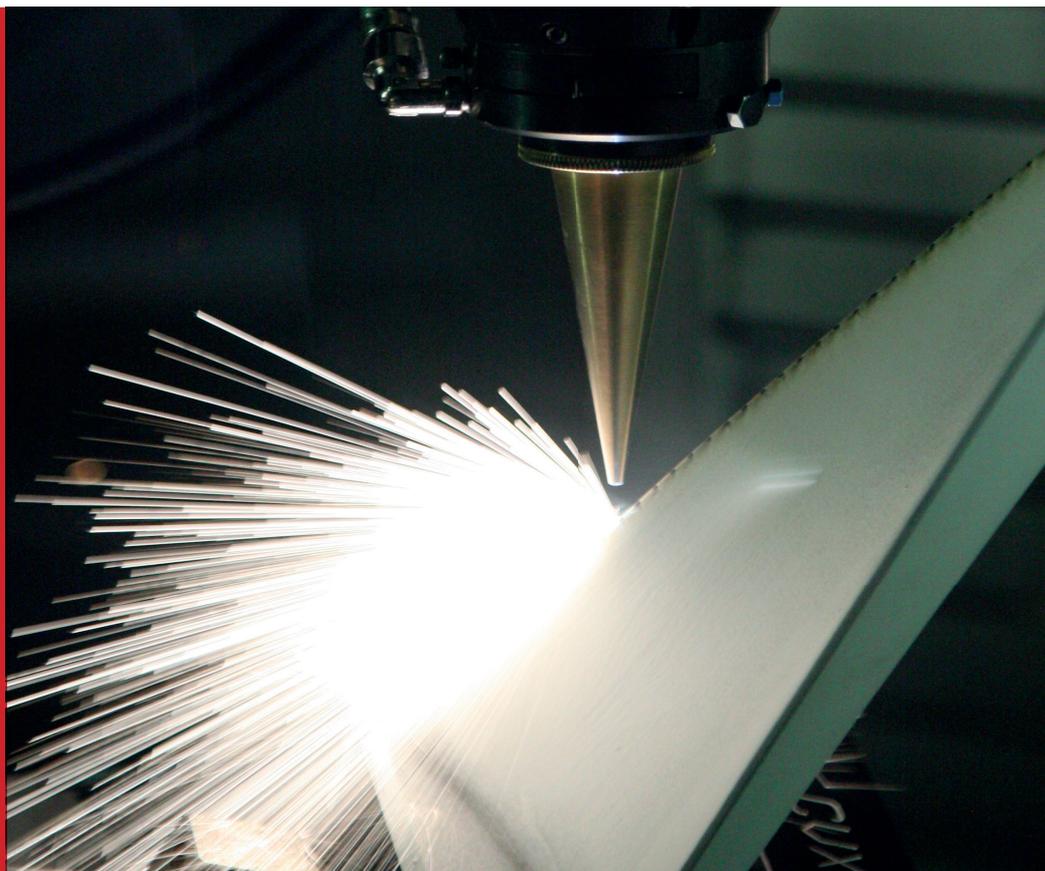
TECHNOLOGY PROTECTION

We care to protect the results of the development by:

- patenting.
- copyrights.
- trademarks.
- registrations.
- contracts.
- confidentiality agreement.



PURSUING LEADING
EDGE TECHNOLOGY



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