

### **Oerlikon Balzers introduces BALORA TECH PRO: Environmental barrier coating with high temperature wear resistance**

Balzers, Liechtenstein, July 17, 2024 – **Oerlikon Balzers, a technology brand of Oerlikon and global leader in PVD surface solutions, introduces BALORA™ TECH PRO, an innovative environmental barrier coating designed to enhance the durability and performance of critical components in the aerospace and power generation industries. The coating provides a REACH compliant alternative to traditional coating technologies.**

The introduction of BALORA™ TECH PRO marks a further significant advancement in surface technology, offering customers improved efficiency, extended component lifetime, and adherence to sustainability goals. By integrating this environmental barrier coating (EBC) into their products, OEMs can achieve higher service temperatures, increased reliability, and reduced operational costs, all while meeting stringent environmental regulations.

BALORA™ TECH PRO remains stable at temperatures up to 1400°C, depending on the substrate material, significantly extending the service life of components by providing robust protection against hot corrosion, oxidation, and mechanical wear. The well-bonded aluminum oxide based coating adheres effectively to various substrates, enhancing the durability and performance of critical components used in all sections of a turbine engine such as low- and high-pressure turbine blades (LPT/HPT) and low- and high-pressure compressor blades (LPC/HPC).

As original equipment manufacturers (OEMs) in these sectors seek solutions to protect temperature sensitive materials from harsh environmental influences and extreme operating temperatures, BALORA™ TECH PRO emerges as an ideal solution. Utilizing Physical Vapor Deposition (PVD) technology, this aluminum chromium oxide coating uses a corundum-type crystal structure, ensuring strong adhesion to a wide range of metallic and oxide materials, including aluminum, titanium, aluminides, steel, nickel alloys, and superalloys.

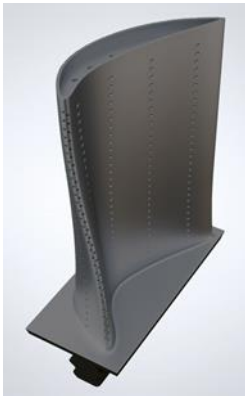
The coating acts as an excellent barrier against diffusion processes, increasing the reliability of turbine blades and other high-stress components, thereby improving overall operational efficiency. By actively preventing fretting and galling, BALORA™ TECH PRO extends service intervals, reducing operating costs and ensuring longer-lasting performance.

As an environmentally sustainable solution, BALORA™ TECH PRO eliminates the need for hazardous substances such as cobalt. This makes it not only a safer choice for the environment but also compliant with REACH regulations.



Beyond the key applications, BALORA™ TECH PRO is also engineered to protect further components that require environmental barrier coatings with high oxidation resistance when exposed to high temperatures, including turbine disc roots, turbine blade roots, seal rings, variable stator vane bushings, nozzle guide vanes, and motorsport pistons.

Visitors to the Farnborough International Airshow, taking place from July 22 – 26, will have the opportunity to learn more about BALORA™ TECH PRO at stand 3540 in Hall 3.



BALORA™ TECH PRO is an innovative and REACH compliant environmental barrier coating designed to enhance the durability and performance of critical components in the aerospace and power generation industries.

**For further information, please contact:**

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**About the Oerlikon Surface Solutions Division**

Oerlikon is a leading global provider of surface and additive manufacturing solutions and services. The division offers an extensive portfolio of market-leading thin-film, thermal spray and additive manufacturing technologies, equipment, components and materials. Emission reduction in transportation, maximized longevity and performance of tools and components, increased efficiency and intelligent materials are hallmarks of its leadership. Pioneering technology for decades, the division serves customers with standardized and customized solutions across a worldwide network of more than 170 sites in 37 countries.

With its technology brands – Oerlikon Balzers, Oerlikon Metco and Oerlikon AM – the Oerlikon Surface Solutions division focuses on technologies and services that improve and maximize performance, function, design, reliability and sustainability, which are innovative, game-changing advantages for customers in the automotive, aviation, tooling and general industries and in the luxury, medical, semiconductors, power generation and oil & gas markets.

The division is part of the publicly listed Oerlikon Group (SIX: OERL), headquartered in Switzerland, which has more than 12 600 employees and generated CHF 2.7 billion in revenue in 2023.

For more information see: [www.oerlikon.com/surface-solutions](http://www.oerlikon.com/surface-solutions)