

Media Release

Extending uptime and lowering operating costs with application-tailored carbide materials.

Oerlikon Metco Develops Carbide Materials to Solve Harsh Industrial Wear Challenges

Wohlen, Switzerland, August 11, 2014 – The widespread demand for increased uptime, encourages Oerlikon Metco to continually develop reliable surface technology products that protect components against wear under extreme conditions. Metco is part of the newly formed Oerlikon Surface Solutions Segment as announced on June 3. The company manufactures specialty carbide materials needed to extend component service life and improve productivity. As a result, oil and gas, mining and other industries benefit from substantial savings in time and money.

“With rising expenses for oil and gas exploration and expectations for production companies to increase annual earnings over the next five years, it is vital that industry growth is supported by safe and reliable technologies,” states Oerlikon Metco’s Vice President and Head of Global Marketing, Dr. Hans Keller. “The broad choices of optimized carbide materials we offer for weld overlay and thermal spray are proven solutions for wear protection. Our clients can select tailored materials to match their specific surface needs and operating environments so they can customize their operations and significantly reduce downtime repairs and costs.”

Surfaces produced from carbide materials are the preferred protection method for parts that must withstand the effects of wear. Oerlikon Metco produces modern carbides specially designed to resist the harshest environments of corrosion, impact, high compressive loads, deformation, cavitation, solid particle erosion, severe abrasion and complex, combined mechanisms. For instance, while the company designs high-quality materials in standard cobalt matrixes for best wear protection, matrixes of nickel-cobalt-chromium are available for environments that require corrosion resistance.

The type of carbide used in the material, as well as the carbide grain size, is also chosen for the specific application. “We excel at tailored combinations of carbides and matrix compositions to optimize component service life,” explains Manfred Oechsle, product line manager at Oerlikon Metco for carbides and hard facing materials. “The key is to design a combination with the right wear and the right corrosion resistance for the downhole formation pH and hardness.”

Carbide coating solutions help operators maximize production with resilient surfaces for other applications. A typical example consists of high-pressure gate valves used in the oil and gas industry for flow diversion and safety applications. These are exposed to galling, abrasion and erosion causing leaks or faulty actuation. Oerlikon Metco carbide coatings protect the gates and seats from damaging surface attacks ensuring smooth actuation and safe operation.



Oerlikon Metco carbide materials and HVOF application equipment provide a reliable solution that protects high-pressure gate valves, used in the oil and gas industry, from galling, corrosion and wear.

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About the Surface Solutions Segment

The Oerlikon Surface Solutions Segment includes the two brands Oerlikon Balzers and Oerlikon Metco. Oerlikon Balzers is one of the world's leading suppliers of surface technologies that significantly improve the performance and durability of precision components as well as tools for the metal and plastics processing industries. Extremely thin and exceptionally hard coatings reduce friction and wear. Under the technology brand ePD, the company develops integrated services and solutions for the metallization of plastic parts with chrome effects. Oerlikon Metco enhances surfaces with coating solutions and equipment. Customers benefit from a uniquely broad range of surface technologies, coating solutions, equipment, materials, services, and specialized machining services and components. The innovative solutions improve performance and increase efficiency and reliability. Oerlikon Metco serves industries such as power generation, aviation, automotive, and other specialized markets. The Surface Solutions Segment operates a dynamically growing network of currently more than 130 facilities with over 110 coating centers in 35 countries in Europe, the Americas and Asia, employing around 6 000 people. The Surface Solutions Segment is part of the Switzerland-based Oerlikon Group (SIX: OERL).

About Oerlikon Metco

Oerlikon Metco enhances surfaces that bring benefits to customers through a uniquely broad range of surface technologies, equipment, materials, services, specialized machining services and components. The surface technologies such as Thermal Spray, Thin Film, Plasma Heat Treatment and Laser Cladding improve the performance and increase efficiency and reliability. Oerlikon Metco serves industries such as aviation, power generation, automotive, oil & gas, industrial and other specialized markets and operates a dynamically growing network of more than 50 sites in EMEA, Americas and Asia Pacific. Oerlikon Metco, together with Oerlikon Balzers, belongs to the Surface Solutions Segment of the Switzerland-based Oerlikon Group (SIX: OERL).

For further information, please see: www.oerlikon.com/metco