

Media Release

Oerlikon Metco Offers Materials Newly Optimized for Additive Manufacturing Applications

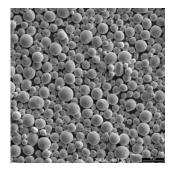
Winterthur, Switzerland, March 3, 2015 — Oerlikon Metco has expanded its materials portfolio with novel, superalloy powders optimized for new applications in laser-based and electron beam additive manufacturing processes that save customers' development time and resources.

In keeping with recent developments in the fabrication of components by additive manufacturing processes such as laser sintering (LS), laser melting (LM), laser metal deposition (LMD) and electron beam melting (EBM), Oerlikon Metco has expanded its R&D and materials engineering competency to support customers producing components using those processes. These parts are formed layer-by-layer using metals, alloys and metal matrix composites. The high growth opportunities from aerospace, defense and automotive industries must meet demanding requirements to create increasingly complex components yet exhibit mechanical properties obtained using traditional manufacturing methods.

For key applications, superalloy materials are preferred for their strength and corrosion resistance at high temperatures. Oerlikon Metco has been involved in multiple projects to correlate materials, manufacturing processes and metallurgical mechanisms to create tailored materials for additive manufacturing processes. The company is equipped to custom-design materials and currently markets optimized alloys such as MetcoClad 718, MetcoClad 625, MetcoClad 625F. Aiding these activities is Oerlikon Metco's ability to offer clients high-end testing and characterization services that ensure materials meet customers' requirements with top-performance results.

"Additive manufacturing has created an increased interest for developing metals and alloys materials," explains Materials Product Line Manager, Thomas Glynn. "The boost in process-specific powder development activities prepared us to meet this market trend through innovations that reinforce our knowledge in the relationship between powder characteristics and resulting component quality." Oerlikon Metco has over 50 years of experience in developing powder products for challenging industries with critical material requirements.

Current powder manufacturing activities include initial prototype quantities, pilot production lots, and scale up to produce and deliver many tens of tons of materials per year suitable for laser-based and electron beam additive manufacturing applications.



Morphology of typical gas atomized alloys optimized for new applications in laser-based additive manufacturing processes.



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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 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 40 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

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 145 sites with over 140 service and production centers in 35 countries in Europe, the Americas, Asia and Australia, employing more than 6 000 people. The Surface Solutions Segment is part of the Switzerland-based Oerlikon Group (SIX: OERL).