FHR Chooses Advanced Energy's Premier DC Process Power Technologies for New Roll-to-Roll Vacuum Coating System

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Ascent® AMS and DMS DC and Bipolar Products Power Innovation, Providing Superior Process Stability and Repeatability in Critical SiO_2 PVD Applications

FORT COLLINS, Colo., May 14, 2015 (GLOBE NEWSWIRE) -- Advanced Energy Industries, Inc. (Nasdaq:AEIS) announced today that its Ascent AMS and DMS DC and bipolar process power technologies have been selected to power an advanced roll-to-roll coating system under construction in Germany. FHR Anlagenbau GmbH (FHR), a manufacturer of thin-film vacuum process systems in Ottendorf-Okrilla, Germany, will include Advanced Energy (AE) Ascent units in an inline roll-to-roll vacuum coater—1.6 m in bandwidth and 12 km in strip length—for a customer in Asia using PVD sputtering technology to deposit various oxide films, such as silicon dioxide (SiO_2), in low-emissivity coating applications.

The field-proven Ascent power supplies will provide stable, repeatable process power to deposit metal and oxide layers with outstanding film quality, productivity and yield in the low-e application. This refined power delivery, critical to achieving high-quality, high-rate deposition, derives from AE's wealth of intellectual property, including Arc Management System™ technology, a powerful boost feature, and sophisticated, real-time control of thin-film plasma parameters.

"New developments in power supplies in recent years have significantly contributed to technology and productivity advancements in PVD systems," said Sascha Kreher, head of process technology at FHR Anlagenbau. "Particularly in the area of reactive, high-rate, dual-magnetron sputtering, significant progress has been made that, in turn, has increased the competitiveness of FHR equipment, performance and flexibility in leading processes."

The Ascent DMS series excels at managing arcs—even for critical process materials like SiO_2—thanks to its original bipolar design that measures and responds to both voltage and current half wave forms to swiftly extinguish arcs. Independent power control to each cathode allows auto-balancing of the duty cycle to the wear profile of each target, which enables increased target-erosion uniformity and longer campaigns. A controllable pulse rise boost feature offers significant advantages to the vacuum system design, transforming the Ascent DMS unit into a current source and contributing to deposition rates that continue to push conventional boundaries. Exclusive power delivery options—like selectable frequency and independent power-ratio regulation for each magnetron—deliver power stability, process repeatability and transferability in power, current or voltage regulation mode.

"AE has ushered in a new era of precision power conversion for dual-magnetron sputtering," said Yuval Wasserman, president and CEO of Advanced Energy. "We are pleased that the stable, repeatable power delivery of the Ascent AMS and DMS series is helping FHR solve process problems and drive innovation. Our products offer exceptional capability so our customers can develop new applications and realize new possibilities."

About Advanced Energy

Advanced Energy (Nasdaq:AEIS) is a global leader in innovative power and control technologies for high-growth, precision power conversion solutions. Advanced Energy is headquartered in Fort Collins, Colorado, with dedicated support and service locations around the world. For more information, go to www.advanced-energy.com.

About FHR Anlagenbau GmbH

FHR Anlagenbau GmbH in Ottendorf-Okrilla specializes in the development of innovative thin-film technologies and vacuum coating systems, as well as services in the field of thin-film technology. The company, which was founded in 1991 in Dresden, has been part of the Centrotherm Group since 2008. Its main field of business is the construction of vacuum coating systems for industry and research using vaporization, sputtering, CVD and ALD technologies. The FHR product portfolio comprises vacuum processing systems for many different fields of industry, including photovoltaics (specifically CIGS solar cells and organic PV technology), solar thermal systems, optical systems, electronics and sensor technology, as well as automotive engineering. One of the company's key strategic areas is film coating systems for the production of flexible electronics, flexible solar cells and organic display films. FHR is both technology leader and market leader in this field. In a different business unit, FHR manufactures sputter targets for the coating industry. All around the world, FHR works with renowned industry partners and research institutions.

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