

Beneq delivers world's first scaled-up roll-to-roll ALD system to ASTRaL

Beneq announces a breakthrough in its roll-to-roll (R2R) atomic layer deposition (ALD) technology with the delivery of its first industrial-scale system to the Advanced Surface Technology Research Laboratory (ASTRaL), a research unit based in Mikkeli, Finland, that belongs to the Lappeenranta University of Technology. The R2R system allows the development of rapidly growing new applications that were not able to take advantage of ALD coating until now.

Beneq has successfully scaled up its proprietary continuous ALD process to a 500 mm wide web using the R2R manufacturing method. Testing of the pilot WCS 500 system was completed in December 2012, and the system is currently being delivered to ASTRaL. The system is the promising outcome of a longer term partnership between ASTRaL and Beneq.

Dr Tommi Vainio, CTO of Beneq, says, "Evidence of the successful process scale-up to 500 mm and beyond has a profound impact on how this technology is perceived. We've leapfrogged from a 120 mm proof-of-concept system up to industrial scale in just over one year. This is a true test of the inherent robustness of the ALD process and Beneq's engineering skills."

According to Professor David Cameron, Director of ASTRaL: "We're thrilled to have the world's first industrial-scale R2R ALD system and look forward to exploring the exciting R&D opportunities that come with it."

Beneq currently offers two systems for R2R ALD: The WCS 500 has been designed for R&D to pilot scale; the TFS 200R is intended for initial proof-of-concept development with 120 mm wide films.

The R2R ALD system combines the advantages of high ALD film quality with excellent roll-to-roll productivity. It is ideally suited for demanding thin-film coatings, such as moisture/gas barriers on flexible polymer substrates. Applications include flexible PV and OLED. Beneq's R2R ALD has been tested successfully on a wide range of substrate materials and in different thicknesses.

For more information, please contact:

Mr Sampo Ahonen, CEO, Beneq Oy
Tel: +358 40 520 1090
e-mail:sampo.ahonen(at)beneq.com

Beneq Oy, based in Finland, is a leading supplier of industrial production and research equipment for thin film coatings used in solar photovoltaics, flexible electronics, strengthened glass and other emerging applications. Industry-proven Beneq equipment and thin film experience is used for improving the efficiency of crystalline silicon and thin film solar cells, producing transparent conductive oxide (TCO) coated glass and making touch screen glass more durable. Beneq has introduced several revolutionary innovations within its coating technologies, including true roll-to-roll atomic layer deposition (ALD) and high-yield atmospheric aerosol coating (nAERO®). www.beneq.com

Beneq and nAERO are registered trademarks of Beneq Oy.