
Collaboration between RK Print & National Centre for Flexible Electronics, Indian Institute of Technology Kanpur

RK PrintCoat Instruments, UK announce their collaboration with with National Centre of Flexible Electronics (FlexE Centre) at Indian Institute of Technology, Kanpur (IITK) to design, manufacture and supply a bespoke roll-to-roll (R-2-R) pilot line for their latest R&D and prototyping projects in the field of printed and flexible electronics.

About RK Print

RK Print was founded in the early 1960's; a family run business with over 60 years' experience in the surface coating industry. Designed and manufactured in the UK, RK equipment has one common theme, the production of repeatable samples; to be used for the purposes of research and development, quality control.

Well known for the K Printing Proofer, RK received increasing demand for a reel to reel machine enabling more realistic printability in R&D trials for gravure & flexo inks and substrates. Design of RK's Rotary Koater (ROKO) began during the mid to late 1970's and the first machine was delivered soon after.

Building on their developed knowledge and experience of web handling, gained from the supply of over 300 ROKO units, together with ongoing advances in application techniques, RK invested in the design of a more sophisticated machine. The Versatile Converting Machine (VCM) is bespoke in design and is optimised to the specific requirements of each process. Since 2004, VCM equipment has been installed at many locations worldwide, involved in the development of high tech coatings such as printed/plastic electronics, e.g. VTT, Finland.

Darren Ellis, Project Manager at RK Print is managing and overseeing the design and build of the machine for FlexE Centre says " This long-term project is an exciting one for RK Print to be involved with, developing and adding to our knowledge of the emerging printed electronics market. I am looking forward to working with Juliane and her colleagues at FlexE Centre over the coming months".

The R2R pilot coating line will have applications such as Flexo, Rotary Screen, Slot die, Inkjet and Direct Gravure as well as the integration of Plasma treatment and Flash sintering.

Prof. Monica Katiyar, coordinator of FlexE Centre, says: "Access to a R-2-R processing facility in India will provide a boost to development of domestic industry in the field of printable electronics."

Dr. Juliane Tripathi, Team Leader at FlexE Centre oversees the project from FlexE Centre's site. She explains: "Industrial and even many R&D roll-to-roll printing lines are custom designed for one specific process and cannot be altered easily. However, the FlexE Centre's line has been designed to be extremely versatile and modular with state-of-the-art printing and sintering technologies that can be combined for broad range of applications in the field of printed electronics. The line will mimic industrial scale processing on R&D level. It will be the first of its kind in India and possibly even worldwide."

“We want to conduct R&D by developing partnership with industry and with a view that potentially leads to manufacturing. This R-2-R line will be the link between translational research and industrial process development.” says Prof. Deepak Gupta, one of the initiators of FlexE Centre. He adds, “The FlexE Centre’s line will potentially be open to industrial partners to test low-volume manufacturing of new products before they put capital investment in equipment”

RK’s flagship R-2-R lab/pilot coating machine will be on display at various exhibitions throughout 2017.

About FlexE and IIT Kanpur

Indian Institute of Technology, Kanpur (IITK), established in 1959, is one of the premier institutions established by the Government of India. The aim of the Institute is to provide meaningful education, to conduct original research of the highest standard and to provide leadership in technological innovation. Read more at www.iitk.ac.in

National Centre for Flexible Electronics (FlexE) was established in 2014 through a grant from Department of Electronics and Information Technology (DeitY) under ESDM scheme of Electronics Policy 2012 of Government of India and support from the Indian Institute of Technology Kanpur (IITK). This centre functions as a nodal point in India to bring academia, industry and public research organizations under one umbrella for research and development of large area and flexible electronics. Located within the IITK, FlexE benefits from the state-of-the-art on-site facilities. The centre simultaneously support research with the academia and develop products with and for the industry.

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