

Lab coater for high-precision printing

Coating specialist

It is impossible to imagine everyday life in the future without printed data storage, whether as intelligent labels on foodstuffs, pharmaceuticals, and many other consumables; in the logistics sector; or even for application on textiles. Thinfilm Electronics ASA is a market leader in the expansive field of printed data storage. Kroenert GmbH, an expert manufacturer of coating and laminating machinery based in Hamburg, Germany, developed a customized coating station for the Norwegian company for the production of printed data storage. For this application, Kroenert's LabCo lab coater has been specially adapted to the customer's needs.

Printed data storage for a wide variety of applications usually has a storage capacity of 20 bits. To produce the base material, a polymer carrier film is coated multiple times in a register. Because utmost precision, both mechanical and electronic, is required in this process, the LabCo has been equipped with various additional modules in collaboration with Siemens Solution Partner Lebbing engineering & consulting GmbH. For example, the register control was integrated into the motion control system with the TRC3000 Simotion register control technology module. An intelligent wedge mark sensor now measures the registers of the printed web with a three-channel light sensor and

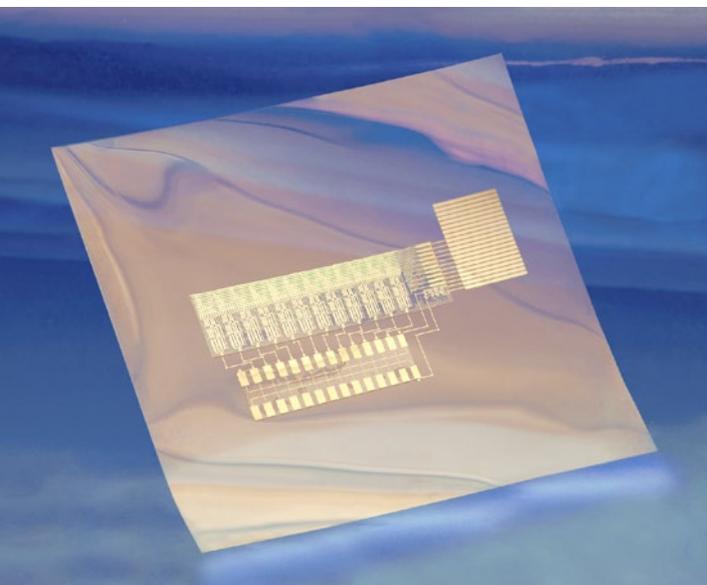
lebbing.com

Lebbing engineering & consulting GmbH, with headquarters in Bocholt, Germany, has been a certified Siemens Solution Partner since 2003. In addition to its core competencies in drive and automation technologies, the team has extensive experience in the application of converting technologies. Motion control systems based on mechatronic drive designs improve the machines' performance while at the same time reducing engineering costs.



transfers the values directly to the control system via Profinet IO IRT, which guarantees accuracy of under 50 µm along the longitudinal register. A Simatic IPC 277D panel, used for visualization, records and archives all the register values in real time in Siemens WinCC flexible through add-ons.

"We achieve the necessary mechanical precision by using low-backlash gears and direct drives and a specially adjusted edge control system," explains Guido Lebbing, managing director of Lebbing GmbH. The guide rolls have a very smooth surface and are precisely aligned, ensuring stable web tension and a perfect web run. Frank Schäfer, clean technologies sales manager at Kroenert, adds, "Systems like this allow us to use our expert knowledge and industry know-how to tailor the machine exactly to our customer's needs." ■



Printed array with addressable, nonvolatile storage and transistor logic

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