

Session	Advanced Coating Technologies (I)
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Chair	Ozan Özer



Insights into Future Glass-Coating Monitoring Solutions by Inductive Inspection Methods

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Biography

Dipl.-Wi.-Ing. Marcus Klein is managing director of the SURAGUS GmbH since 2010. He holds a master degree in Business and Engineering from University of Technology Dresden focusing on microelectronics and electronic packaging. Past working experiences include Siemens Pte Singapore, Wacker Chemie AG, Advanced Mask Technology Center and Fraunhofer Institute for non-destructive testing Dresden. Marcus' expertise focuses on material testing and layer characterization.

Abstract

Functionalization of glass is being used in several applications for decades and new or improved functions and application are added constantly. Innovations are achieved by the application of thin-films in architectural glass, smart glass, display glass, solar glass, heatable glass, mobile friendly glass or bird friendly glass. Also ultra-thin glass with integrated touch sensors or displays are develop for the achievement reactive surfaces. Aspects for innovation are thin-film deposition, thin-film modification, and thin-film removal or structuring. Along with new materials, new layer stacks and advanced processes its process control is crucial for cost efficient production of advances layer stacks. Here individual monitoring solutions and process control strategies are required. The presentation describes monitoring strategies for glass processing based on inductive layer characterization by eddy current sensing. Many existing limitations are reduced and new innovations are being achieved. The focus of this talk is the depiction of new opportunities for process monitoring achieved by new sensor capabilities that allow to address process requirements, in terms of the measurement task itself and the specific process environments. Requirements such as minimized installation space, high-vacuum at high-temperature conditions up to 600°C require new innovations. New innovations such as miniaturized sensor solutions, high temperature resistant sensors, sensor lines for inline imaging are shown. The talk also addresses new monitoring strategies which are enabled by this. German-based SURAGUS company provides process and quality control solutions by means of high frequency eddy current technology, for applications such as architectural glass, smart glass, display glass, solar glass, heatable glass, mobile friendly glass or bird friendly glass and further automotive glass applications.

