



The Colour Society International Seminar 2010 Innovation: The Key To Sustainable Growth

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TECHNICAL SESSION - II

Lecture - V

The Kaleidoscope of Polyurethane Coatings

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Bayer Materials



Mr. Nicholas Smith obtained his Bachelor's Degree in Chemistry from the University of East Anglia, and Masters in Business Administration from Oxford Brookes University, England.

He joined Bayer in the UK in 1997 as Technical Sales Representative, responsible for sales of Bayer products for the coatings industry. In 2005 he transferred to Bayer MaterialScience in Leverkusen, Germany as Segment Manager for General Industrial, Can, Coil & Glass Coatings for Western Europe within the Business Unit Coatings, Adhesives & Specialties (CAS). In 2008 he transferred to Spain to assume responsibility for the CAS business in Spain & Portugal.

Mr. Nicholas Smith's current responsibility is as Head of Sales & Distribution for the subregion India, Southeast Asia and ANZ within the business unit's APAC operations, and he is operating out of Mumbai, India.

Prior to joining Bayer, Mr. Smith worked in Research and Development for Coates Lorilleux in the UK. Mr. Smith has recently relocated to India and is accompanied by his wife and three children. Mr. Smith keeps interest in cooking and tennis as well as photography.

ABSTRACT

Some 50 years ago, in 1957, the first polyurethane coatings were obtained when Otto Bayer and his co-workers realized that alkyd resins could be modified by means of diisocyanates to give coatings with significantly improved properties.

The breakthrough for polyurethanes in the surface coatings area came when low-monomer polyisocyanates were developed and introduced. Since then, polyurethane coatings, also known under the synonym DD coatings (Desmodur® and Desmophen®), have undergone rapid market development. Continued above-average growth is also expected in coming decades due to the considerable potential for innovation in this sphere of chemistry.

Polyurethane raw materials are used in many different applications. The products made with them protect cars, aircraft, railway stock, ships and even oil platforms from the effects of weathering and corrosion. They also help to ensure that substances like red wine, cleaning agents and other aggressive media do not stain furniture and parquet floors. Concrete, too, can be given lasting protection from abrasion and weathering with polyurethane raw materials.

This presentation would cover the kaleidoscope of polyurethane coatings and make comparison between polyurethane coatings against alternate technologies with rationale for their preference.

The presentation would take us through latest developments in polyurethane coatings and its application as waterborne coatings, direct to metal coatings and other high performance applications.