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EDITOR'S NOTE

Innovations & Regulations Create Incentives for Technological Advances

— Darrell J Reeve

We live in a very fast changing world in every aspect of our lives and these changes apply equally to manufacturing production lines in all spheres of industry. Surface finishing is certainly no exception and, as each year goes by, it is amazing to witness the rapid changes in technological developments. ([Click to Read the magazine](#))

COATING APPLICATIONS & PRODUCTS

Automotive Painting Line

Research & Practice of Environmental Painting Technologies for Automotives - High Solids Coating Process

— Junqiang He, Yun Tian, Chery Automobile Co., Ltd.; Lizhi Guo, PPG Coatings Co., Ltd.

This article describes the recent development trend of environmental protection coating technologies for domestic automobile, and discusses one of more economical and practical technologies - high solids coating process. High solids coating process can significantly reduce VOCs emissions and meet the quality requirements of the automotive coating appearance and other aspects of performance. Moreover, it only requires minor adjustments to the existing production lines according to the characteristics of high solids coatings systems to ensure the smooth progress of production, which is easy to be promoted and is a preferred environmental solution for the transformation of old coating lines. ([Click to Read the magazine](#))

Case Study

Dürr Modernises Paint Shop in China in Record Time - Satisfied Customer: "Corporation of the Year" Award from SAIC-GM

Dürr has modernised an almost 20-year-old paint shop for car manufacturer Shanghai General Motors (SGM) and made it more environmentally friendly. It took just six weeks to remove large sections of the existing paint shop equipment and replace it with state-of-the-art technology. This enables SAIC-GM (formerly SGM) to apply environmentally friendly water-based paints instead of solventbased paints. The order, worth over € 30 million, was Dürr's largest upgrade project in China to date. The customer was so pleased with the project execution that they presented Dürr with the "Corporation of the Year" award in Shanghai in January 2016. ([Click to Read the magazine](#))

Electrostatic Coating

Advances in Electrostatic Coating of Non-Conductive Substrates: Wet Painting & Powder Coatings (Part 1)

— W.S. Gutowski, S.Li, L.Russell, C.Filippou, Mark Spicer, CSIRO Manufacturing Flagship, Australia

Our earlier paper on powder coating heat-sensitive substrates presented broad details of our technology converting surfaces of non-conductive plastics into materials exhibiting good surface conductivity. This development overcame preexisting technology barriers such as the lack of polymer surface conductivity and poor adhesion preventing the use of electrostatic transfer of coatings, such as powder resins, in surface finishing of non-conductive materials including plastics, polymeric composites or wood-based products. ([Click to Read the magazine](#))

ELECTROPLATING & PRODUCT FINISHING

Chemical Finishing

Plasma Cleaning, a Viable Alternative

— Erik Hermans, IHI Hauzer Techno Coating, Venlo, The Netherlands; Chinese translation: Bill Chen & Bruce Li, IHI Hauzer Techno Coating, Shanghai, P.R. China

Cleaning of substrates is the most critical preparation step prior to coating. Insufficient cleaning will always result in delamination of the coating. Typically substrate cleaning consists of aqueous cleaning in a separate cleaning line and etching in the PVD machine. As an alternative to the conventional method of Ar-ion etching in low pressure argon atmosphere, this paper explores the so-called method 'plasma cleaning'. ([Click to Read the magazine](#))

Environmental Challenges

Discharges to Air

— Mr. Darrell J. Reeve, UNEP / UNIDO Consultant in Metal Finishing

Last issue, we looked at solid wastes from our industry in some detail. In this issue, we will look closely at discharges to the atmosphere and add in some ideas and hints for potential reduction. Our industry has definitely improved dramatically over the past decade and our readers may be somewhat justified in thinking that air discharges are not a real problem for us. However, it may surprise some that, though we may not be a major contributor to greenhouse gas and smog, we can be very guilty of throwing a very valuable resource into the atmosphere in the form of 'HOT AIR'. In this article, we will concentrate on heat losses but also refer to several toxic discharges as well. ([Click to Read the magazine](#))

Regular Columns

Clinic ([Click to Read the magazine](#))

Product Showcase

- E-Coatings for Heating Systems
- Uyemura's Nanotechnology Process Preserves Metal Brightness
- Easy & Quick Paint Mixer Cleaning
- Robot-Supported Automated Sanding Solution from ASIS
- 2C Coating Reduces Costs & Environmental Impact for Paint Removal Processes
- Atotech's Fumetro[®] 21 LF 2 - Second Generation Non-PFOS, Low Foaming Mist Suppressant ([Click to Read the magazine](#))

Industry News

- PPG Passive Fire Protection Coatings Lab Awarded UL Witness Test Data Program Certificate
- Solvay Announces New Application Testing Laboratory in Shanghai to Support Technyl[®] Customers' Growth in Asia ([Click to Read the magazine](#))

Trade Shows & Forums ([Click to Read the magazine](#))

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