# AIMCAL Fall Technical Conference 2005 and 19th International Vacuum Web Coating Conference 2005

Myrtle Beach, South Carolina, USA 16-19 October 2005

ISBN: 978-1-62276-074-9

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2005) by the Association of International Metallizers, Coaters and Laminators All rights reserved.

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact the Association of International Metallizers, Coaters and Laminators at the address below.

Association of International Metallizers, Coaters and Laminators 201 Springs Street Fort Mill, South Carolina 29715

Phone: (803) 802-7820 Fax: (803) 802-7821

aimcal@aimcal.org

#### Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA Phone: 845-758-0400 Fax: 845-758-2634 Email: curran@proceedings.com Web: www.proceedings.com



#### Session 1A: Coating Operations

Lean Manufacturing "% David R. Ball, Lean Enterprise Advancement Program, Industrial Extension Service, NC State University Paper\* <u>Presentation</u>

Various Coating Techniques: An Overview<sup>\*\*\*</sup>&-John A. Pasquale III, New Era Converting Machinery Inc. <u>Paper</u> <u>Presentation</u>

Coating Characteristics Of Slot Die Systems Predicted Via Simulation <sup>...</sup>( & Sam G. Iuliano, Extrusion Dies Industries, LLC <u>Paper</u> <u>Presentation</u>

Scaling Up A Coating Process<sup>…</sup>\*' Larry Gogolin, Gogolin & Associates Paper Presentation

Making Your Coating Process Lean \*\*\*+Donald Teich, Black Clawson Converting MachineryPaperPresentation



#### Session 2A: Coatings and Adhesives

Cold Seal Adhesives<sup>…</sup>-) Nancy Smith, Ph.D., Rohm & Haas Company Paper Presentation

EB Coating Development For Graphic Arts ..... % Rick Sanders, Energy Sciences Paper Presentation

High Performance Co-Polymer Dispersions For Flexible Packaging .....% & Christopher Guy, Michelman, Inc. Paper Presentation

Is your Dryer Optimized to Get you your Desired Product?"%% Pete Walter, National Adhesives Paper Presentation

Oxygen Barrier Coating Provides Adhesion Under Humid Conditions <sup>...</sup>%+( Jessica Bodine, Mica Corporation <u>Paper</u> <u>Presentation</u>



### Session 3A: Drying and Curing

Airflotation & Convection<sup>311</sup>% & Dan Bemi , MEGTEC Systems Paper Presentation

New Microwave Technology For Uniform Heating, Drying And Curing Coatings And Laminants<sup>300</sup> &% J. Michael Drozd, Ph.D., Industrial Microwave Systems, LLC Paper Presentation

Infrared And Its Application For Dryer Coatings On Webs <sup>...</sup>& & Bob Narang, Radiant Energy Systems <u>Paper</u> <u>Presentation</u>

Heat Management Methodology For Successful UV Printing On Film Substrates<sup>30</sup> & Juliet Midlik, Prime UV Systems Paper Presentation

Utilizing the Heat Transfer Roll to Dry, Cure and Temper <sup>...</sup>&--George Cozzarin, F.R. Gross Company <u>Paper</u> <u>Presentation</u>



#### Session 4A: Converting Management

Core Competency "&, , Paul Roth, Appleton Mfg. Division Paper Presentation

Flame Treatment Technology: Process And Its Applications Stefano Mancinelli, esseCI SRL<sup>....</sup>' ' \$ <u>Paper</u> <u>Presentation</u>

Why Isn't Your Slitter Running? "'') ( Timothy J. Walker, TJ Walker & Associates, Inc. Paper Presentation

Open-Cell Reverse Anilox Technology For Enhanced Coating Performance '' +( Rodney McFarland, Praxair Surface Technologies Paper Presentation

How Do You Know You Have the Right Cover For Your Roller?",, Steve Huff and Jeff Bell, ABBA Rubber International, Inc.

Paper Presentation



### Session 5: Advances in Technology

RFID-The Technology, Markets & Trends In Manufacture & Development "(\$& William Llewellyn, Alexander Watson Associates - USA Paper\* Presentation

Advances and Applications of Baytron® Conductive Polymer Technologies <sup>...</sup>( %+ Jill Simpson, H.C. Starck <u>Paper</u> <u>Presentation</u>

Organic Roll Coating To Make Interference Coatings Ken McCarthy, Polaroid USA<sup>...</sup>((+ Paper\* <u>Presentation</u>

Specification Of Metallized Films And Substrates Eldridge Mount III, EMMount Technologies "(\*% <u>Paper</u> <u>Presentation</u>

Creation Of A Switch Array Matrix For Flat Panel Display And Other Applications Using Roll-To-Roll Processes "(,) Nicholas F. Pasch, Rolltronics Paper Presentation

Trends, Developments & Changing requirements from Specialist Papers Mark Gooseman, Cham Paper<sup>...</sup>) \$) Paper\* <u>Presentation</u>

Multi-layer Micro-structured Films<sup>…</sup>)', Kent Coulter, Southwest Research Paper <u>Presentation</u>

Nanocomposite Barrier Coatings<sup>…</sup>))% Harris A. Goldberg, InMat Inc. Paper Presentation



# **Vacuum Web Coating Sessions**

# Session 1B: Barrier

The Old Bishop's Almanac ")\*, Dr. Charles Bishop, CA Bishop Consulting Paper Presentation

A Review of Transparent Barrier Coatings <sup>\*\*</sup> \*\* Dr. Bernard Henry, Oxford University Paper Presentation

Measuring Permeation of Gases and Vapours through Polymer Substrates and Barrier Layers<sup>\*\*\*</sup> & Holger Nörenberg, Technolox Ltd. Paper Presentation

Enhanced Water Vapor Permeability Tester for High Barrier Materials<sup>\*\*\*</sup> -Alyce Hartvigsen, PBI-Dansensor Paper Presentation

Mass Production of Clear Barrier Coatings -Requirements on Vacuum Web Coaters for Quality Assurance <sup>'\*</sup>) % Rainer Ludwig, Applied Films Paper Presentation



# **Session 2B: Barrier Continued**

Vacuum Deposited Clear Barrier Coatings for Packaging Applications<sup>\*\*\*</sup>, Alf Smith, GVE Paper<sup>\*</sup> <u>Presentation</u>

SiOx Barrier Films for Flexible Displays <sup>…</sup>\*,) Tsunemori Komori, Toppan Printing Paper Presentation

The Effect of Retort Conditions on Clear High Barrier Laminated Structures<sup>\*\*</sup>+\$' Dante Ferrari, Celplast Metallized Products Paper Presentation



#### **Vacuum Web Coating Sessions**

#### Session 3B: Process

Remote Plasma Sputter Process for High Rate Web Coating of Low Temperature Plastic Film <sup>...</sup>+&\$ Peter Hockley, Plasma Quest <u>Paper</u> <u>Presentation</u>

Comparison Of Different Sputter Processes For ITO: Planar DC Versus Planar AC Versus DC Rotatable<sup>\*\*\*</sup>+', Peter Sauer, Applied Films <u>Paper</u> <u>Presentation</u>

Novel Roll-to-roll Deposition of Transparent Electrode on Plastic <sup>···</sup>+) \* Auke Talma, PhD, Akzo Nobel <u>Paper</u> <u>Presentation</u>

Pattern Metallization: Selective Deposition of Metals on Polymer Films for Functional Applications<sup>••••</sup>+- \$ Wolfgang Decker, Vast Films, Ltd. <u>Paper</u> <u>Presentation</u>

Copper Thin Film on Polyimide Substrates by Vacuum Web Sputtering System for Chip on Film <sup>17</sup>, \$% Jung Cho, Toray Saehan Paper Presentation

Copper Coating on Polyimide Films With Strong Adhesion<sup>…</sup>, % Christopher Steuer, Von Ardenne Paper\* <u>Presentation</u>

Processes and Equipment for Specialty Web Products <sup>…</sup>, & Fabiano Rimediotti, Galileo Paper Presentation



# **Vacuum Web Coating Sessions**

# Session 4B: Vacuum Web Products

Plasma Activated EB-PVD of Titanium and it's Compounds by Means of Large Area SAD<sup>...</sup>, ( ( Ekkehart Reinhold, von Ardenne <u>Paper</u> <u>Presentation</u>

Discharge Voltage Variations When Switching from Pure Metallic to Poisoned Sputtering<sup>…</sup>, \* & Roger De Gryse, University Ghent <u>Paper</u> <u>Presentation</u>

Etching & Texturing Polymer Films: Different Options for Patterned Deposition or Encouraging Nucleation ', , % Charles Bishop, CA Bishop Consulting Paper Presentation

Global Markets for Metallized Films and Papers<sup>…</sup>- \$% Corey Reardon, Alexander Watson Associates Paper<sup>\*</sup> Presentation

Coating Textiles in Vacuum; Extending Vacuum Web Coating to Everyday Apparel <sup>··</sup>- <sup>9</sup>/<sub>4</sub> Angelo Yializis, Sigma Technologies International, Inc. Paper\* <u>Presentation</u>

Initial Wetting System for IMC Evaporators ...- '\* Michael Nurnberger, Sintec Keramik GmbH & Co. KG Paper Presentation



AIMCAL 2005 Fall Technical Conference 19th International Vacuum Web Coating Conference

**Vacuum Web Coating Sessions** 

#### Session 5: Advances in Technology

RFID-The Technology, Markets & Trends In Manufacture & Development "( \$& William Llewellyn, Alexander Watson Associates - USA Paper\* Presentation

Advances and Applications of Baytron® Conductive Polymer Technologies '(%-Jill Simpson, H.C. Starck <u>Paper</u> <u>Presentation</u>

Organic Roll Coating To Make Interference Coatings '((+ Ken McCarthy, Polaroid USA Paper\* <u>Presentation</u>

Specification Of Metallized Films And Substrates "(\*% Eldridge Mount III, EMMount Technologies Paper Presentation

Creation Of A Switch Array Matrix For Flat Panel Display And Other Applications Using Roll-To-Roll Processes (,) Nicholas F. Pasch, Rolltronics Paper Presentation

Trends, Developments & Changing requirements from Specialist Papers Mark Gooseman, Cham Paper<sup>··</sup>) \$) Paper<sup>\*</sup> <u>Presentation</u>

Multi-layer Micro-structured Films")', Kent Coulter, Southwest Research Paper Presentation

Nanocomposite Barrier Coatings "))% Harris A. Goldberg, InMat Inc. Paper Presentation