

INDA's e-Filter Newsletter

The Filtration Industry's Information Hub

August 1, 2008

Volume 9, Issue 4 of the INDA e-FILTER Newsletter.

Welcome to e-FILTER, sponsored by INDA, Association of the Nonwoven Fabrics Industry (www.inda.org). It is sent every other month to executives within the global filtration business and focuses on the latest news, new products, patents, legislative issues and commentary in the filtration industry. Check out the information at the end of this newsletter on how to subscribe or submit your company's information for inclusion.

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INDA FILTRATION NEWS

TWO FILTRATION SESSIONS ARE PART OF INTC IN SEPTEMBER

The most important technical issues facing the nonwovens industry in 2008 – ranging from increasing energy costs to nanotechnology to the need to pursue technologies with commercial applications and including two sessions on Filtration Technology – are part of the agenda for the 2008 International Nonwovens Technical Conference (INTC), scheduled for September 8-11, 2008, at the Hilton Americas in Houston, Tex.

Co-sponsored and organized by INDA and TAPPI, Technical Association of the Pulp and Paper Industry, the world's largest nonwovens technical conference will once again bring together hundreds of technical executives from all aspects of the nonwovens, textile and paper markets. It will feature presentations from dozens of researchers and experts from around the world during the four days of technical sessions, tutorials and networking.

Highlighting the four-day technical conference will be a keynote presentation from Karen Jones, Director of Fibers & Feedstocks at Chemical Market Associates, Inc. (CMAI). She will discuss how nonwovens manufacturers are facing an enduring squeeze as rising resin costs are quickly eating into margins. Jones will also provide insight into the current oil price dynamics that are having a major impact on the nonwovens industry.

Scheduled sessions and presenters are:

- **Binders & Additives Tutorial** moderated by Michèle Mlynar, Rohm and Haas. Speakers: Andrew McKnight, Rohm and Haas; Ronald Pangrazi, Wacker Chemical; and Peter Wallace, Hexion Specialty Chemicals.

- ❑ **Web Handling & Converting Tutorial**, moderated by Michael Flannigan, Maxcess International. Speakers: Riccardo Arnaboldi, HIP-MITSU; J.K. Good, University of Oklahoma; Susan Stansbury, Converting Influence; and Jim Ward, Martin Automatic, Inc.
- ❑ **Binders & Additives I**. Moderator: John Norton, BASF. Speakers: James Robbins, OMNOVA Solutions; Kathrin Michl, BASF; Haksu Lee, Rohm and Haas; and Kenneth Greeson, Cotton Incorporated
- ❑ **Polymers & Processes**. Moderator: Bill Haile, Missing Octave Insights. Speakers: Ron Weeks, Dow Chemical; Laurence Chan, Strata America; Todd Williams, Eastman Chemical; Ron Weeks, Dow Chemical; and Mike Budai, ITW Dynatec.
- ❑ **Filtration I**. Moderator: Daniel Hennessy, Ahlstrom. Speakers: Da-ren Chen, Washington University in St. Louis; Kyung-Ju Choi, AAF International; Gary F. Ferrell, Bonavista Technologies; Lydia Boguslavsky, CSIR, MSM
- ❑ **Binders & Additives II**; Moderator: John Norton, BASF. Speakers: Shailesh Majmudar, Cytec Industries; Uwe Meisenburg, BASF SE; Stephanie Cottrell, Rohm and Haas; Jürgen Hanel, DyStar Textilfarben GmbH.
- ❑ **Filtration II**. Moderator: Dan Hennessy, Ahlstrom. Speakers: Yvonne Klawitter, Nanogate AG; Behnam Pourdeyhimi, The Nonwovens Institute; Christine Stanfel, Ahlstrom Filtration; Christine Sun, Freudenberg Nonwovens.
- ❑ **Nanotechnology**. Moderator: Uday Raval, Pall Life Sciences. Speakers: Martin Smith, Pall Corporation; N. Anantharamaiah, The Nonwovens Institute; Dan Hayes, NanoHorizons; Seshadri Ramkumar, Texas Tech University - TIEHH; Juan Hinestroza, Cornell University.
- ❑ **Melt Blowing & Spunbonding Technologies I**. Moderator: Larry Wadsworth, University of Tennessee. Speakers: Joachim Bauer, Rieter Automatik GmbH; Asli Begenir, Hanes Brands; Daniele Bugada, Basell USA; Raja Dharmarajan, ExxonMobil Chemical.
- ❑ **Insulation I**. Moderator: Andrew McKnight, Rohm and Haas. Speakers: Marcus Bianchi, Johns Manville; Angus Crane, North American Insulation Manufacturers Association (NAIMA); Helene Hardy Pierce, GAF Materials; Scott Miller, Knauf Insulation.
- ❑ **Nonwoven Markets & Applications I**. Moderator: Bob Averell, Wellman. Speakers: Karen Bitz McIntyre, Nonwoven Industry Magazine; Ian Butler, INDA; Steve Ogle, INDA; Matthew Pickett, BASF Corporation; Mark Snider, Smith, Johnson & Associates.

- ❑ **Melt Blowing & Spunbonding Technologies II**. Moderator: Larry Wadsworth, University of Tennessee. Speakers: James Luce, ExxonMobil Chemical; Larry McAmish, IMERYS Performance Minerals; Robert Shambaugh, University Of Oklahoma; Ralf Taubner, Sachsisches Textilforschungsinstitut.
- ❑ **Insulation II**. Moderator: Andrew McKnight, Rohm and Haas. Speakers: Kim Tutin, Georgia-Pacific Chemicals; Nazire Yilmaz, North Carolina State University.
- ❑ **Nonwoven Markets & Applications II**. Moderator: Bob Averell, Wellman. Speakers: Rory Holmes, INDA; Jan O'Regan, Cotton Incorporated; Robert Lovegrove, Eastman Chemical; Andrew Goodby, Ahlstrom.
- ❑ **Flame Retardants**. Moderator: Gajanan Bhat, University of Tennessee. Speakers: Ronald Dombrowski, TechTex Solutions; Gerald Keep, Missing Octave Insights; Stuart Smith, Norafin (Americas).
- ❑ **Antimicrobials**. Moderator: S.S. Ramkumar, Texas Tech University-TIEHH. Speakers: James D. Back, AEGIS Environmental Management; Roy Broughton, Auburn University; Gerry Getman, BIOSAFE; Rodney Rees, THOR Specialties; Jeffrey Trogolo, AgION Technologies; Rajan Vempati, ChK Group.
- ❑ **Modeling**. Moderator: Hooman Tafreshi, Virginia Commonwealth University. Speakers: S. Jaganathan, North Carolina State University; Yujun Liu, Hongda Research Institute; Benoît Mazé, Nonwovens Cooperative Research Center, North Carolina State University; Dieter Mueller, University of Bremen; Eunkyoun Shim, North Carolina State University; Hooman Tafreshi, Virginia Commonwealth University.

To view the complete abstracts submitted by the authors, visit the INTC website: www.inda.org/events/intc08

Among the other highlights of INTC 2008:

- ❑ A unique addition to INTC 2008 is a full-day **Nonwovens Enhancements** session co-sponsored INDA and AATCC that will feature industry experts explaining the technologies and complexities of enhancing nonwoven fabrics. The one-day session will focus on innovative structure technology, coloring and printing techniques, performance finishes and surface treatments for product enhancement. A similar joint session was successfully held for the first time three years ago at INTC 2005.
- ❑ A Graduate Research Award will allow up-and-coming professionals to present papers detailing their research in nonwoven technology. The

winner of the Graduate Research Award will be announced at the INTC Keynote & Award Luncheon.

- ❑ A **Table-top Event & Reception** will provide attendees with the opportunity to network with more than 30 corporate and university in an informal, relaxed setting.
- ❑ A number of TAPPI Committees will hold their annual meetings during INTC, including Nonwovens Binders and Additives, Building and Industrial Mat, Materials Characterization and Modeling, Fibers and Process Technology, and Nonwovens Insulation.
- ❑ The traditional Awards Luncheon will once again recognize the accomplishments of a number of industry professionals, including the presentation of the TAPPI Mark Hollingsworth Award.

For more information or to register online: www.inda.org.

COS CAMELIO TO RECEIVE INDA LIFETIME ACHIEVEMENT AWARD

The Board of Directors and Executive Committee of INDA has unanimously voted to present the INDA Lifetime Achievement Award to the late Cos Camelio. Camelio, who retired last year as Technical Director of INDA, passed away on May 29 at the age of 67.

The coveted Lifetime Achievement Award will be presented to Camelio's wife, Phyllis, in a special ceremony this summer. Camelio, who will be formally honored as well at IDEA10, in April, 2010 in Miami Beach, Fla., will also be installed in the Nonwovens Industry Hall of Fame.

“Cos Camelio was truly one of the pioneers in the development of the global nonwovens industry,” says INDA President Rory Holmes. “This is a well-earned honor for a wonderful and talented man who devoted his entire professional life to the advancement of the industry worldwide.”

Camelio served as INDA Technical Director for six years before his retirement one year ago. During his tenure he was heavily involved with the harmonization of standard test methods with INDA's sister organization, EDANA. He was also involved with both ISO and ASTM standards committees, shared the responsibility for the programs at INDA technical conferences and chaired a number of INDA committees. Camelio was instrumental in the development, in conjunction with EDANA, of the Flushability Guidelines that will be premiered at the WOW (World of Wipes) 2008 Conference, June 16-18, Chicago, Illinois.

Camelio started his career in nonwovens in 1964 with Chicopee at the Chicopee Falls location in Massachusetts as a shift supervisor and management trainee. He eventually was promoted to Plant Manager of the Chicopee Falls location and then to Northern Operations Manager. In 1975, Camelio transferred to Chicopee's nonwoven operations in North Little Rock, Ark. as plant manager of

the staple fiber operations. In 1979, he was promoted to site manager with responsibility for both a wet-laid plant as well as the staple fiber operation.

In 1983, he joined Freudenberg Nonwovens as Vice President of Manufacturing with responsibility for two facilities, corporate engineering, capital budgets, and R&D. Between 1983 and 2000, Camelio held various positions within Freudenberg Nonwovens including COO and President.

Industry pioneers Lee Sullivan and Dr. Edward Vaughn received the IDEA07 Lifetime Achievement Awards and were inducted into the INDA Nonwovens Hall of Fame during IDEA07.

FILTRATION INDUSTRY NEWS

BOTTLED WATER BACKLASH HAS CONSUMERS LOOKING AT FILTERED WATER

The recent bottled water controversy has caused a ripple of doubt regarding where consumers can turn for their filtered water needs this summer. Reports that some bottled water supplies come from municipal water and questions about the safety of the plastic used in many water bottles and their environmental impact have left consumers wondering what other options exist.

The decision of whether to drink tap water versus bottled water is a personal decision each consumer must make based on convenience, cost, taste and safety. As for safety, many people throughout the country have no qualms about drinking tap water due to regular testing and monitoring by government agencies to ensure it is safe. But numerous consumers still seek cleaner, better tasting water, as evidenced by the \$11 billion spent on bottled water last year.

An under-counter filtration system, however, enables consumers to forgo the plastic water bottles and rely on tap water to be the primary source for cooking and preparing hot beverages. One supplier, InSinkErator, provides the following tips when considering an under-sink filtration system:

- ❑ A carbon water filter provides the most effective and reliable form of water filtration on the market; up to 95 percent of inline water filtration systems that are installed in homes use a carbon-based cartridge.
- ❑ Unlike reverse osmosis or distillation, carbon-based filters allow water's fluoride and other natural minerals to pass through. These minerals are essential to good health and aid in the body's absorption of water.
- ❑ A standard filter should reduce chlorine taste and odor and sediment.
- ❑ A premium filter should remove toxic chemicals, heavy metals and dangerous parasites.

- ❑ To keep the system running at optimal levels, consumers should replace their filters every six to 12 months; that will depend on the water quality and amount of use.
- ❑ A versatile filter is ideal, one that can be used with a refrigerator, ice-maker and other water dispensers.

3M TO ACQUIRE LIGAICON AG

3M has entered into a definitive agreement to acquire Ligacon AG, a Switzerland-based manufacturer and supplier of filtration systems and filter elements for the pharmaceutical, biotech and general industrial markets. Terms of the transaction were not disclosed.

As a distributor of CUNO products, Ligacon and 3M have enjoyed a working relationship for several years. “The combination of 3M's technology leadership and Ligacon's broad customer reach and customization capabilities will accelerate growth and enable us to deliver the right solutions to meet the needs of the filtration industry,” says Tony Theunissen, VP & GMM, CUNO Inc., a 3M company.

“The acquisition of Ligacon allows 3M to offer complete filtration system solutions and better serve our customers in Switzerland and beyond,” adds Reza Vaziri, managing director, 3M Switzerland.

3M CUNO Filtration manufactures and markets filtration solutions for separating, clarifying and purifying fluids and gases. 3M CUNO products serve the food and beverage, residential, leisure, industrial, healthcare and food service markets. Complementary acquisitions such as this support 3M CUNO Filtration's core business and expansion into key markets such as the pharmaceutical manufacturing industry.

Ligacon employs approximately 20 people at its headquarters in Tagelswangen, Switzerland. The transaction is expected to close in the third quarter, subject to customary closing conditions.

APPLIED NANOSCIENCE RECEIVES ADDITIONAL PATENT COVERAGE

Applied Nanoscience, a nanotechnology-based filtration development company, has been issued a patent in New Zealand for its core technology platform encompassing "Filtering Devices Incorporating Nanoparticles." The patent covers three main methods of associating nanoparticles with filter media: (1) having pellets of nanoparticles located adjacent to the filter media; (2) coating the filter media with a powder of nanoparticles; and, (3) impregnating the nanoparticles into the filter media.

In addition, ANI has been informed by its attorneys in Australia that a patent for this same invention will issue as a matter of course within 90 days. The patent became sealed on July 17 and will afford broad protection for filtration applications across all of Australia.

PRICE INCREASES ANNOUNCED BY FILTER SUPPLIERS

Johns Manville is increasing its prices for filter media products as a result of the dramatically raised energy costs and raw material prices. Depending on the composition of the specific product the percentage of the increase will have to be negotiated individually announced the company today.

Ahlstrom also plans to increase prices on its filter media products globally, effective August 1. The level of increase will depend on the markets and the constituents of the products. The company says the increases are a consequence of the continued rise of raw materials and energy costs.

DONALDSON DECLARES QUARTERLY CASH DIVIDEND

Donaldson Company recently declared a regular cash dividend of 11 cents per share, payable September 12 to shareholders of record as of August 22. The current declaration is the 212th consecutive quarterly cash dividend paid by Donaldson over a time span of 53 years.

PDA EXPANDS LIBRARY OF BEST PRACTICES

The Parenteral Drug Association (PDA) has published Technical Report No. 45, Filtration of Liquids Using Cellulose-Based Depth Filters (TR-45). The report provides guidelines for the selection, validation and use of cellulose-based depth filters in pharmaceutical and biopharmaceutical applications.

TR-45 is the sixth PDA Technical Report on filtration, cementing PDA's reputation as a primary source of best practices for filter suppliers and users in the pharmaceutical and biopharmaceutical industry. Others address tangential flow filtration (TR-15), sterile filtration practices (TR-23), sterile filtration of liquids (TR-26), sterile filtration of gases (TR-40), and virus filtration (TR-41).

The Depth Filters Task Force that wrote this document was composed of European and North American professionals from the pharmaceutical and filter manufacturer industries. This report also underwent a global, technical peer review to ensure the methods, terminology and practices presented are reflective of sound science and can be utilized globally.

APPLIED NANOSCIENCE AND EFP IN MERGER AGREEMENT

Applied Nanoscience, a nanotechnology-based filtration development company, and Emergency Filtration Products, the developer of the NanoMask, have entered into a definitive merger agreement under which ANI has agreed to acquire EFP by issuing approximately 36,586,287 shares of its common stock and 18,293,143 warrants for the purchase of additional shares of ANI in exchange for the approximately 47,514,658 shares of EFP that are currently outstanding. ANI currently has approximately 24,315,569 common shares outstanding. The merger agreement requires the approval of the shareholders of both ANI and EFP.

The EFP shareholders will receive 0.77 shares of Applied Nanoscience common stock for every share of EFP along with a warrant to purchase 0.385 shares of ANI. In the first year following issuance, warrant holders will be able to purchase additional shares of ANI at \$ 0.50 per share; the exercise price will rise to \$ 0.75 in the second year; and \$ 1.00 in the third year following the date of issuance.

"We are pleased to announce this agreement and believe firmly that the union of these two companies will result in a single company whose value will be greater than the combined value of the two separate companies," says Philip Dascher, CEO, EFP. "Merging with Applied Nanoscience brings the technology that makes the NanoMask a superior product under one roof. Although we remain focused on receiving regulatory clearance to begin marketing the NanoMask, the true value of commercializing Applied Nanoscience's technology platform may lie in other markets that are substantially larger than those addressed by the NanoMask."

BRITA TO EXPLORE TRADEMARK LICENSING OPPORTUNITIES

Brita Products has signed a strategic licensing deal with Los Angeles-based new business development consultancy Brand Sense Partners (BSP). BSP is tasked with identifying and executing upon new licensed product and service opportunities for Brita that are consistent with the fresh, sustainable and healthful attributes for which the brand is known.

Brita's line of products, including water pitchers, dispensers, refrigerator filters and faucet mount systems for the kitchen and bathroom, make it easier to enjoy great-tasting water by reducing substances that can contribute to bad taste or odor. In addition, Brita's products support sustainable living by allowing consumers to enjoy refreshing drinking water without the waste of disposable plastic water bottles.

"Our goal at Brita is to energize and enrich people's lives by providing better tap water as part of a healthful lifestyle," says Steve Silberblatt, VP-new business development and licensing at Brita.

The company is embarking on the strategic licensing initiative as part of a continuing commitment to inspire wellness through increased water consumption by making available high-quality products and services that deliver better-tasting tap water when and where consumers need it.

SPX COMPLETES SALE OF AIR FILTRATION BUSINESS

SPX Corporation has completed the sale of its Air Filtration business unit to The Riverside Company. The company reported this business unit as a discontinued operation at the end of the third quarter 2007. The terms of the sale were not disclosed.

SPX is headquartered in Charlotte, North Carolina and employs more than 17,000 people worldwide in over 35 countries. Visit www.spx.com. (NYSE: SPW)

SEYCHELLE AND INNOVA IN BUSINESS PARTNERSHIP

Seychelle Water Filtration Products has entered into a joint venture agreement with Innova Pure Water, Inc. to work together to expand their sales and marketing efforts in the growing worldwide filtered water market. In a joint statement, Carl Palmer, president and CEO of Seychelle and John "JT" Thatch, president and CEO of Innova said, "We are very pleased to be working together to sell exciting, new portable water filtration products at a time when consumers are becoming more and more concerned about the high cost and environmental concerns associated with bottled water."

A further benefit of the Joint Venture Agreement is that both companies own various patents pertaining to portable water filtration bottles, caps and filters; and have agreed that both Seychelle and Innova can use each other's patents as well as jointly protect them.

EFP APPOINTS HEATH TO BOARD

Emergency Filtration Products has appointed Douglas Heath to its Board of Directors. Heath is the founder and President of Manteca, CA-based Nushake Roofing Inc., one of Northern California's largest re-roofing companies, which has been in continuous operation since 1976. Mr. Heath has also founded and operated a number of other business concerns, including the Gutter Guy Inc.; Hula in Motion, which operates a Hawaiian souvenir distribution company; and 2H Distributors Inc., a company which sold EFP's first NanoMask.

HIGH GROWTH REPORTED FOR U.S. RESIDENTIAL WATER TREATMENT MARKET

Reportlinker.com announces that a new market research report related to the Water industry is available in its catalogue. U.S. Market for Residential Water Treatment Products presents an in-depth analysis of water treatment solutions available in the United States for residential applications. Descriptions of the various types of water treatment products are provided, along with consumer demographics. Historical and anticipated future sales are presented for the overall market, as well as the following segments:

- Water Softeners
- Water Filters
- Reverse Osmosis Products
- Disinfectant Products
- Distillation Products

Background information is discussed to give the reader perspective on the need and demand for residential water treatment. Economic, technological,

regulatory, and other factors that promote or inhibit the growth of these types of products are also presented. The report profiles major manufacturers in the market, and discusses distribution channels for residential water treatment products. New product trends and technologies are also explored, including an examination of patents awarded over the prior three years.

TETRA LAUNCHING WHISPER EX FILTER FOR AQUARIUMS

Tetra recently unveiled Whisper EX, a series of freshwater aquarium filters that will allow fishkeepers to more easily and intuitively maintain cleaner and healthier aquariums. Through the exclusive use of Timestrip technology, Whisper EX lets aquarium owners know when the carbon has expired and it's time to change their filter. Fish health depends on regular filter changes to remove toxins and other harmful impurities.

This technology is now being used by Whirlpool in refrigerator filters and in Febreze True Air Odor Eliminators. Tetra will debut the exclusive use of the technology within the pet industry when Whisper EX becomes available at retailers nationwide in September.

Whisper EX is the first of its kind in the aquarium water filtration marketplace, too, combining eight new patent-pending technologies, new materials and a physical redesign. The result is a filtration system that is sleeker, quieter, easier to set up and use, virtually drip-free, and better at cleaning and oxygenating water.

WESTERN NONWOVENS BEING SOLD TO SBC

Western Nonwovens has agreed to sell a substantial portion of its assets to SBC Manufacturing. The sale includes WNI's plants in Orlando, FL, Sauget, IL, and an option to purchase the Carson, CA plant. At the same time, the Company filed a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. The filings were made today in the U.S. Bankruptcy Court for the District of Delaware.

The Company also announced that it has reached an agreement with its lender to provide debtor-in-possession financing, subject to Bankruptcy Court approval, to fund the Company's business operations while it completes the sale process. This financing will provide the Company the necessary funds to continue operations in the normal course of business; keeping all of the Company's currently operating plants open on normal schedules, and fulfilling customer orders.

The purchase agreement is subject to the approval of the Bankruptcy Court. Definitive documents will be filed with the court, along with bidding procedures noting that qualified bidders will be provided an opportunity to make higher and better offers for the purchase. It is anticipated that the sale will be completed within 45 days. Bid procedures for sale of assets not included in the sale to SBC will also be filed with the court.

The transition of control should be concluded by the end of August 2008.

THAT'S ALL, FOR THIS MONTH ...

To subscribe to the INDA E-FILTER newsletter and have e-mail notifications announcing new additions, please visit <http://www.inda.org/pubs/rsvp.html>.

Any company with news for the INDA e-FILTER Newsletter, or any individual with something they want to say to the industry, should send an email to Michael Jacobsen, INDA, at mjacobsen@inda.org; 201-612-6601; Fax 201-612-6677.