

# INDA's e-Filter Newsletter

The Filtration Industry's Information Hub

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**Welcome to e-FILTER**, sponsored by INDA, Association of the Nonwoven Fabrics Industry ([www.inda.org](http://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 NEWS***

#### **INDA OFFERING NONWOVENS VIDEO AND PRIMER ONLINE**

Everything anyone needs to know about the basics of nonwovens – from fibers to processes to end-uses – is now available in two formats at no charge as a service to the global industry from INDA, Association of the Nonwovens Fabrics Industry.

A video titled "Nonwovens! What Are They?" and the comprehensive "INDA Nonwovens Glossary" are now being offered to everyone via INDA's website. The goal, according to the association, is to spread the word about the nonwovens industry as well as to educate those inside the business on the reach and scope of nonwovens technologies.

"Nonwovens reach into so many applications and end-uses. We want to make our educational resources available to people in other industries who will benefit from our products," says INDA President Rory Holmes. "In addition, this video and the Nonwovens Glossary are an invaluable resource for companies within our business to educate their own employees."

A must-see for any company that produces or uses nonwovens, the "Nonwovens! What Are They?" video provides the basics of nonwovens in just eight minutes. The video explains manufacturing processes such as air laid, dry laid, wet laid, needlepunch, spunlace/hydroentangled, spunbond, and meltblown.

The video also touches upon the various end-uses where nonwovens can be found, including aerospace, apparel, automotives, construction, electronics, filtration, geotextiles, healthcare, home furnishings, hygiene, protective apparel and wipes. It also highlights the many benefits of nonwoven fabrics.

The 69-page INDA Nonwovens Glossary is a comprehensive dictionary that serves as a vital information resource for nonwovens companies and their customers. It is written in easy-to-understand language and it contains definitions and illustrations of nonwoven technologies.

To access the Nonwovens What Are They? video visit:

<http://www.inda.org/video/NonwovensVideo.html>

To download the Glossary of nonwoven terms, visit:

<http://www.inda.org/Glossary.pdf>

#### **JEFF JOURNAL PUBLISHES SPECIAL ISSUE**

As part of its continuing commitment to advancing research in the field of nonwovens and engineered fabrics, a special issue of the highly respected Journal of Engineered Fibers and Fabrics (JEFF) will be available online on March 27. The issue will focus exclusively on modeling and it will provide a snapshot of the current state of computational modeling in the field of engineered fibers and fabrics.

JEFF is an online technical magazine published by INDA, Association of the Nonwoven Fabrics Industry, and is co-sponsored by TAPPI, the Technical Association of the Pulp

and Paper Industry, The Fiber Society and AATCC (the American Association of Textile Chemists and Colorists).

According to JEFF guest editors, Hooman Vahedi Tafreshi and Behnam Pourdeyhimi, with the rapid advancement of our computational power researchers can now model many fiber manufacturing processes and fabric properties that once were only possible via cumbersome, time consuming, expensive and sometimes erroneous, experimentation. This special issue of JEFF explores a number of the more important advances in the field.

“The motivation for developing this issue was to inform our readers of current university and government computational research that may well be relevant to the needs of the industry,” according to Tafreshi and Pourdeyhimi. “In soliciting these contributions, utmost attention was paid to the novelty and newness of the research as well as brevity and conciseness of the information presented.”

The first four papers in the issue are on modeling properties of nonwoven materials when challenged with heat, mass, and particle flows or an external mechanical force. The collection concludes with a paper focused on modeling the challenging problem of fiber melt-spinning, in which a numerical simulation of multifilament semi-crystalline polymer fiber spinning based on a flow-enhanced crystallization approach is presented.

Access to the Journal of Engineered Fibers and Fabrics is free by visiting [www.jeffjournal.org](http://www.jeffjournal.org).

## ***FILTRATION INDUSTRY NEWS***

### **CUMMINS LAYS OFF 127 AT THREE PLANTS**

Cummins Filtration recently laid off 127 employees at its plants in Black River Falls, Viroqua and Bloomer, Wisconsin, because of a decrease in demand for its products, the company said. It laid off 30 employees in Black River Falls; 53 employees in Viroqua; and 44 employees in Bloomer.

The 127 employees laid off include 11 who voluntarily left after being offered retirement packages. Six employees in Black River Falls and five in Viroqua accepted the offer.

The three plants make filters for engines used in products ranging from lawn mowers to diesel trucks, Cummins Inc. spokesman Mark Land said recently.

Cummins Filtration is based in Nashville, Tennessee, and is part of Cummins Inc., whose headquarters are in Columbus, Indiana. "As the economy has affected sales of the end products, the need for components like filters has declined as well," Land said.

"We are going at these (layoffs) from the perspective they are permanent, simply because we don't know when our markets will come back," Land said. "We have every reason to believe that once the economy improves, business will come back. But we don't have any certainty as to when that might be."

### **CONTEST OFFERS CHANCE TO WIN HEPA FILTER**

Alen Corp., a manufacturer of eco-friendly indoor air quality products, is holding an online contest offering visitors to its website the chance to win a new Paralda HEPA air purifier just for voting for their favorite color Paralda online at [http://www.alencorp.com/paralda\\_survey.asp](http://www.alencorp.com/paralda_survey.asp) from April 1 through April 22.

Voters will be automatically entered into the prize drawing to be held on Earth Day on April 22. The winner will receive one free bamboo green Paralda valued at \$499 shipped no later than April 28 to any address in the U.S. at no charge. Voters can choose from

the following colors: Espresso, Ripe Mango, Bamboo Green, Cherry Blossom, Bronze, Aquamarine, Twilight, or Glacier Blue.

Paralda is Alen's new portable HEPA air purifier that eliminates 99.97 percent of indoor air pollution in the home or office. It is recommended for homes with children or for people seeking asthma relief. The new eco-friendly HEPA air purifier also delivers allergy relief for those suffering from seasonal allergies, pet allergies, as well as bronchial infections, cardiac or respiratory problems, or general poor health.

### **FEI UNVEILS FIBERMETRIC SYSTEM FOR AUTO MEASUREMENT**

FEI, a provider of electron imaging and analysis systems, has unveiled its Fibermetric system powered by the Phenom personal electron microscope. The Fibermetric system is designed to discover and quantify the properties of woven and nonwoven fiber samples in minutes, making direct observation and measurement of micro- and nano-fibers faster, more accurate and easier.

"This is the first integrated, turnkey system for sub-micron fiber imaging and automated measurement," says Paul Scagnetti, VP & GM at the Industry Division of FEI. "Synthetic fiber manufacturers will typically forego the measurement of sub-micron fibers and pores, suffering the process control and product quality consequences, or they may use a more expensive and complex electron microscope in the lab, which can take several days before the data is available to those who need it."

With the Fibermetric system, engineers can get the data they need themselves. The system automatically collects hundreds of measurements per image, and generates fiber and pore size distribution plots for quality control and for predicting application properties such as filtration efficiency.

The Fibermetric system accurately images and measures almost any fiber sample with its 4.9 nm/pixel resolution and a Gaussian fit function, which automatically finds and measures fibers and pores. Nano-fibers with diameters of 100nm are routinely measured with greater than 97 percent accuracy.

### **CLEARFORD REFOCUSING ON FILTRATION BUSINESS**

Clearford Industries recently announced its strategic business focus following the sale last year of its concrete division. Clearford will now integrate its Small Bore Sewer SBS with membrane-based filtration and reverse osmosis systems provided by third party producers of these technologies to deliver to communities a turnkey capacity to receive wastewater and deliver potable quality water.

"The SBS delivers wastewater with low biological oxygen demand and low suspended solids while modulating the flow to the treatment facility. This provides excellent input to state of the art membranes. After membrane treatment, the water is purified by reverse osmosis to potable standards. This combination will allow a very significant percentage of water used in urban communities to be returned to water sources with quality that at least matches the fresh water being received by the community," said John Kelly, president and CEO of Clearford.

Clearford believes that a worldwide demand exists for systems that reduce the net impact of urban water consumption on available supplies of fresh water. The ability to deliver an integrated collection and treatment system for a cost that is comparable to the costs of traditional sewage collection, primary and secondary treatment, while returning to the environment water of drinkable quality is seen by the company as a significant and immediate commercial opportunity.

The current focus by governments on using infrastructure investment to both improve the quality of public services and generate sustainable employment provides an impetus

to the demand for cost effective systems for the management of wastewater and the conservation of fresh water supplies.

### **AERUS HOLDINGS ACQUIRES ECOQUEST**

Aerus Holdings, Dallas, Texas, has acquired a majority of the assets of EcoQuest International, its parent and their subsidiaries. EcoQuest, Greeneville, Tennessee and known as the "Healthy Living Company," has been providing air and water purification products, energy management systems and nutritional supplements to consumers and businesses through network marketing professionals for years. The assets include the EcoQuest, Infinity, Heartland, activTek and UNOVUS product lines.

This acquisition is a natural fit for Aerus Holdings, which also owns a number of other direct selling companies including Aerus LLC, which was known as Electrolux from 1924-2003.

A direct selling company, EcoQuest International was established in January 2000 based on a 15-year history in the air purification industry.

The EcoQuest assets were acquired by an Aerus Holdings' subsidiary, DBG Group Investments, LLC. The business will be operated as an independent network marketing organization of DBG and will be separate and distinct from the other businesses in the Aerus Holdings portfolio. Joseph P. Urso will serve as Chairman and Chief Executive Officer of DBG.

### **WQA DISCUSSES WELL WATER TREATMENT OPTIONS IN CONGRESS**

Members of Congress received information late last month from the Water Quality Association about methods to help ensure safe well water, as a new study revealed the extent of contamination in the nation's ground water. WQA attended a congressional briefing sponsored by the US Geological Survey's (USGS) National Water Quality Assessment Program and the Water Environment Federation (WEF). During the briefing, the USGS released findings on samples of more than 2,000 wells.

"It is vital for public policy makers to understand what tens of millions of Americans are ingesting and how they can be helped," said Peter Censky, president of WQA.

Nearly 45 million people rely on private wells for drinking water, which is not regulated by the federal Safe Drinking Water Act. According to news reports in previous months, almost one in six Americans may be affected by pharmaceuticals in their household water. Additionally, many other contaminants are often present, either from natural or human sources.

WQA, a not-for-profit alliance of water treatment companies, has become a resource for consumers and public policy makers seeking information about the issue. WQA offers an online fact sheet with answers to the issue of contaminants in water, available at [www.wqa.org](http://www.wqa.org). Copies of the fact sheet were provided to members of Congress.

WQA has also joined a task force to develop independent testing standards that will be able to tell consumers what devices are successful at removing many of these newly discovered contaminants.

Filtering systems in the home provide the highest technology available for treatment of drinking water, according to Dave Loveday, director of government relations for WQA.

For a copy of the WQA fact sheet on drinking water safety and related information, visit the "Breaking News" button on the WQA home page, [www.wqa.org](http://www.wqa.org).

### **U.S NONWOVENS FORMS AMERICAN DETERGENTS**

American Detergents Corp, a newly formed entity, has announced plans to enter the private label and branded laundry detergent market in the first quarter of 2010. The plans include next generation vertically integrated blow molding, smart blending and high volume filling substations. The company will utilize automated and robotic high speed equipment. The facility will incorporate clean wind energy as well as PURox ultra pure USP water filtration systems in its manufacturing process.

American Detergents has selected a strategic east coast facility, which will be announced soon by the state's governor, local authorities and company representatives. The final design and engineering are in the process of being completed. All significant agreements for land acquisition, equipment, and engineering have been finalized.

### **NH15 EMERGENCY ESCAPE HOOD RECEIVED NIOSH APPROVAL**

The new 15-minute NH15 escape hood from Avon Protection Systems, part of Avon Rubber, has been awarded full NIOSH (National Institute for Occupational Safety and Health) Air Purifying Escape Respirator (APER) approval (number TC-14G-0302).

The NH15 hood is the world's smallest NIOSH-certified CBRN (chemical, biological, radiological and nuclear) escape hood specifically designed for police, correction officers, emergency medical services and fire officers to offer instant CBRN protection. The hood provides a high level of respiratory, eye and face protection for up to 15 minutes to allow sufficient time to evacuate from a contaminated area. Use of the hood requires minimal training and it takes approximately 30 seconds to deploy, due to the novel self-adjusting harness system.

Avon Protection's NH15 hood is vacuum-sealed in a foil bag and protected by a durable reinforced pouch small enough to store in a briefcase, glove compartment or drawer. The compact NH15 hood can be carried on a utility belt or thigh mounted and has a five-year shelf life. The hood is a single-use device and, unlike conventional respirators, does not require annual OSHA-specified (Occupational Safety and Health Administration) fit testing.

Made of clear material, the NH15 escape hood not only protects against all airborne CBRN threats, but also protects the face from liquid agent splashes. The clear material has a number of advantages: it gives a non-threatening appearance; aids with recognition; and allows for better visual communication. Twin low-profile filters on a unique hinge system feature the latest filtration media which reduces breathing resistance.

### **POOL SAFETY COUNCIL, SAFE KIDS USA ISSUE POOL SAFETY GUIDANCE**

The Pool Safety Council and Safe Kids USA recently released a joint guidance document outlining requirements for public pools and spas to come into compliance with the Virginia Graeme Baker Pool and Spa Safety Act. The guidance document was developed in an effort to correct inaccurate information circulating about the steps necessary to protect swimmers from the threat of drain entrapment.

The Pool and Spa Safety Act, which went into effect in December 2008, was named after former Secretary of State James Baker's granddaughter, who died after becoming entrapped in a spa drain. The law requires all public pools and spas take relatively simple measures to prevent drain entrapment from occurring.

All public pools must install approved safety drain covers, while single drain public pools must also install approved anti-entrapment devices, such as a Safety Vacuum Release System (SVRS), an automatic pump shut-off system, a gravity drainage system or a suction-limiting vent system.

The full guidance can be found on the Pool Safety Council's Web site, [www.poolsafetycouncil.org](http://www.poolsafetycouncil.org).

### **SOLAR POWERED WATER PURIFICATION SENT TO AFGHANISTAN**

Spectra Watermakers, a maker of energy-efficient water treatment systems and energy recovery pumps, recently delivered two of its Solar Powered Ultra Filtration Units to the U.S. Army in Afghanistan. These water treatment units purify contaminated fresh water while producing up to 5,000 gallons (20,000 liters) per day each. The unit, ideal for use in harsh and remote locations, is complete with a feed water pump, battery bank, controls, back-flushing pre-filtration, self-cleaning UF and is powered by a tracking photovoltaic array.

The U.S. military devotes a great deal of their assets to emergency preparedness and disaster relief. The front line of these humanitarian operations is providing clean water. During the aftermath of a natural or manmade disaster, the deployment of life-saving supplies requires a tremendous logistical effort, and a vast amount of fuel, time, and manpower is assigned to water transport. Military and relief agencies commonly airlift bottled water, tanker-truck to the point of need, or use inefficient diesel generator powered treatment plants. Now, Spectra Land Based can provide mobile water treatment units that are more energy-efficient, independent, and onsite, while saving valuable resources.

Spectra's Pearson Pump is a new high-pressure pump innovation that has been developed for energy-efficient reverse osmosis desalination of sea water and brackish water. The Pearson Pump is a breakthrough enhancement of reciprocating pump design. This unique pump system combines feed water pumping and energy recovery into a single unit.

### **DELSTAR UNVEILS BIODEGRADABLE FILTER MEDIA**

DelStar Technologies recently introduced a biodegradable and compostable DelPore melt blown media designed specifically for the air filtration industry. It is manufactured from PLA (polylactide) and its efficiency has been enhanced by successful electrostatic charging.

DelStar developed the new DelPore media for short-term disposable air filtration applications, including medical face masks, respirators, vacuum bags and furnace filters. Although more expensive than traditional polypropylene media, the charged PLA media offers value to manufacturers concerned with sustainability, zero-toxicity and low-energy initiatives, according to the company.

### **MUNKTELL OPENS RALEIGH OFFICE**

[From [www.nonwovens-industry.com](http://www.nonwovens-industry.com)] Ken Atkins, executive director for Wake County Economic Development, has announced that Munktell Filter AB, a Swedish-based paper filtration company, has opened its first North American sales and distribution office in Raleigh, North Carolina at Brier Creek. From its new Raleigh location, Munktell plans to aggressively grow its client base throughout the U.S. Projected to open this spring, the Raleigh operation will consist initially of a small sales and distribution office with plans to expand operations as its marketshare grows.

The Munktell Group, based in Falun, Sweden, is one of the world's leading companies specializing in filtration and separation technologies and is the first producer of filter paper for analytical purposes. The company specializes in filtration and separation technology for laboratory, industrial and environmental markets, air filter media, medical filtration technology and archival storage products. Munktell has production sites and sales offices in Sweden and Germany.

Wayne Watkins, WCED project manager, has worked with Munktell on the expansion since August 2008.

## **FILTER PATENT REVIEW**

### **Self-Cleaning Filtration Machine with Rotary Drum Filter for Contaminated Liquids**

Pub Number: WO2009037122

Applicant: Losma, S.p.A.

Inventor: Pola, Carlo

Abstract: A self-cleaning filtration machine with rotary drum filter for filtering contaminated liquids, comprising at least one filtration device which is associated with the rotary drum, the filtration device being interposed between a contaminated liquid collection tank and a filtered liquid collection tank, the self-cleaning filtration machine comprising air suction means in order to generate a partial vacuum between the contaminated liquid collection tank and the filtered liquid collection tank.

### **Filtering Device for the Precipitation of Small Parts from a Liquid**

Pub Number: EP2038033

Applicant: Mann & Hummel GmbH

Inventor: Reynders, Luc

Abstract: The invention relates to a filtering device for the precipitation of small parts from a liquid. This device has a container with a feed inlet, a gravitational force sedimentation area, and a filtering area arranged downstream therefrom. Two transversally distanced continuous chains are provided in the container, with diagonally running carriers attached between the chains that, together with the chains, form a conveyor device that is actuated by means of gearwheels and a drive motor. The filtration area has a vacuum chamber that is partially formed by the container and that is arranged below the solid part filtration. A filtering strip that is pulled through the container by the chains and the carriers is arranged between the uncleaned liquid area and the cleaned liquid area. Flexible metal strips are provided on each chain and extend along the chain and across several chain links, and are attached on one side and overlap at one section. These metal strips exert a force on the filtering strip that ensures a seal between the uncleaned liquid area and the cleaned liquid area, in the area where the moving filtering strip changes direction.

### **A Filter Device for Filtering Liquid from a Source**

Pub Number: EP2038222

Applicant: Aqua Filtration Systems Ltd.

Inventors: Farrelly, Patrick, McCromack, Sean; Verkerk, Robert; Maybin, David

Abstract: A filter device for filtering liquid passing there through, the filter device comprising a housing for securing to a source of the liquid and having a liquid accommodating duct there through for accommodating the liquid. The duct extends from an upstream end for communicating with the liquid source, to a downstream end terminating in an outlet through which the liquid is discharged from the filter device, characterised in that the filter device incorporates a filter element for substantially removing bacteria from the liquid passing there through.

**INDA MEETING SCHEDULE**

**Elementary Nonwovens Course**

May 13-14, INDA Headquarters, Cary, North Carolina

**World of Wipes 2009 International Conference**

June 22-24, Grand Hyatt Atlanta, Atlanta, Georgia

**INDA Nonwovens Course**

September 15-17, INDA Headquarters, Cary, North Carolina

**INTC 2009 International Nonwovens Technical Conference**

September 21-24, Grand Hyatt Denver Downtown, Denver, Colorado

**Filtration 2009 International Conference & Expo**

November 17-19, Navy Pier, Chicago, Illinois

**IDEA 2010 International Conference & Expo**

April 27-29, Miami Beach Convention Center, Miami Beach, Florida

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**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 [mjacobson@inda.org](mailto:mjacobsen@inda.org); 201-612-6601; Fax 201-612-6677.