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). It is sent monthly 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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INDUSTRY NEWS

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INDUSTRY NEWS

RIVAL CLAIMS HONEYWELL BROKE FILTER PATENT

Hamilton Beach/Proctor Silex has accused small appliance rival Honeywell International of infringing on a new patent for an air filter that plugs into an electrical outlet. Hamilton Beach says Honeywell's Plug & Clean air cleaner violates the patent and that Honeywell is engaging in false advertising by saying replacement filters last three months.

In a federal lawsuit filed in Richmond, VA early last month, Hamilton Beach says it owns a patent awarded last December for the plug-in filter device, which it is selling under the TrueAir brand name.

A Honeywell spokesman said the allegations are "baseless, and we will vigorously defend against them." He said the filter is "a very small product for our business, minuscule."

EPA'S PM 2/5 MICRON STANDARD BACK IN COURT

From Peter Mayberry, INDA Government Affairs: Early last year, the U.S. Supreme Court handed down a decision thought to end legal challenges to EPA's 1997 standard limiting emissions of particulate matter to no more than 2.5 microns in size. But now the parties are back in court.

In legal arguments before the U.S. Court of Appeals for the District of Columbia Circuit heard late last year, lawyers for those challenging the standard asked the Court to invalidate EPA's PM 2.5 standard on grounds that the Agency should have considered a less stringent alternative, and then explain why it was not adopted. Lawyers for the U.S. government responded that EPA had studied less stringent standards and determined that a lesser approach could not be justified.

The government's argument was supported in legal briefs filed in the case by the American Lung Association. While EPA continues to implement the 2.5 PM standard as this latest challenge plays itself out, it will likely take quite some time for the courts to resolve the matter. This is especially true considering that – despite the verdict reached in the case by the Court of Appeals – the losing party can be expected to appeal to the Supreme Court once again. In the meantime, EPA is predicting that it will survive the current challenge.

3M AND FLEETGUARD IN JD PROGRAM

Fleetguard Emission Solutions and 3M Automotive have initiated a joint development agreement to design and develop advanced exhaust emission control technologies geared to meet diesel emission standards. The agreement takes advantage of 3M's strengths in filtration and materials and Fleetguard's capability in diesel-related filtration and systems integration.

The technologies being developed by Fleetguard and 3M are focused on bringing about superior performance and cost-effective exhaust filtration products. These advanced filtration products are intended for use in diesel exhaust emission control systems. The products will be sold by Fleetguard and 3M for automotive, medium/heavy duty trucks, buses and non-road mobile and stationary applications.

USFILTER RECEIVES CONTRACT FOR WORLD'S LARGEST MICROFILTRATION PLANT

USFilter reached a significant milestone in membrane filtration technology last month when it received a contract to provide the largest microfiltration plant in the world for the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD) in Fountain Valley, CA.

The $25 million Memcor continuous microfiltration - submerged (CMF-S) system will be a part of an advanced water

reclamation project. The CMF-S system will draw secondary wastewater from the nearby sanitation district and inject it into deep groundwater aquifers to prevent seawater intrusion. When the plant is commissioned in 2004, the 86.7-million gallon per day unit will produce enough water to fill over 1000 Olympic size swimming pools every day.

FIBERTEX HAS NEW OWNERS

Danish nonwovens producer Fibertex has been purchased by diversified holding company Aktieselskabet Schouw & Co. The management of Fibertex, including CEO Knud Waede Hansen, will continue with the company, which produces needlepunched and spunbond/melt blown materials for industrial and hygienic markets. Fibertex operates two plants in Aalborg, Denmark.

POLYPORE ACQUIRES MEMBRANA

The Acordis Group has sold its Membrana GmbH business unit to Polypore, Inc. Financial details were not disclosed.

Membrana manufactures high-performance membranes for medical applications such as haemodialysis, oxygenation and plasma separation; technical products for water filtration and the pharmaceutical, food and beverage, semi-conductor and environment technology industries; and carriers for liquid or low melting polymer additives. Membrana has two manufacturing plants located in Wuppertal and Obernburg (Germany). Polypore is a manufacturer and supplier of microporous membranes in the Energy Storage and Separations markets.

AQUACELL FINISHES PURCHASES OF WATER SCIENCE

AquaCell has closed on its acquisition of Arizona-based Water Science Technologies (WST). WST provides a range of products and services for water purification and treatment to address industrial, commercial, institutional and residential needs.

AquaCell's marketing plan for the acquired product line focuses on three specific areas: Purification and bottling systems for water bottling plants, both foreign and domestic; systems to treat water for car washes, providing environmentally friendly recycling and discharge; and the restaurant and food-service industry.

ARMY HONORS FORT IRWIN FOR ENVIRONMENTAL EFFORTS

The secretary of the Army has recognized Fort Irwin (CA) for its efforts to save water, recycle waste and improve air quality at the desert training center. The fort will receive the Army's highest recognition for environmental protection in a ceremony April 30 at the Pentagon.

The fort is saving nearly 33 million gallons of water annually, in part by changing the type of membrane used in its water filtration system. An additional 11 million gallons is saved yearly through use of multiple filters and advanced water separators in washing military vehicles.

NUCLEAR SOLUTIONS EXPANDS PORTFOLIO

Nuclear Solutions has obtained the exclusive worldwide rights to a proprietary technology for the removal of radioactive isotopes from contaminated wastewater. The technology, referred to as "GHR," was obtained from the Institute for Industrial Mathematics, Beer-Sheva, Israel.

The GHR process is a chemically based filtration system that uses an advanced water-reactor to extract radioactive elements from nuclear wastewater. The extracted isotopes are then collected and processed for appropriate disposal.

ESCO ACQUIRING FILTRATION TECHNOLOGY RIGHTS

ESCO Technologies has acquired the exclusive rights to the patent portfolio and related intellectual property of North

Carolina SRT, a manufacturer of cross-flow filtration and separation modules and equipment. ESCO will also purchase certain production assets and inventory of NC SRT. NC SRT sales of products utilizing the technologies being acquired were approximately $3 million in 2001. Terms of the acquisition were not disclosed.

The addition of NC SRT's flat sheet module technology will allow ESCO to broaden its filtration and separations product offering to the food and beverage, and biopharmaceutical processing markets. PTI expects to begin manufacturing NC SRT products at its Oxnard facility by the end of fiscal 2002. Until that time, NC SRT will provide contract manufacturing services to PTI.

CALGON AWARDED CONTRACT FOR UV DISINFECTION SYSTEM

Calgon Carbon has received a contract from the Moon Township Municipal Authority, near Pittsburgh, PA, to supply four Sentinel UV Disinfection Systems for the township's drinking water plant. The contract is valued at more than $300,000 and includes a license fee to operate the systems.

Calgon Carbon has patented the application of low-energy UV light for the inactivation of cryptosporidium and offers water producers a license fee of $0.015 per 1,000 gallons treated to utilize the technology. Moon Township elected to make a one-time lump sum payment to CCC for a paid up license for use of the technology.

EMERGENCY FILTRATION RECEIVES FDA APPROVAL FOR FILTER

Emergency Filtration Products last month received FDA approval of a Class II medical device for its 2H Technology Breathing Circuit Filter (2H Filter).

EFP's 2H Filter captures and isolates infectious pathogens by removing moisture and particulate from airflow at high levels

of efficiency. The 2H Filter is compatible with numerous applications in ventilators, respirators and anesthesia circuits, and is EFP's first device in a planned series of high efficiency circuit filters targeting the worldwide hospital market.

In addition, EFP has introduced the 2H Filter to the V.A. (Veterans Administration) and the Department of Defense. As part of its initial government marketing effort, EFP is in the process of obtaining its National Stocking number to make the 2H Filter available for all military medical applications.

NEW BUSINESS ACTIVITY UP FOR U.S. MICROBICS

Sub-Surface Waste Management (SSWM), a wholly-owned subsidiary of U.S. Microbics, recently reported that its second quarter business activity is up significantly over first quarter ending. SSWM says it has experienced an increase in bid activity and installations for continuing revenue filtration projects, carbon treatment systems, and technology licensing and tolling at customer sites. At the same time, outstanding bids for soil and groundwater projects have increased by $1.5 million over the prior quarter.

VARIAN DEBUTS LIFE SCIENCE LAB CONSUMABLES

Just weeks after Varian completed its acquisition of ANSYS Technologies, a U.S. supplier of consumable laboratory products for life science and other applications, Varian has introduced liquid chromatography (LC) columns, solid phase extraction (SPE) materials and filtration products for drug discovery and development laboratories.

CLARCOR GRABS WO FILTRATION CONTRACTS

Clarcor has signed Total Filtration Program contracts with Deere & Company and TRW Inc. When fully implemented, Clarcor expects the combined annual revenues from these two contracts will be approximately $8-$10 million.

TICE PURCHASING FLORIDA FILTER COMPANY

Tice Technology has announced its intent to acquire A3 Technologies, Ponte Vedra Beach, FL, but for the deal to take place, Tice would have to sell two of its businesses, gain shareholder approval of a 10-for-1 reverse stock split and get $6.5 million in private investment.

If the proposed deal occurs, A3 Technologies would keep its name and remain in the same location. The seven-person company is 50% owned by Atmospheric Glow Technologies, a research and development company based in Knoxville. Last year, the company spun off A3 to test and bring the company's atmospheric plasma technology from the concept phase to selling it to potential clients.

ARTISAN LOWERS JET-VAC STEAM-JET VACUUM PRICES

Artisan Industries has streamlined engineering and incorporated new technology for its Jet-Vac line of steam-jet vacuum equipment and chillers. These improvements significantly reduce engineering and manufacturing costs, allowing Artisan to significantly lower prices on all Jet-Vac products for the chemical, pharmaceutical, food, petrochemical and power industries.

PALL SELECTS VUEPOINT TO TRAIN SALES REPS

Vuepoint, a corporate eLearning software and services company, has been selected by Pall to train its sales and marketing representatives on its filtration, separation and purification products for the life sciences and industrial industries. Pall University also plans to use VLS to train all 9,000 global employees, distributors and customers across 30 countries with courses created in five different languages.

NEW PRODUCT: PRAXAIR MEMBRANE MODULES

Praxair’s Innovative Membrane Systems subsidiary has introduced Membrane Nitrogen Generation and Compressed

Air Dryer modules as alternative point-of-use sources of supply for small-volume users of gaseous nitrogen and dry air. These products utilize Praxair's patent-pending membrane process technology and Hankison International's pre-filtration and design technology. Praxair Distribution, also a Praxair subsidiary, and Hankison are the exclusive master distributors of these modules.

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FINANCIALS

FEDDERS ANNOUNCES 2Q RESULTS

Fedders recently reported sales of $73.1 million for the second quarter of fiscal year 2002 ended February 28, compared to $84.7 million in the second quarter of fiscal 2001. In the first six months, sales were $111.2 million, an 11.5% decrease from sales of $125.6 million in the comparable fiscal 2001 period. Despite the decline in sales, the gross profit percentage for the second quarter and fiscal year-to-date was relatively flat due to the ongoing contribution from the company's previously announced restructuring plan.

The decline in second quarter and fiscal year-to-date sales is primarily the result of weakness in demand due to economic conditions in overseas markets for air conditioners, in the telecom market for cooling products used in wireless and fiber-optic applications, and in the semiconductor cleanroom market for air filtration products.

CLARCOR PROFITS DROP IN FIRST QUARTER

Clarcor recently reported an 18.4% drop in net profits for its first quarter ended March 2, due to a non-recurring item. Clarcor had net profits of $8 million, down from $9.8 million in the 2001 period. Sales were $158.3 million, up 1.3% from $156.2 million in the year-earlier quarter.

The 2001 period's net profits and sales were boosted by a $7 million contract termination payment. Excluding that, net profits in the 2002 quarter would have been up 15% and sales up 6.1%. Clarcor said its bottom line was helped by aggressive cost reduction efforts and the success of its "Total Filtration Program" sales initiative.

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MEETINGS

AFS EXPO SET FOR THIS MONTH

The 15th annual Conference and Exposition of the American Filtration and Separations Society is set for this month, April 9-12, 2002. at Moody Gardens in Galveston, TX. For a complete rundown of the conference and a list of exhibitors, log on to www.afssociety.org.

FIRST MEDICAL FILTRATION CONFERENCE SET

The first International Conference on Medical Filtration is being organized by Filter Media Consulting and is inviting papers on the following related topics:

· HVAC/HEPA/ULPA filtration for hospitals and operating theaters
· Facemask and respirator solutions
· Topics related to anthrax and bio-warfare
· Breathing filters
· Filters used in surgery like cardio-pulmonary bypass
· Oxygen filters
· Arterial and final blood filters
· Leukocyte reduction filters
· Critical filter media aspects, incubator and in-vitro fertilization
· Bacterial-viral
· Laser fume control
· Diagnostic filters and screens
· The important field of dialysis filtration, dental challenge and

amalgam removal from dental wastewater,
· Intravenous fluid and drug delivery
· Bedside filters and patient care protection
· And many more.

The two-day conference will take place in Stuttgart, Germany, and will attract all segments — user, manufacturer, health-care officials, consultants and distributors — of the fast growing $2-3 billion worldwide market of medical filtration. For information: Filter Media Consulting, P.O. Box 2189, LaGrange, GA 30241-2189; or fmclutz@mindspring.com.

FILTRATION 2002 SET FOR DECEMBER IN DC

Exhibit sales for the Filtration 2002 Exposition, December 3-5 in the Washington Convention Center in Washington, DC, are well under way. Any company involved in any aspect of filtration that is looking for a cost-effective way to promote products, develop new business relationships and enhance their profitability should exhibit at Filtration 2002.

Scheduled as part of the Filtration 2002, the conference sessions will focus on HEPA/HVAC, Respiratory Protection, Nuclear Air and an Industry Forecast.

Back again will be the popular Filtration 101 Short Course, which will feature a number of test machines to demonstrate the basic principles of filtration. In addition, a Filtration 201 Short Course expanding on the fundamentals presented in the Basics course is also being offered.

For information on exhibiting: Marilyn Bellinger at 919-233-1210 Ext. 118; mbellinger@inda.org, or Tracey Barefoot at 919-233-1210 Ext. 129; tbarefoot@inda.org. A Filtration 2002 Exhibit Brochure is also available on the INDA website: www.inda.org.

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FILTER PATENT REVIEW

Filtration assembly and culture device

Assignee Pall Corporation

Abstract: A filtration assembly can comprise a chamber for holding a fluid sample to be filtered and a cover assembly defining a petri dish into which a filter element can be placed for cultivating microorganisms present on the filter element. A filtration assembly can also comprise a sample reservoir for holding a fluid sample and a base for supporting the sample reservoir detachably connected to the sample reservoir. One of the sample reservoir and the base can have a projection extending around its periphery and the other of the sample reservoir and the base can have a groove extending around its periphery and detachably engaging the projection in a fluid-type manner around its periphery. A filtration assembly can also comprise a sample reservoir for holding a fluid sample to be filtered and a base for supporting the sample reservoir. The base can include a fluid port and communication with an interior of the sample reservoir and a skirt surrounding the fluid port for contact with a vacuum manifold. A method of filtering a fluid may comprise disposing a filter element on a support surface formed on one of a sample reservoir and a base. The method can further comprise detachably connecting the sample reservoir to the base in a fluid type manner without using the ceiling member by engagement between a projection formed on one of the sample reservoir and the base and a groove formed in the other of the sample reservoir and the base. A method of using a filtration assembly can comprise placing a base of a filtration assembly on a vacuum manifold with a skirt of the base contacting an inlet tube of the manifold around the periphery of the skirt. A method of culturing microorganisms can comprise passing the fluid sample through a filter element and placing the filter element in a petri dish defined by a cover assembly mountable on a sample reservoir.

Patent Number: 6358730; Issue Date: 2002 03 19; Inventor: Kane, Jeffrey

Vacuum fluid filter

Abstract: A vacuum filter includes a cylindrical filter drum 12 having both a perforate section 14 and an imperforate section 16. The drum is positioned in a tank 20 so that the imperforate section is oriented upwardly therein. A level controller is provided to maintain the level of contaminated fluid below the top of the imperforate section but above the perforate section. A filter belt 54 wrapped around the filter drum is repositioned by rotating the drum when the differential pressure between the interior and exterior of the drum reaches a predetermined value. The inlet ends 35 of the suction pipes 34 are continuously positioned at the lowest point of the drum so that the pump does not lose suction when the drum is rotated thereby facilitating continuous filtration of the contaminated fluid through the vacuum filter.
Patent Number: 6358406; Issue Date: 2002 03 19; Inventor: Hirs, Gene

High turbidity wastewater purification system

Abstract: A device and method for the filtration and purification of suspended solids from high turbidity wastewater or other fluids using a slow circulating fluid stream flow inside a vessel of fluid containing a mixture of coagulant and suspended solids. By determining and using a calculated velocity of the flow of the fluid in the vessel, suspended solids are caused to separate from the fluid in which they are suspended by natural actions of gravity and pressure differentials in the vessel ceasing the rise of the suspended solids. The suspended solids are filtered from the water or other fluid by a filter layer of the suspended solids themselves which form a filter element for the fluid at a determined level in the vessel wherein suspended solids are separated and drain back though a return orifice leaving cleansed fluid to rise through a secondary filtration system of buoyant balls floating at a higher lever. Additional filtration of

fluid and condensation of solids into sludge is achieved using an optional second return conduit to leach additional fluid from solids drained into the return orifice from the first filtration layer of suspended solids.
Patent Number: 6358407; Issue Date: 2002 03 19; Inventors: Liao, Taiouan; Liao, Chunjiang; Lam, Manhoi

Ultrafiltration device and method of forming same

Assignee: Orbital Biosciences LLC
Abstract: An ultrafiltration device has a ported reservoir body, and a filter membrane sealed to the body along a closed contour surrounding the port(s) to provide a large area filtered outflow path. A frusto-conical end provides hydrostatic deadstopping with little or no wicking, greatly enhancing recovery time and efficiency. Methods of using the device rapidly isolate a predetermined amount of a desired retentate in the distal portion of the tube, and are also useful for quantitative transfer of smaller molecules and for multi-step processing of sample arrays Linear array strips of such chambers may be formed by bonding together mating halves with filter areas over the chamber ports. The vessel may include a rib to guide and orient filter during assembly, and/or a ledge or recess to engage and align the filter, assuring that the filter is precisely positioned and does not wander during manufacture and bonding. The vessels have a high filter area to volume ratio, maintain open filter surfaces and high rates of filtration throughout the spin, and are fully compatible with robotic loading, multistage operation and in situ multiwell plate filtrate and/or retentate assay or transfer. Attachment of the filter may be effected by heat welding. Preferably the vessel and filter are positioned between a press member and a heat sink and a superheated tool contacts the press member to selectively deliver a defined bolus of heat to the weld areas.
Patent Number: 6357601; Issue Date: 2002 03 19; Inventors: Bowers, William F.; Yankopoulos, Basil; Towle, Timothy

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THAT'S ALL, FOR THIS MONTH ...

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