

Asia's Only Regional Bilingual Magazine for the Nonwovens Industry  
**NonwovensAsia**

亚洲非织造材料工业    ノンウオーブンス・アジア    부직포 아시아



垂直式混开棉机组  
Vertical mixing opener

ASBG003气压自动棉箱  
ASBG003 Air auto hopper

ASBG091梳理机  
ASBG091 Carding machine

ASBG215系列梳理机  
ASBG215 Carding machine

ASBG401高速铺网机  
ASBG401 High-speed cross lapper

ASBG939大仓混棉箱  
ASBG939 Large bin hopper

直列式混开棉机组  
In-line mixing opener

WF923边料开松机  
WF923 Leftover material opener

**节能、高效水刺非织造布生产线**

Energy Saving and High Efficient Spunlaced Nonwovens Production Line

**适用: 医用卫生材料, 清洁、护肤、即弃材料, 合成皮革基布材料**

Applications: Production of Medical and Hygiene Material, Cleaning Material, Skincare Material, Disposable Material and Substrate for Synthetic Leather



**新型湿法成网水刺非织造布生产线**

New Type Wetlaid Spunlaced Nonwovens Production Line



**适用: 可冲散可降解的水刺非织造材料**

Applications: Production of Flushable and Degradable Spunlaced Nonwovens



**高速梳理机**  
High-speed carding machine

机器宽度: 2.5M, 3.0M, 3.8M  
Machine width: 2.5M, 3.0M, 3.8M  
出网速度: 可达150M/min  
Output speed: up to 150M/min

适用范围: 针刺、水刺、热风无纺布  
Application: Needle Punching, spunlace, air through fabric



**热风定型机**  
Hot air setting machine

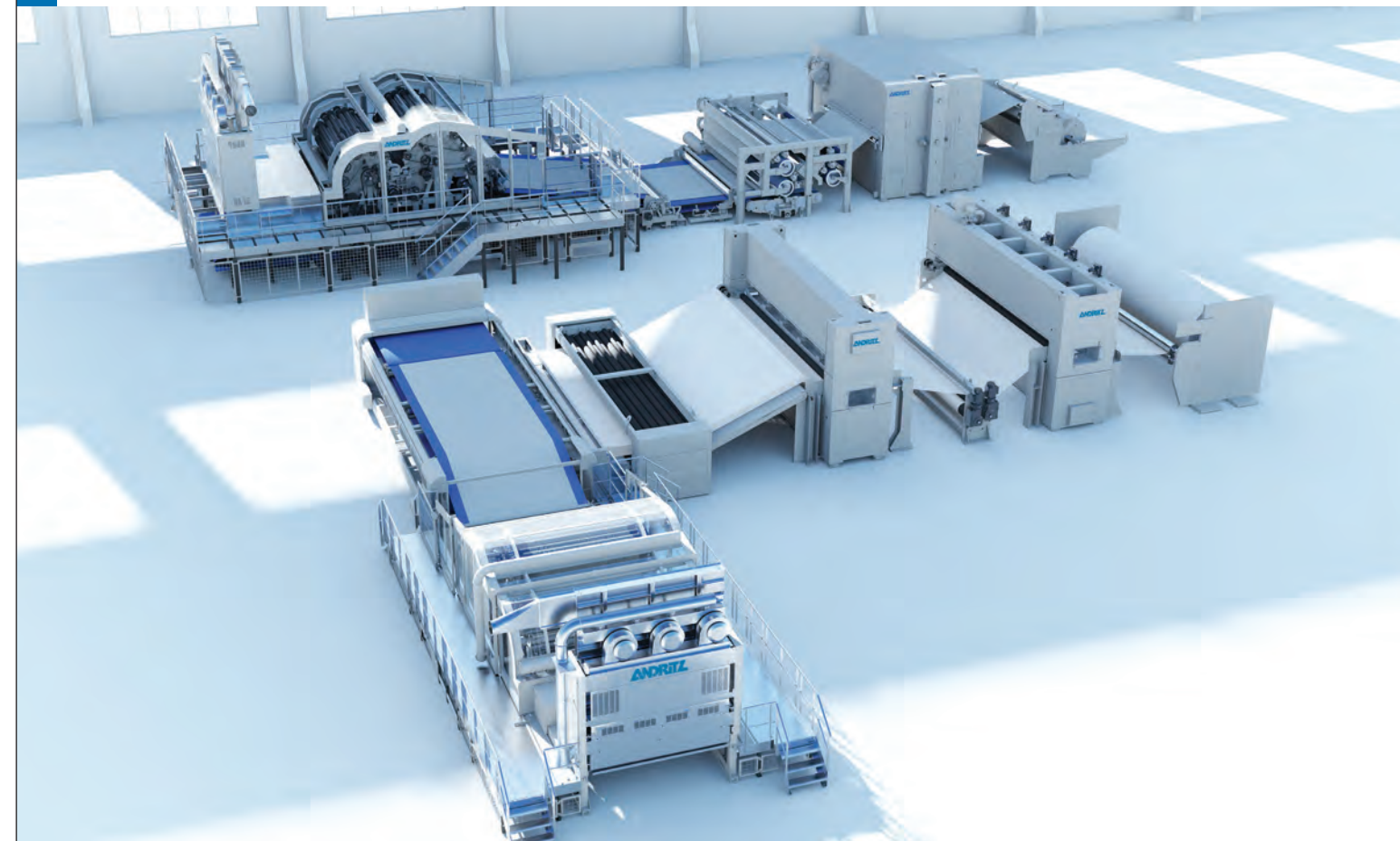
机器宽度: 2.5M, 3.2M  
Machine width: 2.5M, 3.2M  
有效烘区: 3M × n单元  
Drying zone: 3M × n unit  
生产速度: 可达150M/min  
Production speed: up to 150M/min

适用范围: 热风无纺布、无胶棉、过滤棉、热熔毡  
Application: Air through fabric, non adhesive mattress, filter media, thermal bonding fabric

**120M新型热风无纺布生产线**

## A competitive edge with the aXcess range

### Efficient lines for spunlace and needlepunch



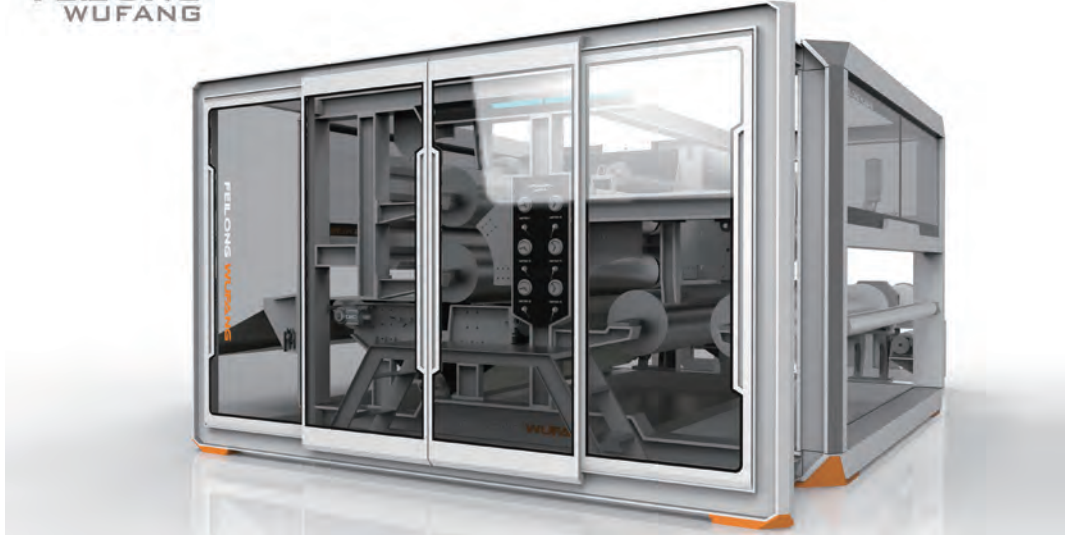
#### Designed in Europe – Made in Jiangsu.

The new neXline spunlace and needlepunch aXcess ranges are the right solutions for nonwovens producers who want to offer large annual capacities at a competitive price level. All key

components have been tested and approved by European process experts, and the equipment is manufactured at ANDRITZ Wuxi (member of the CNITA association). ANDRITZ is the right partner for high-level technologies with

local manufacturing and spot-on services. [Team up with ANDRITZ Nonwoven at ITMA Asia 2018, Oct. 21-25, Shanghai, hall 2 booth A24.](#)

**FEILONG**  
WUFANG



**高效水刺机组**  
High-efficient spunlace units

机器宽幅：2.5M、3.5M  
Machine width: 2.5M, 3.5M  
生产速度：可达180M/min  
Production speed: up to 180M/min

适用范围：各种水刺无纺布  
Application: all kinds of spunlace  
nonwoven fabric



**高速针刺机**  
High-speed needle loom

机器宽幅：2.5-9M  
Machine width: 2.5-9M  
针刺结构：单针区、双针区、四针区  
Needle structure: single board, double  
boards, four boards

针刺频率：1200n/min、1600n/min  
Needling frequency: 1200n/min, 1600n/min

地址：江苏省常熟市支塘镇任阳晋阳西街125号  
邮编：215539  
ADD.: No.125, Jinyang West Street, Renyang, Zhitang Town,  
Changshu City, Jiangsu Province, P.R. China 215539



⊕ NT1600热熔胶透气喷涂复合设备  
NT1600 Hot Melt Spray Lamination Machine

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Applicable to oil filtration by adjusting spray system  
and supply adhesive up to 220℃~250℃.



**创新** 在于每日的用心之作累积而成！

Innovation is inspired by dedicated efforts every day!

**适用范围：**  
空气过滤材料、汽车内饰及隔音材料、医用隔离服等

**Application:**  
Air Filtration Material, Automotive Interior, Medical Isolation Gown, etc.

www.ndccn.com



NT2400透气涂布复合设备   
NT2400 Breathable Coating Lamination Machine

NT2100透气涂布复合设备   
NT2100 Breathable Coating Lamination Machine



**创新** 在于每日的用心之作累积而成!

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**适用范围:**

医用隔离服、一次性医用床垫、建筑用隔水透气膜、婴儿尿裤、成人尿裤、床垫底膜等材料复合

Application:

Medical Isolation Gown, Disposable Underpad, Building Water-proof Breathable Film, Backsheet Lamination for Baby Diaper, Adult Diaper, Underpad, etc.

**NDC 新日成**

**NDC Spray Coating System Fabricating Co., Ltd.**

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# 汕头三辉无纺机械厂有限公司

## SHANTOU SANFAI NONWOVEN MACHINERY FACTORY Co., LTD.

汕头三辉无纺机械厂有限公司成立于2001年8月，总部位于广东省汕头市，在揭阳高新区建有占地10万m<sup>2</sup>的广东三辉无纺机械有限公司新厂区，为国家高新技术企业、广东省民营科技企业、广东省守合同重信用企业、汕头市战略性新兴产业重点培育骨干企业、汕头市装备制造重点企业，拥有广东省无纺机械（三辉）工程技术研究中心、汕头市企业技术中心等科研机构，是《针刺机》、《针刺法非织造布生产联合机》等行业国家标准起草单位，为科技创新型企业。

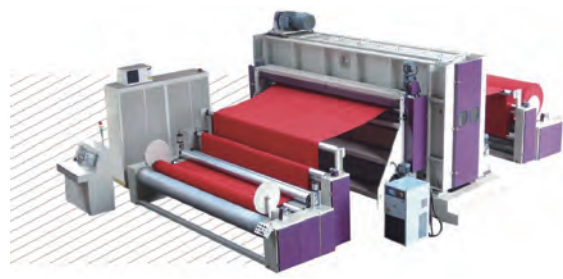
公司坚持“工艺主导、联通产研，科技创新、引领行业”的研发方针，承担多项国家、省、市科研项目，获得国家、省、市科技进步一、二、三等奖，拥有如“宽幅高频起绒针刺机”等一批具有自主知识产权的高新技术产品，多项技术填补国内行业空白，处于国内领先国际先进水平。自主研制的针刺法非织造机械有八大类50多个品种，主销国内高端市场，并已出口欧亚等地，可提供产品定位、工艺制定、设备选型、安装调试、人员培训、设备保养等交钥匙工程。

### 主要产品 MAIN PRODUCTS



宽幅高频针刺机  
Wide Width High Frequency Needle Punching Machine

工作幅宽 (Working Width): max10500mm  
针刺频率 (Stroke Frequency): 1200 ~ 1600rpm/min  
生产速度 (Production Speed): 2.5 ~ 15m/min  
植针密度 (Needle Population): 2000 ~ 8000ns/m



(双针板) 高频起绒针刺机组  
(Double Boards) High Frequency Velour Needle Punching Units

工作幅宽 (Working Width): 2500mm ~ 4500mm  
针刺频率 (Stroke Frequency): 1200 ~ 1800rpm/min  
生产速度 (Production Speed): 2 ~ 10m/min  
植针密度 (Needle Population): 2 × (5000 ~ 8000)ns/m

### 超纤皮革基布自控针刺生产线 Microfiber Artificial Leather Base Needle Punching Production Line



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# ASPIA

Asia Superabsorbent Polymers  
Industry Association

亚洲吸水性树脂工业协会

The Asia Superabsorbent Polymers Industry Association (ASPIA) is a non-profit, voluntary international association that was established in May 2007.

亚洲吸水性树脂工业协会 (ASPIA) 是一个自愿参加的非营利国际组织，成立于2007年5月。

The mission of ASPIA is to create a foundation for the sustainable growth of the superabsorbent polymer industry in Asia by promoting high levels of product safety and care of the environment.

本协会的宗旨是提升产品关爱环境、安全的水平，促进亚洲高吸水性树脂工业持久稳步健康发展。

#### For more information

Asia Superabsorbent Polymers Industry Association

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# 高速针刺生产线

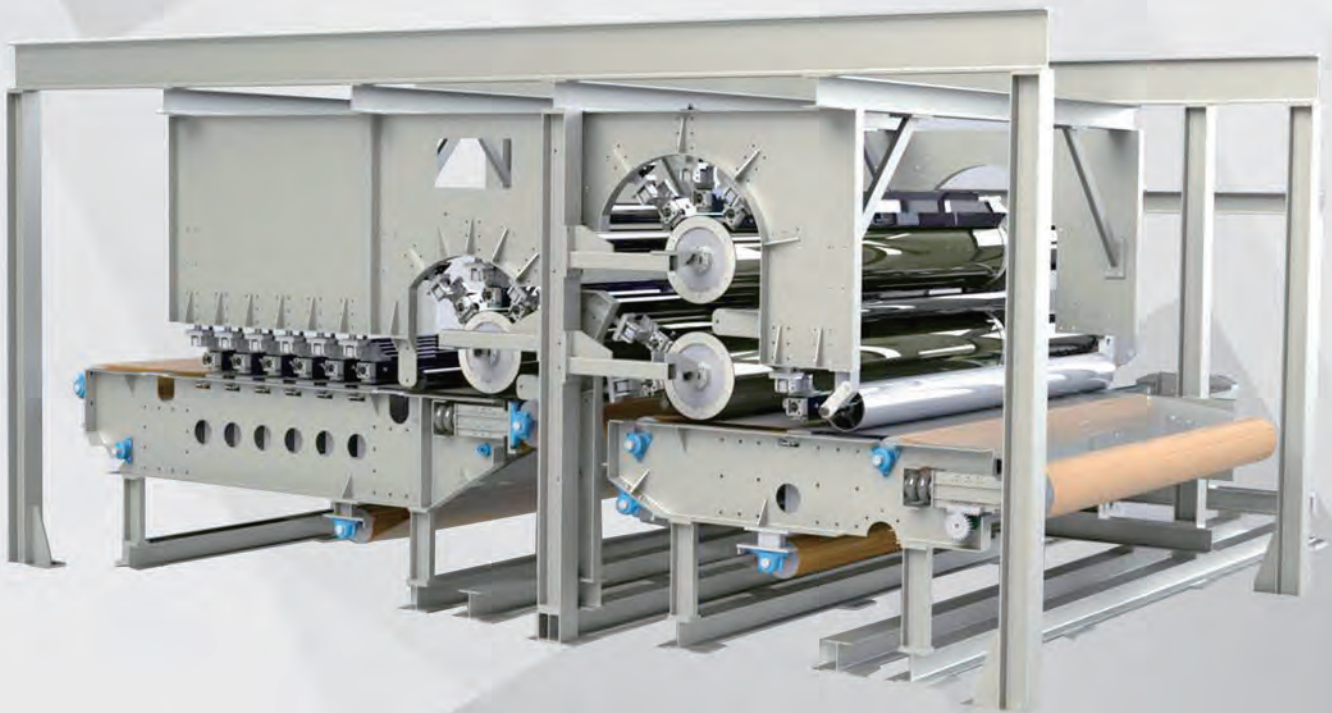
HIGH SPEED NEEDLE PUNCHING LINE



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# 水刺机

## SPUNLACE MACHINE



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生活用为重点

工业用为辅助

倩而宝卫生用品

欧品佳纸尿裤

裕丰无纺布

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示范基地 (A区)

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# Business News

## The 7th Filtration & Separation Asia The 10th China International Filtration & Separation Exhibition Exhibitors preview



**LENZING FIBERS**

**B20**

Website: [www.lenzing.com](http://www.lenzing.com)

The Lenzing Group is an international group of companies with its headquarters in Austria, production sites in all major markets and a global network of sales and marketing offices.

Lenzing's quality and innovative strength set standards for the global man-made cellulose fiber industry. United under its roof are all three product generations: Viscose, Modal and the Lyocell fiber TENCEL®.

Lenzing is committed to the principles of sustainable management and very high environmental standards.



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**G10**

Website: [www.berryglobal.com](http://www.berryglobal.com)

Berry is the world's leading leader in plastic packaging and specialty engineered materials.

Berry has a global footprint and operates 124 manufacturing and processing facilities in 17 countries around the world. Currently, there are 10 bases in the Asian region, and the business sector covers medical, health and specialty materials. Berry strives to make people's lives better by providing the world's leading and emerging brands innovative packaging and protection solutions, often before the customers and consumers even know they need them.



**Abalioglu Teknoloji**

**D10**

Website: [www.abaliogluteknoloji.com.tr](http://www.abaliogluteknoloji.com.tr)

Abalioglu Teknoloji, located in Denizli, Turkey, is a group company of Abalioglu Holding which has 2500 employees with \$1.3 billion in USD turnover. We are experienced in production of polymeric nanofiber based filter media for various filtration applications on a mass scale.

Innovative nanofiber production technology represents a major breakthrough in air and liquid filtration by providing an extremely low pressure drop, highly durable nanofibers and extended filter life.



**A2Z Filtration Specialities Pvt. Ltd.**

**A18**

Website: [www.a2zfiltration.com](http://www.a2zfiltration.com)

A2Z Filtration Specialities is a designer and manufacturer of filter production lines, filter testing equipment and filter components with a client base in over 65 countries across six continents.

The company has evolved from an equipment & components supplier to developing turnkey solutions in the field of filter manufacturing lines. A dynamic work force comprising of over 50 engineering professionals offering installation, implementation and specialized training for filtration equipment and complete turnkey projects around the globe.



**TSI Incorporated**

**H82**

Website: [www.tsi.com](http://www.tsi.com)

TSI Incorporated serves a global market by investigating, identifying and solving measurement problems. As an industry leader in the design and production of precision measurement instruments, TSI partners with research institution and customers around the world to set the standard for measurements relating to aerosol science, air flow, indoor air quality, fluid dynamics and biohazard detection. TSI serves the needs of industry, government, research institutions, and universities, with applications ranging from pure research to primary manufacturing. With headquarters based in the U.S. and field offices throughout Europe and Asia, TSI has established a worldwide presence in the markets we serve.

With the growing importance of its sales in China, TSI create a wholly owned foreign enterprise in Beijing to manage the activities and increase its level of factory support.



**Palas GmbH**

**C21**

Website: [www.palas.de](http://www.palas.de)

## Business News

With over 60 patents submitted, Palas® has set the standard in aerosol and particle technology for more than 30 years. Through continuous innovation, company achieve extraordinary quality and durability in our products.

The result is unique technical and economic advantages for our customers. Palas® has established itself as a global market leader in the fields of aerosol generation, aerosol dilution and aerosol particle measurement technology. Renowned companies, universities and research institutions in approximately 60 countries put their trust in Palas® precision technology.

### Core Competencies:

- Fine dust monitoring systems
- Nanoparticle measurement technology
- Aerosol spectrometer systems
- Filter test systems
- Particle generation systems
- Dilution systems
- Clean room particle technology
- Special developments
- Calibration systems



**BinNova Microfiltration GmbH** D30  
 Website: [www.binnova.de](http://www.binnova.de)  
 Development and manufacture of innovative micro filtration materials for next generation products made from inorganic/glass and synthetic fibers and manufacture of customized porous materials for innovative filter companies.

These materials are made in Germany on a very new manufacturing line with the most advanced process technology.

Filtration materials for use in air/gas filtration, in liquid filtration (in particular hydraulic oil filtration) and for use in coalescer units (air-oil separation and liquid-liquid separation).



**ACA Systems Oy** A10  
 Website: [www.aca.fi](http://www.aca.fi)  
 Founded in Polvijärvi Finland in 1986, ACA Syetems Oy has been focused on developing analyzers for the process industries of paper, filter media, plastic film, etc.

Since the launch of the Permi online permeability and pressure drop analyser in 2001, over 200 units have been sold worldwide. It provides continuous measurement for the entire width of the filter media during production which is important for quality control and process optimization. A stable process is important for consistent quality and efficient production.

The unprecedented level of visibility provided by the Permi ensures our customer operates at peak performance.



**TEXTTEST AG** B21  
 Website: [www.textest.ch](http://www.textest.ch)  
 TEXTEST has been manufacturing testing equipment for the measurement of air permeability, hydrostatic head, water vapor transmission rate, and etc. since 1969. It specializes in measurement of air Permeability. All TEXTEST products are designed and made in Switzerland.



**Jiangxi National Bridge Industrial Co., Ltd.** D37  
 Website: [www.jxnbi.com.cn](http://www.jxnbi.com.cn)  
 JXNBI—Jiangxi National Bridge Industrial Co., Ltd. was set up in May 2003, has 4 domestic and overseas high technology PET spunbond thermobonded & needle punched nonwoven production lines and multiple special functional processing production lines, with annual output nearly 10000 tons of PET spunbond non-woven and annual 3000 tons processing functional nonwoven. JXNBI is one industrial company with PET spunbond production, R&D, processing, sales and nonwoven professional equipment R & D design, processing and making.

JXNBI has a high production capacity, advanced process technology, specification complete and excellent product quality, industrial function extension, can better meet customer requirement. So far, JXNBI has formed 6 series of national industrial nonwoven: "JXNBI Engineering Non-woven", "JXNBI Waterproofing Nonwoven", "JXNBI Filter Nonwoven", "JXNBI Vehicle Nonwoven", "JXNBI Degradable Nonwoven", "JXNBI Functional Nonwoven". JXNBI is



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well known in the industry with 7 national registered trademark brand, 4 invention patents and 21 utility patents. So, JXNBI is the leader in the domestic PET spunbond nonwoven industry, especially, the "JXNBI Filtration Nonwoven" sell well both at home and abroad and has a constant leading sharing market rate with the first three in the same industry manufacturers.



**Johns Manville Asia Trading Co., Ltd.** E30  
Website: [www.jm.com](http://www.jm.com)

Johns Manville, a Berkshire Hathaway company, is a leading manufacturer and marketer of premium-quality products for building insulation, mechanical insulation, commercial roofing, and roof insulation, as well as fibers and nonwovens for commercial, industrial and residential applications. JM serves markets that include aerospace, automotive and transportation, air handling, appliance, HVAC, pipe and equipment, filtration, waterproofing, building, flooring, interiors and wind energy. In business since 1858, the Denver-based company has annual sales of approximately \$3.0 billion and holds leadership positions in all of the key markets that it serves. JM employs approximately 7,500 people and operates 43 manufacturing facilities in North America, Europe and China.

Filtration segment belongs to Engineer product Group (EPG), one of Johns Manville's three strategic business units. Johns Manville has been providing filtration solutions since the 1940s and offers one of the widest arrays of filtration products in the world. JM has a broad range of product technologies serving the filtration markets which include Synthetic and Glass Fiber solutions. The synthetic products include Spunbond Polyester (PET), Meltblown Polypropylene (PP), and Meltblown Polyester (PBT). The glass fiber products include Glass Air Media, Sliver and Microfibers. Our diverse product portfolio allows us to design and engineer custom solutions to meet existing and emerging application requirements.



**Tianjin TEDA Filters Co., Ltd.** G20  
Website: [www.tedafilters.com](http://www.tedafilters.com)  
As the leading manufacturer of Meltblown

fabric and MB-based laminated media in China, TEDA FILTERS offers the high-quality synthetic nonwoven used in variety of applications: air filters (HVAC and HEPA grade), vacuum bag, disposable face masks and respirators, liquid filter cartridges, thermal insulation, acoustic insulation, wiper and absorber. The company owns six production lines with total capacity up to 8000MT annually. Besides the common PP resin, its newly launched MB line can make superfine fiber using PBT, PPS to convey the good filtration function even under higher temperature circumstance.



**中材科技** G50  
**Sinomatech Membrane Material Company**  
Website: [www.fiberglasschina.com](http://www.fiberglasschina.com)

Sinomatech Membrane Material Company is continuously focusing on R&D, manufacture of fiberglass products by wet process, and presently becoming the largest manufacture base of fiberglass products by wet process in China. The company is mainly engaged in R&D, production and sales of filter material used in environment protection, batteries material, air purifying material and functional organic membrane material, which of application is covering air filtration in-doors, industrial clean room, non-bacteria shop floor and the filtration in coalescence, anti-bacteria, high temperature and liquid and so on.

There are seven series of air filtration materials with different grade such as: ASHRAE, HEAP, ULPA etc., with the liquid accuracy range from 1µm-30µm, which is suitable for aircraft fuel, hydraulic oil, and lube and pre-filtration and so forth. Meanwhile, the company is providing filtration solutions and program in various industrial filtrations.



**NDC 新日成** C30  
**NDC Hot Melt Adhesive Application System Co., Ltd.**  
Website: [www.ndccn.com](http://www.ndccn.com)

As a pioneer in Asia-pacific, NDC is professional for R&D and manufacturing hot melt spray coating system. NDC has provided equipments and service for over 30 countries, including the leading corporations (e.g. world top 500 3M) and other promising enterprises, and earned good reputation. Main Products: Hot melt machine, Hot melt coating machine, hot melt spray laminating machine, etc.

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D21

Shijiazhuang Chentai Filter Paper Co., Ltd.  
Website: [www.chentai.net](http://www.chentai.net)

As a manufacturer specialized in filter paper, Shijiazhuang Chentai Filter Paper Company has accumulated more than 20 years' experiences since its foundation in the year of 1990. The product includes air filter paper, oil filter paper, fuel filter paper, cabin filter paper, gas turbine filter paper and dust collection filter paper etc. According to different application, cellulose fiber/synthetic fiber and nano fiber will be used in the production to enhance filtration efficiency and using lifetime.

Chentai Filter Paper Company is always devoting himself to becoming the expert of filter paper industry. Besides the insistence to product quality, they pay more attention on the professional after-market service. To offer timely and exact feedback to customers, Chentai Filter Paper Company will keep the high passion to grow into an environment-friendly enterprise of world-class.

### Web Industries offers micro-slitting

Technology allows spooling materials down to 1 mm wide

Manufacturers in the food, personal care, industrial and alternative energy market segments seeking greater production throughput with materials down to 1 mm wide can now turn to Web Industries for thin-width precision-slit flexible webs wound on high capacity spools.

According to Web Industries director of operations James G. Oas, films and laminates can be slit to exacting customer specifications and wound onto spools in lengths exceeding 130,000 linear feet for lay up or inline production in a variety of applications. The extra-long length spools enable manufacturers to save downtime by reducing changeover and splicing requirements.

Examples of micro-width flexible material end uses include package-opening strips in personal care products, food applications such as chewing gum and cheese packaging, and metalized films in industrial and alternative energy equipment.

"The types of materials that can be precision micro-slit and then spooled often depends on factors such as coefficient of friction (COF), tensile strength, cross contamination concerns and other considerations," Oas says. "At Web Industries, we take a customer's sample material and quickly determine if it has the necessary qualities for precision micro-slitting and spooling." Precision-slit micro-width materials must be wound on spools with sufficient precision to maintain a stable build."

"There's a lot that goes into spooling," Oas notes. "To ensure material integrity, we maintain proper tension throughout our process. Traditional processes lack this robustness and often deform or damage the materials during converting. Our attention to material quality, combined with Web's ability to precisely wind material into a spool form within a .25 mm variation of customer specifications, brings a unique set of precision converting capabilities to the market."

Spooling of thin micro-width flexible materials is a Web Industries formatting development. (Source from: "[www.convertingguide.com](http://www.convertingguide.com)")

### Diamond Wipes partners with USA Table Tennis

Develops new line of wipes for the sport

American wet wipe manufacturer Diamond Wipes International, Inc. and USA Table Tennis (USATT), the national governing body for the sport in the U.S., announced today a multiyear partnership to support current and future elite U.S. teams and athletes better promote the sport of table tennis in the U.S.

As part of the multi-faceted partnership, the Diamond Wipes logo will be featured on USATT's National Team uniforms that will be used in domestic and international competition.

"I'm beyond excited for this partnership. Growing up in Taiwan, I've been a big fan of table tennis. It is an honor to support and work with USATT," says Eve Yen, founder, owner, and CEO of Diamond Wipes. "My husband, James, loves this game. He's been an avid table tennis player for as long as we've been together. Before his retirement, our employees knew him as 'Mr. Table Tennis' and I hope more and more people

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come to learn about this unique and fun sport."

"We are thrilled to have Eve, James and the entire Diamond Wipes team join the USATT family and I am so excited for what this partnership will bring to the table," says Gordon Kaye, CEO of USA Table Tennis. "Partnering with Diamond Wipes - an innovative, entrepreneurial American company - will provide resources and opportunities for our athletes to better compete on the world stage."

In addition to the sponsorship of USATT's National Team uniforms, Diamond Wipes has developed a new line of wet wipe products for the table tennis community. One such unique wipe is designed to clean table tennis paddles easily and quickly, while maintaining its grip. The product is the first of what will be many innovative wipes for the sport. The paddle cleaning wipes would be available in the summer and the portion of the proceeds from their sale will benefit USATT. (Source from: "www.convertingguide.com")

### Creating a new differentiated soft nonwoven fabric

#### Key advantages

- Enhanced soft touch feel - silky and cottony
- Enhanced comfort
- Consistent quality
- Stable high-speed processability
- Opportunities to create differentiated hygiene products

JOFO (Weifang) Nonwovens Co., Ltd. has created a new differentiated nonwoven fabric by increasing the dosage of Vistamaxx™ performance polymers in a formulation with an ExxonMobil™ polypropylene (PP) resin which it first developed for its "SilkSoft" product about five years ago. The new premium nonwoven fabric, R1, meets the needs of brand owners by offering an ultra-soft-touch feel, low fluff, consistent quality and stable high-speed processability. The soft-touch feel provided by Vistamaxx polymers combines cottony and silky softness and is comparable to carded air-through nonwovens. ExxonMobil PP3155E3 resin provides excellent spinnability and consistent product quality.

Over the years, softness has become a basic

requirement of nonwoven fabrics because it delivers comfort to hygiene applications such as the backsheet and waistband of baby diaper/adult incontinence products. Today, brand owners are looking to upgrade their hygiene products with fabrics that offer superior softness balanced with enhanced processability.

#### Collaborating for success

Keen to respond, JOFO (Weifang) one of China's major suppliers of nonwoven fabrics to international brand owners, turned to ExxonMobil. The two companies have a 10 year history of long-term collaboration and joint development which resulted in JOFO (Weifang) becoming the first customer to successfully commercialize a Vistamaxx polymer-based soft nonwoven fabric solution.

"Our collaboration with ExxonMobil over the years has been key to a mutually successful relationship," said Peng Wenzhong, plant manager, JOFO (Weifang) Nonwovens Co., Ltd. "As well as highperformance materials with consistent product quality and reliable supply, they offer expertise in value chain engagement. This has proved invaluable in helping to shape the soft fabric market and influencing decision makers downstream."

Creating a differentiated nonwoven fabric To create a new softer nonwoven fabric solution, the companies first looked at the existing formulation of "SilkSoft", a nonwoven fabric that has proven successful since it was introduced. The formulation comprised a lean blend of Vistamaxx polymers with ExxonMobil PP3155E3 resin. "ExxonMobil PP3155E3 is well-suited for spunbond production because it combines high and consistent quality with high-speed processability," said Peng. "And Vistamaxx polymers, a drop in solution, offer unique softness when dry blended with PP."

After tests of different formulations, it was discovered that increasing the dosage of Vistamaxx polymers provides an ultra-soft-touch fabric combining a silky and cottony feeling, consistent product quality and stable high-speed processability on diaper lines.

#### Brand owner breakthrough

The new premium tier nonwoven fabric, R1, is already enjoying success among domestic and international brand owners. "Feedback has been very positive which is important



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because softness is very subjective," said Peng. "Brand owners are now upgrading and differentiating their portfolio to meet downstream requirements, and we are already seeing some significant breakthroughs with key industry players."

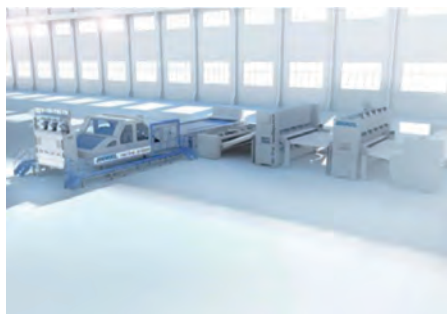
(Source from: "www.exxonmobilchemical.com/vistamaxx-nonwovens")

### ANDRITZ highlights its state-of-the-art technologies

GRAZ, AUGUST 9, 2018. International technology Group ANDRITZ will be presenting its innovative nonwovens production processes and textile finishing technologies. As one of the global market leaders in advanced technologies for drylaid, spunjet, thermobonding, wetlaid, and converting processes for absorbent hygiene products, ANDRITZ offers reliable and unique solutions tailored to each customer's individual needs.



ANDRITZ neXline spunlace aXcess



ANDRITZ neXline needlepunch aXcess

### ANDRITZ (CHINA) LTD. WUXI BRANCH – THE RIGHT PARTNER FOR THE ASIAN NONWOVENS INDUSTRY

The Chinese nonwoven market is on the rise in terms of capacity and excellent roll good quality, serving both local and international markets. ANDRITZ (China) Ltd. Wuxi Branch, China, is an experienced competence center for production, service, and R&D especially geared to fit the Asian nonwovens industry. It designs and manufactures cutting-edge nonwoven machines to complement the ANDRITZ aXcess product range, designed with focus on the Asian markets.

ANDRITZ has built up the Wuxi facility on a par with European standards to better serve nonwovens producers and respond to customers' requests promptly with top-end quality products. The ANDRITZ Wuxi branch is now optimally structured to focus on increasing efficiency and decreasing delivery time. Trained by European experts, the local project management team benefits from top-level expertise and the design department can make use of the most advanced software. A new service organization has been set up to enhance prompt delivery and provide excellent customer support.

The facility's proximity to customers ensures a full range of services, including a roll service center with state-of-the-art grinding equipment and a test stand for various kinds of rolls. This is why all roll types can be repaired,

reconditioned, and upgraded there on the spot.

### ANDRITZ AXCESS PRODUCT RANGE FOR MEDIUM-CAPACITY PRODUCTION

As an all-round partner for the nonwovens industry, ANDRITZ has developed the nonwoven aXcess range especially suited to the demands of producers with medium-capacity requirements, particularly in the emerging markets. The ANDRITZ aXcess portfolio includes lines and individual machines for air-through bonding, needlepunch, spunlace, wetlaid, and calendaring processes, making it the ideal product for entering the nonwoven market with medium-capacity production.

The latest development in this segment, the neXline wetlaid aXcess devised for low to medium-capacity production, offers added value for producers. Compact lines make shipment easy, and they also fit perfectly into containers so that transport is fast. An operator-friendly configuration and versatile design ensures efficient and on-the-spot production at affordable investment costs.

### FOR FURTHER INFORMATION, PLEASE CONTACT

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[www.andritz.com](http://www.andritz.com)

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and with Milife Microfiber smaller/equal than meltblown. Milife fiber sizes fills a gap in the current nonwoven fiber sizes available.

Milife is a thin product, with exceptional narrow fiber size distribution, low elongation, dimensional stability, and excellent web uniformity. It is available with weights from 8 gsm to 60 gsm. Milife is currently used in luxury packaging, interior decoration, specialty tapes, medical and other industrial applications. Milife can be used in filtration products as a support material, as a filter media or as a fine denier component in a composite.

JX Nippon ANCI, VP Sales & Marketing, Gabriel Cuellar, notes "we are excited on the launch of Milife for filtration applications and believe Milife with its unique properties offers additional and new options to filter manufacturers."

(Source from: "https://fiberjournal.com")

# Market News

## Canopus enters Indian wet wipes market

**New manufacturer hopes to capture a share of India's growing middle class**

India has become a promising place for nonwovens and hygiene-related companies to set up shop. With low penetration rates and rising disposable incomes among India's middle class, entrepreneurs are seeing opportunities to establish businesses in many industries in the country.

"With industrialization and women moving out of homes for work, there is huge demand for products that make life easier. Wet wipes are one of them," says Mr. A. R. Kulkarni, consultant for technical textiles, who has written various blogs and given lectures at important seminars, including Invest Karnataka.

"India has grown immensely with the IT industry at the forefront," he adds. "Today, India's common man has a higher disposable income and wipes are affordable by middle and higher class. Hence, India is ready to move ahead and use new products."

According to a market survey conducted in India by the chairman of Canopus Wet Wipes Pvt Ltd, Mr. Ashok Kulkarni, the highest percentages of sales are baby wet wipes, and therefore are rampant among Indian manufacturers and overseas imports. Since India is a growing economy, growth for the India wipes market is pegged at 23% year over year.

Founded in February 2017, Canopus Wet Wipes strives to serve the growing middle and upper classes in India with wet wipes in various categories. Located in Karnataka, India, the company is starting up its manufacturing operations recent, and will produce hygiene wipes (baby, intimate, hand), cosmetic and facial care wipes, medibath wipes and home wipes (furniture, glass cleaning), among others.

Situated at Harohalli, KIADB Industrial Area, Ramanagara District, Canopus is launching its business with one wipes converting line with a capacity of 15 million pieces per year in a 12,000 square foot manufacturing facility. Following ISO 9001:2015, the company has taken all measures to build the factory

according to high standards and expects to have certifications required by the EU and U.S. soon.

Initially, the company will export private label wipes products and later intends to launch its own brand locally under the name Canopus. Its also making plans to expand its operations in six months with the addition of two more converting lines, with further investments down the road.

Part of Canopus' strategy to stand out from the competition is to launch innovative products that Indian consumers haven't seen before. One of these products is sports wipes, which the company says hasn't been introduced yet in the Indian wipes market.

"We stick to a three-layer technology like European Union manufacturers and producers, while the entire Indian market uses two layer packaging material. With this, water and chemical content will remain intact for a longer period," adds Mr. Kulkarni. "Our quality of product and packaging will be the standout point of our company. Very few companies in India adhere to EUP, INDA, EDANA standards. Our wipes will be affordable, the best quality and easily available in the nearest stores soon." (Source from: "www.nonwovens-industry.com")

## GDM to host innovation week in May

**The company would showcase its portfolio of solutions and services across several formats**

GDM, worldwide leader in the hygiene disposable industry, committed to providing innovative converting and packaging solutions for the manufacturing of open baby diapers, baby pants, adult incontinence briefs and lady sanitary napkins. Customers can rely on us thanks to our operating sites in Italy, Brazil, China and the U.S. and in other 28 countries through the worldwide network of Coesia, a privately owned group of innovation-based industrial solution companies operating globally and headquartered in Bologna, Italy.

During Innovation Week 2018, scheduled for May 7-11, 2018 at GDM's Italian headquarters, the company would showcase its portfolio of solutions and services, both live and through 4K videos, and the latest

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R&D developments.

For the event, GDM has created a "Product Experience" area, where attendees will make a journey through the worldwide disposable market, diving into the latest trends in product features and regional specificities, with a strong focus on Total Cost of Ownership for converting solutions. They will also have the exclusive opportunity to look behind the scenes and discover GDM's latest R&D developments.

The spotlight is on GDM's latest development, BP8 Red: designed to produce baby pants ensuring optimized absorption and free movements, keeping baby skin and product surface dry.

BP8 Red has a production speed of 800 ppm, giving competitive advantage through the best Total Cost of Ownership. The line enables premium materials processing, delivering the highest quality with the best versatility and comfort for H-type products.

BP8 Red has been designed focusing on raw material control and tensioning, as well as leveraging on technical solutions allowing optimization on both production and product costs.

Moreover, the lean design of processes creates a more intuitive and easier interface with operators, bringing remarkable advantages in machine operation and handling.

(Source from: "www.convertingguide.com")

### Jet.com launches private label brand

**Uniquely brand features all-purpose wipes**

Jet.com, one of the fastest growing ecommerce companies in the U.S., officially launched its new brand, Uniquely J. Uniquely J was designed with Jet.com's consumer – a busy, discerning shopper – in mind. At launch, consumers can shop over 50 carefully curated Uniquely J SKUs across the coffee, cleaning, laundry, pantry, paper, and food storage categories. All products boast bold and beautiful packaging, specially designed by artists Jet.com partnered with from around the world.

Uniquely J products were developed with key qualities Jet.com's shoppers look for, including: plant-based ingredients for the cleaning products; USDA Certified organic and Fair Trade Certified beans for the coffees; and BPA-free plastics for the food storage bags. Uniquely J's mission, articulated in its launch video, is to offer customers everyday products without tradeoffs.

"We're excited to introduce Uniquely J to consumers, confident that they'll embrace the products and soon begin to consider them essential to their day-to-day shopping," said Liza Landsman, president of Jet.com. "Uniquely J is not just Jet.com's entry into the private brands space, it also furthers our efforts to serve the metropolitan consumer with a select assortment of premium products while also offering them a great shopping experience."

Among the over 50 SKUs available at launch, Uniquely J products will include Cleaning Living All Purpose Cleaning wipes.

"Uniquely J was created to make it easier for busy consumers to get their everyday essentials without having to give up the things they care about. With Uniquely J, we want to eliminate the tradeoffs consumers face; the purchase decision becomes an easy one when each product offers the trifecta of quality, style, and value," added Dan Hooker, general manager, Private Brands, Jet.com and Walmart ecommerce.

Consumers can shop Uniquely J via [www.jet.com/uniquelyj](http://www.jet.com/uniquelyj) and expect more products to be added to the brand in the coming months and continuously over time.

(Source from: "www.nonwovens-industry.com")

### Vietnamese company to make diapers, pads in Cuba

**Thai Binh Investment Trading Corporation will invest \$9 million in island**

A Vietnamese company will start producing disposable diapers and sanitary pads in Cuba's Mariel Special Development Zone (ZEDM) beginning in the first half of next year, the largest project on the island dedicated to attracting foreign investors.

The Director General of Thai Binh Investment

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Trading Corporation, Vi Nguyen Phuong, said the project, which is currently under construction, represents a more than \$9 million dollar investment and is expected to produce 40 million diapers and 150 million sanitary pads annually.

The Vietnamese company has had a presence in Cuba for nearly 20 years and approved the investment in 2016 with the aim of “offering the consumers local, high quality items made in Cuba,” according to the representative, cited by Island media.

There is currently no disposable diaper production in Cuba, despite high demand for the products, but a Cuban Italian company is reportedly building a plant in the ZEDM, which is the business center and merchant port located about 45 kilometers west of Havana.

Thai Binh also plans to construct a plant capable of making 50,000 tons of detergent per year in the Mariel zone. This new project will be done in partnership with the Cuban trade company “Industrias Nexus S.A.” They intend to present the Mariel office with the proposal with plans of starting in 2020. (Source from: "www.nonwovens-industry.com")

### Toray to expand business in India

Base	Production capacity (tons/year)	Future operation plan (tons/year)
[Republic of Korea] Toray Advan Materials Korea Inc.	43,000	(April 2018) 18,000
[China] Toray Polytech (Namtong) Co., Ltd.	73,000	
[Indonesia] P.T. Toray Polytech Jakarta	37,000	
[China] Toray Polytech (Foshan) Co., Ltd.	-	(2019) 20,000
[India] Toray Industries (India) Private Co., Ltd.	-	(2020) 18,000
Group total	153000	

Toray Industries announced that it acquired a business plot, about 350,000 m<sup>2</sup> in size, in Sri City, Andhra Pradesh, India, for a new base for its local subsidiary Toray Industries (India) Private Limited (abbr. TID).

Toray positions the new site as an important base for the Toray Group’s advanced materials business and plans to aggressively invest management resources in it and utilize it as the global operation base in response primarily to the domestic demand in India and targeting South Asia in various business

fields where demand is expected to expand.

As a first step, Toray decided to establish a new base for its polypropylene (PP) spun bond for hygiene materials business, whose market is expected to expand along with the increasing demand for disposable diapers. The company will make sure to capture the demand in India, where the disposable diapers will be consumed, and accelerate the global business expansion of PP spun bond with a powerful production platform and high cost competitiveness. The new facility will have an annual production capacity of about 18,000 tons and is expected to start operations in April 2020.

Further, Toray plans to build new bases for nylon and PBT resin compounds in response to the demand for high performance resins given the expansion of the automobile market.

The Indian economy is a promising market that is expected to grow at an annual rate of 6% from 2016 to 2030 and global businesses in various industries including manufacturing industries such as automobile, home electric appliances, chemicals, pharmaceuticals and construction machinery as well as retail and financial industries are making forays into the country.

As for disposable diapers, where PP spun bond is mainly used, the demand is expected to rapidly increase as economic development leads to increased income lifestyle changes. The birth rate is also expected to be high given the country’s population, the second largest in the world (about 1.34 billion people according to 2017 United Nations material), and major hygiene material manufacturers have been aggressively expanding their business in India, a potential market, in response to the expanding demand for diapers.

Moreover, the automobile market in India is expected to grow at a rate of 7% per year towards 2025 due to the economic development. In addition, it is believed that the requirement for Toray’s high performance materials will increase given the expanding demand for high performance auto parts and sophistication of customer demands along with the tightening of environmental restrictions in recent years. In response, Toray plans to establish nylon resin and PBT resin compound bases in India and capture the growing Indian market.

## Market News

Starting with the establishment of trading firm Toray International India Private Limited (abbr. TIID) in 2011, Toray in India set up Toray Industries (India) Private Limited (abbr. TID), a local subsidiary to carry out market research and to support the business expansion of the Toray Group companies in and entry into India in 2014 and began production and distribution of airbag fabrics at Toray Kusumgar Advanced Textile Private Limited (abbr. TKAT), the Toray Group's first manufacturing base in India, in 2016.

As one of the basic strategies of the medium-term management program "Project AP-G 2019" launched in April 2017, the Toray Group pursues the expansion and advancement of global business, and has been working on "AE Project" to expand its business globally by capturing profit opportunities in growth countries and regions in a Group-wide project.

The acquisition of the new business site and start of the business in India is part of this "AE Project". The Toray Group will continue to further strengthen the organic collaboration among bases outside Japan and strongly pursue new market expansion (Source from: "www.texdata.com")

### Say goodbye to compromise, Say hello to Pampers pure protection that works

Introducing new Pampers Pure Diapers and Wipes Collection – made with 0% chlorine bleaching, fragrance, parabens and 100% Pampers protection

For parents searching for diaper and wipe options in the "natural" category who don't want to sacrifice performance, the new Pampers Pure Collection offers another choice. It is the first-ever diaper and wipe collection made with premium cotton and other thoughtfully selected materials, stylish prints, and the Pampers protection parents around the world know and trust. And it all started with a mom at Pampers.

After giving birth to twin girls, Sara Giovanni, a scientist at Pampers, couldn't find an option that had everything she was looking for in diapers and wipes for her daughters. She hated making compromises on softness or protection or style, and knew many other parents felt the same.

"Motherhood made me very aware and focused on each and every decision I made for my girls. As my choices shifted towards more naturally-inspired products, I found the current diaper and wipe options were just not cutting it," she said. "I was craving an option that would deliver on protection and performance while also reflecting my lifestyle choices, and I knew my job at Pampers put me in a unique position to help."

Inspired by her own experience, Sara made it her mission to help create a Pampers diaper offering that was made with premium cotton, plant-based and other soft materials, protected against leaks just like Pampers, and looked cute and stylish. This became the inspiration behind the new Pampers Pure Collection, made with 0% chlorine bleaching, fragrance, parabens and 100% Pampers protection.

#### Pampers Pure diapers and wipes are:

- Made without chlorine bleaching, fragrance, lotion, parabens, natural rubber latex and the 26 allergens identified by the European Union
- Dermatologically tested and clinically proven hypoallergenic and gentle for baby's delicate skin
- Made with Pampers trusted leakage and dryness protection

Pampers Pure Protection diapers are also independently reviewed and accredited as skin safe by the Skin Health Alliance. Each size option of Pampers Pure Protection diapers features different stylish, fun prints (llamas, corgis, and sloths, oh my!), and the much-loved Wetness Indicator.

Pampers Aqua Pure wipes are designed to give parents Pampers' highest water content wipe while still delivering outstanding skin protection. The wipes are crafted with carefully-selected ingredients including 99% pure water and a touch of premium cotton, making them safe and soft even on delicate newborn faces, hands and bottoms.

"Parents rightfully expect it all, and yet when it comes to the diapers and wipes category, many have been forced to compromise," said E. Yuri Hermida, P&G NA VP Baby Care. "We've talked to thousands of parents and heard that while today's natural category diaper and wipe options provide certain



## Market News

qualities parents desire, they struggle to find a product that delivers the leak protection, style, and features they're looking for in one complete package. In fact, of the 57% of moms who use natural products for their babies, only 3% buy natural diapers most often. We're excited to extend our product offerings with our new Pampers Pure Collection to provide parents another trusted option for their babies."

The Pampers Pure Collection holds itself to the same safety standards as all Pampers products. More than 25 million babies and toddlers use Pampers every day making it among the safest products in the world.

Pampers Pure Protection diapers are available in sizes N through 5 for a suggested retail price of \$11.99. Pampers Aqua Pure wipes are available for a suggested retail price of \$5.97. Pricing is at the sole discretion of the retailer. (Source from: "http://news.pg.com")

### Nanoval sells spunlaid line in Asia

**It's the first sale of its novel 1.6m wide spunlaid line**

Nanoval of Berlin, Germany, has sold the first production plant for spunlaid nonwovens based on its unique process for spinning continuous filaments.

The sale of the 1.6m-wide line, which concluded in September 2017, is to an Asian manufacturer that will use it to make polypropylene (PP) and polyethylene terephthalate (PET) filter media with basis weights in the range of 20-50gsm.

Since Nanoval began developing the technology in 2002, the company has only sold two pilot lines based on the process. The main obstacle to commercialization has been the lack of uniformity of the fabric weights, according to the company's project and quality manager Christian Gerking. However, in the later part of 2016, Nanoval was finally able to resolve this issue.

Nanoval was founded in 1987 by Gerking's father and current managing director Lüder to exploit a splitting effect caused by a particular flow of gas to make small, round metal powders. Having worked on the

development of nonwovens for Freudenberg in Weinheim and Kaiserslautern, Germany, during the 1960s and 1970s, Lüder Gerking also realized the potential of the technique for making fabrics.

Compared with conventional methods, the principal advantages of the Nanoval process are that it is simple, cheap and robust, and it consumes less energy and air than is needed to make an equivalent meltblown web. The process can be applied to a range of polymers including cellulose and lyocell.

In the case of cellulose, the process can operate with cheap paper pulp, including waste paper, as a raw material. However, Nanoval says the principal advantage of its cellulose/lyocell spunlaid compared with those made using staple fibers is the fineness of the continuous filaments, which have diameters below 10µm. Conventional staple fibers have a minimum titre of 1.3 dtex (diameter of 10.5µm).

Unfortunately, the productivity for cellulose fabrics is still below that demanded by potential customers; in 2017, the company succeeded in doubling the productivity to 12 kg.h<sup>-1</sup> for each meter of working width; prospective buyers are asking for more than 20 kg.h<sup>-1</sup>.

(Source from: www.nonwovens-industry.com")

### Norafin opens U.S. site

Within one year we built up a new production site in Mills River, with a new state-of-the-art Spunlace line and modern Lab and Offices. By the end of 2018 we will have created about 45 new positions.

With our first American production site we continue the success story of the company. In the 1980s Norafin developed its first spunlace line in Europe and started commercial production there. In the following years we had constant growth of the German production site in Mildenau and improved our knowledge with our needlepunch and spunlace production line. In 2013 Norafin expanded its production site with a second spunlace line, in order to meet increasing demands for specialized nonwovens and to broaden its assortment of high-quality technical textiles. Currently the company employs 180 people in Mildenau.

## Market News

With the change of shareholders and the decision to expand Norafin's production capacity in the US, our next important milestone for our future was made. On June 7th, 2017, we hosted the ground breaking ceremony at 111 School House Road in Mills River, North Carolina. With help from the German investors VR Equitypartner, Maxburg Capital and some members of the Company Management, Norafin has invested within the last 12 months around € 20 million in the new production facility.

Exactly one year later, on June 7th 2018, the inauguration of the new spunlace line in Mills River will take place in the presence of invited guests, which include representatives from the economic, political and industrial sectors, as well as the company's employees. The new line is able to produce technical nonwovens with a width of up to 2.8 m/ 110 inches, and with a weight between 20-500 g/m<sup>2</sup> / 0.6-14.75 oz/sq.yd. Both chemically produced high-performance fibers (Polyester, P84, meta/ para aramid) and natural fibres (Viscose, Tencel) can be processed on this unit.

Partners of the customized unit are the Dilo Group with Temafa and Spinnbau for Opening & Carding, Trützscher Nonwovens with the AquaJet for spunlacing, Brückner with the Power Frame for drying & stretching, and Menzel with Winder and Slitter.

With a good team and a high quality standard, the new spunlace line enables Norafin to be even more responsive to US market demands. It expands the selection of specialized nonwovens even further, and with that strengthens our longtime presence on the American market. Norafin's third spunlace line will make products made in the USA. (Source from: "www.norafin.com")

### Glatfelter to acquire G-P's European nonwovens business

G-P's Steinfurt, Germany, facility produces airlaid products for tabletop, wipes, hygiene, food pad, and other markets

Glatfelter, a global supplier of specialty papers and engineered materials, announced it has signed a definitive agreement to purchase Georgia-Pacific's European nonwovens business for \$185 million, subject to customary purchase price adjustments.

The proposed transaction includes Georgia-Pacific's operations located in Steinfurt, Germany, along with sales offices located in France and Italy. The Steinfurt facility produces high-quality airlaid products for the tabletop, wipes, hygiene, food pad, and other nonwovens materials markets, competing in the marketplace with nonwoven technologies and substrates, as well as other materials focused primarily on consumer based end-use applications. The Steinfurt facility is a state-of-the-art, 32,000-metric-ton-capacity manufacturing facility that employs approximately 220 people.

"Glatfelter's agreement to acquire the European nonwovens business demonstrates our commitment to building leading positions in global growth markets for engineered materials," says Dante C. Parrini, chairman and chief executive officer of Glatfelter. "Steinfurt's products and technologies complement our current airlaid business very well and the acquisition provides synergistic capacity increase opportunities and an improved cost structure to support our ability to serve customers in growing consumer and industrial markets. From a financial perspective, the investment provides an attractive return on capital, is immediately accretive and will deliver attractive EBITDA margins in a growing market."

In 2017, G-P's European nonwovens business generated net sales of \$99 million and EBITDA of \$18 million. The company expects to realize synergies in excess of approximately \$6 million per year within three years, and expects to incur one-time costs of approximately \$7 million for transaction fees and integration.

Glatfelter plans to finance the acquisition through a combination of cash on hand and borrowing under its existing revolving credit facility.

The proposed transaction is subject to customary closing conditions, including receipt of required regulatory approvals. Credit Suisse acted as the financial advisor in connection with the transaction, and Shearman & Sterling LLP as legal advisor. The closing is expected to occur during the fourth quarter.

(Source from: "www.glatfelter.com")

## Market Trends

### MANN - FILTER presents innovative filter medium made from recycled fibers

The new MANN - FILTER C 24 005 air filter offers a new filter medium made from recycled synthetic fibers. "One square meter of the filter medium contains the plastic from around two 1.5 liter PET bottles. The filter therefore makes an important contribution to the conservation of resources," explains Dr. Till Batt, expert in synthetic air filter elements at MANN+HUMMEL. "Our aim is to increase the amount of recycled fibers in new developments to 80 percent."



The new MANN - FILTER C 24 005 air filter made from recycled fibers

The air filter achieves excellent filtration thanks to the multi-layer MICROGRADE A-S medium and removes at least 99.5 percent of dirt particles in the range from 0.001 - 0.352 millimeters. By way of comparison, a human hair measures 0.05 - 0.07 millimeters. Thanks to its high dirt holding capacity throughout the entire service interval, the air filter requires only 30 percent of the filter medium area of traditional air filters based on cellulose media. The C 24 005 meets the replacement intervals prescribed by the vehicle manufacturer even under dusty conditions, and is characterized by its flame-retardant properties. The C 24 005 looks different to other air filters, with the green color of its recycled fibers giving it a distinctive appearance. The new MANN-FILTER C 24 005 air filter would be available in original equipment quality on the European market from November 2017 for various Toyota models. Further air filters with the innovative medium are already in preparation.

Filtration expert MANN+HUMMEL has been championing sustainable forestry for a number of years with environmentally friendly filter media for air filters. As well as meeting technical specifications, it is a priority for the company to conduct its business in a sustainable and environmentally friendly manner. The conservation of resources is an important factor in this context. MANN+HUMMEL has therefore had two production locations certified in accordance with the guidelines of the Forest Stewardship Council® (FSC) in order to be able to manufacture products with wood content from certified sources.

MANN+HUMMEL enhances its filter media on an ongoing basis in cooperation with the

various filter media manufacturers in order to remain at the cutting edge of technology. (Source from: "<https://www.mann-filter.com>")

### Flushable pregnancy test earns FDA clearance

Lia Diagnostics claims it eliminates the need for plastics in pregnancy tests

Lia Diagnostics, Inc. announced the U.S. Food and Drug Administration (FDA) 510(k) clearance for over-the-counter use of the Lia Pregnancy Test, the first and only FDA-cleared, flushable, biodegradable pregnancy test. Lia features a proprietary coating technology, combined with nonwoven and paper techniques, that eliminates the need for plastic, creating a new category of water-dispersible, eco-friendly diagnostics.

Lia was created for women who value privacy, empowering users to choose how to share their results. Lia provides users with the convenience to flush their results, eliminating evidence of a pregnancy test. Lia is more than 99% accurate when used on the day of your expected period.

Lia is the result of years of research that combines the desire for discretion with sustainable materials and novel engineering into a pregnancy test that doesn't harm the earth. Lia is made of the same natural, plant fibers as most toilet paper and weighs less than six squares of the leading three-ply toilet paper.

"1987 brought us the first cell phone, the boombox, the Apple personal computer, and the at-home pregnancy test. They ushered in the era of portable, personal devices, changing the way we communicate and how we share news. It has been 30 years since 1987, and these revolutionary innovations have all advanced significantly – except for one: the at-home pregnancy test," states co-founder & chief executive officer Bethany Edwards. "It is the same, stiff, plastic relic highlighted in movies for its lack of privacy – someone sees the positive result in the trash, and breaks the news before you can! Worse yet, they are bulky, expensive, and add two million pounds of plastic and digital waste to U.S. landfills every year. At Lia, we have modernized the pregnancy test, ditching wasteful plastic and unnecessary electronics for a streamlined alternative that is both good for the environment and more discreet for its users."

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Co-founder & chief product officer Anna Couturier Simpson states, "Pregnancy tests account for enough plastic waste to travel from Philadelphia to the Space Station and back seven times. Lia is the only discreet pregnancy test made with zero glass fibers, batteries, plastic or nitrocellulose – elements found in nearly all single-use diagnostics available on the market today. Lia provides the only sustainable solution to-date."

Lia made its global debut on December 4, 2017, at TechCrunch Disrupt Berlin's Startup Battlefield, the world's leading authority in debuting game-changing technologies and revolutionary startups, and was named one of five finalists.

As part of Lia's continued commitment to women, customers can champion for women's reproductive health by donating Lia pregnancy tests to worldwide women's health organizations. Donations of \$10 will provide one Lia pregnancy test to non-profit organizations including Planned Parenthood, Planned Parenthood Global, Whitman-Walker Health, PreserveFertility.org, and SOS Grossesse via [www.meetlia.com](http://www.meetlia.com). Lia is expected to be available to consumers in mid-2018. (Source from: "[www.nonwovens-industry.com](http://www.nonwovens-industry.com)")

### 3M launches Bluetooth-Enabled HVAC air filter

**Filtrete Smart Air Filters contain pressure sensor that will notify users when the filter needs to be replaced**

The Filtrete brand from 3M announced the arrival of the Filtrete Smart Air Filter, the first-ever Bluetooth-enabled HVAC air filter for the home. The new filter takes the guesswork out of when it's time for a filter change, and provides other information so homeowners can take control of their home's air.

Filtrete Smart Air Filters contain a Bluetooth-enabled pressure sensor that, when paired with the new Filtrete Smart App, will notify users when the filter needs to be replaced based on air flow and usage, not just time. The Filtrete Smart App also provides data on outside air quality and gives helpful tips for helping to improve air quality indoors. Users can decide how much interaction they have with the Filtrete Smart App by opting-in to specific smartphone notifications to alert them when it's time to change their filter or even when outdoor air quality in their area is poor.

"When we talk with consumers, many know their air filter is designed to last on average three months, but every home is unique. Homeowners are unsure how their home's environment impacts their indoor air and the optimal time to change their air filter. And, they often forget important details like their filter size and type when it is time to change," says Amanda Dauphinais, Global Business Unit manager, Filtrete Brand. "The Filtrete Smart Air Filter takes the guess work out, helping homeowners take control of the air in their homes."

While the EPA recommends checking an air filter on a monthly basis and changing them at least quarterly, Filtrete research shows it's not uncommon for consumers to wait much longer between filter changes.

"The Filtrete Smart Air Filter helps monitor factors related to indoor air quality and provides data-driven alerts and replacement reminders, which is important because most people spend up to 90% of their time indoors," continues Dauphinais. "When combined with exclusive 3M filtration technology, the Filtrete Smart Air Filter is a powerful and smart way to cleaner, fresher air in the home."

The Filtrete Smart App logs outdoor air quality information based on the home's location and provides tips to users on how to improve the air quality inside. Every home is a different environment, and various factors impact the lifespan of an air filter. For instance, household activities like vacuuming, cooking, and remodeling projects or the presence of pets can impact how long the air filter will last. The weather and other environmental concerns like smog and humidity also impact the air quality inside a home and may play a role in how often an air filter needs to be replaced.

Filtrete Smart Air Filters would be available at participating retailers nationwide in spring 2018. The MSRP ranges from \$21.99-29.99 depending on filtration level and are compatible with iOS and Android devices. (Source from: "[www.convertinggide.com](http://www.convertinggide.com)")

### 3D Nonwovens Developments for textured nonwovens

When you are looking for a possibility to

## Market Trends



increase the performance, the recognition and the uniqueness of your products, the use of a structured nonwoven is an excellent choice. Structured products decrease the contact area to the skin, provide an additional volume of the product and influence the liquid management in a positive way because of a change in the porosity. Advantages, which are especially interesting in the hygiene market – for example as topsheet, backsheet or functional layer in diapers or femcare products.

Present structuring processes, like hydro entanglement, are slow and expensive. The new technology developed by REICOFIL in cooperation with ALBANY International (patent pending) structures your product fast and efficient. This process can basically be used on all existing REICOFIL lines, upgrades are possible.

**The new process: Using structured spin belts**  
In the REICOFIL process the filaments are collected and pre-bonded on a woven spin belt. The new technology provides a structure inside or on the spin belt, which leads to local changes of the air permeability in the belt. This influences the lay down and transfers the structure into the product. The laydown of the filaments is preferred in the area with the higher air permeability. This causes different fabric weights and thereby different thicknesses in the nonwoven.

### Function of the spin belt

The structured spin belt has mainly two functions: to create the desired pattern in the nonwoven and to ensure the process stability by the right construction of the spin belt (type of spin belt, way of weaving, air permeability of the ground belt vs. air permeability of the structured belt, etc.).

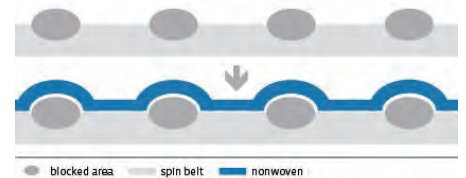
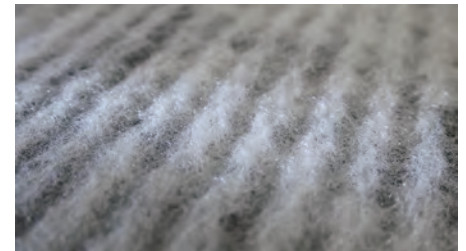
### Realization

To reach these functions a variation in the structure of the spin belt (e.g. different web density, thicker warp thread which lead to a local increase of the spin belt surface) is possible. Another possibility is the adding of additional material on the spin belt. This method is very flexible and a wide range of different patterns can be applied on the spin belt. A third technology to create a structure in the nonwoven is the partial suction under the spin belt. This method can create for example lines in MD direction.

### Version 1

- regulation of the air permeability of the spin belt by local blockages in the spin belt
- generates e.g. line, dot or symbol pattern
- the surface of the belt is still even
- bonding e.g. with calender or hot air
- this product shows a local variation in the fabric weight and this causes a different thickness and leads to a 3D nonwoven

### Version 2



- Create an elevation on top of the spin belt
- generates e.g. line, dot or symbol pattern
- Bonding preferably with hot air on the structured spin belt, e.g. at a "Full High Loft" product (crimped fibers PP/PE) or PP/PE in a core/sheath cross section
- This product reaches a highly distinctive 3D surface structure

(Source from: "www.reicofil.com")

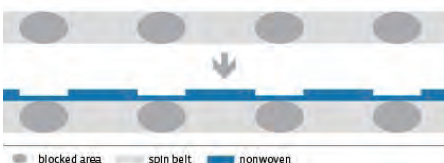
## Volvo aims for 25% recycled plastics in New Cars from 2025

Company unveiled specially-built version of its XC60 T8 plug-in hybrid SUV that incorporated recycled plastics

Volvo Cars announced its ambition that from 2025, at least 25% of the plastics used in every newly launched Volvo car will be made from recycled material.

Volvo Cars also urged auto industry suppliers to work more closely with car makers to develop next generation components that are as sustainable as possible, especially with regards to containing more recycled plastics.

To demonstrate the viability of this ambition, the company has unveiled a specially-built version of its XC60 T8 plug-in hybrid SUV that looks identical to the existing model, but has had



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several of its plastic components replaced with equivalents containing recycled materials.

"Volvo Cars is committed to minimizing its global environmental footprint," says Håkan Samuelsson, president and CEO of Volvo Cars. "Environmental care is one of Volvo's core values and we will continue to find new ways to bring this into our business. This car and our recycled plastics ambition are further examples of that commitment."

The special XC60's interior has a tunnel console made from renewable fibers and plastics from discarded fishing nets and maritime ropes. On the floor, the carpet contains fibers made from PET plastic bottles and a recycled cotton mix from clothing manufacturers' offcuts. The seats also use PET fibers from plastic bottles. Used car seats from old Volvo cars were used to create the sound-absorbing material under the car bonnet.

"We already work with some great, forward-thinking suppliers when it comes to sustainability," says Martina Buchhauser, senior vice president of Global Procurement at Volvo Cars. "However, we do need increased availability of recycled plastics if we are to make our ambition a reality. That is why we call on even more suppliers and new partners to join us in investing in recycled plastics and to help us realise our ambition."

The recycled-plastics XC60 was revealed at the Ocean Summit during the Gothenburg Volvo Ocean Race stopover. The race's focus on sustainability centers on a partnership with the United Nations Environment Clean Seas campaign, focussing on the call to action, "Turn the Tide on Plastic."

"Extensive recycling and reuse of plastic is vital to our efforts to turn the tide on plastic pollution," says Erik Solheim, head of UN Environment. "Volvo's move to integrate plastic waste into the design of their next fleet of cars sets a new benchmark that we hope others in the car industry will follow. This is proof that this problem can be solved by design and innovation."

The recycled plastics ambition is the most progressive statement around the use of recycled plastic by any premium automotive manufacturer. It represents

another demonstration of Volvo Cars' commitment towards reducing its impact on the environment across all operations and products. Last month, Volvo Cars committed to eradicate single-use plastics across all its premises and events by the end of 2019. (Source from: "https://archibaldandshorter.co.nz")

## Clorox Healthcare introduces VersaSure Cleaner Disinfectant Wipes

Wipes are EPA registered to kill 44 pathogens

Clorox Healthcare has introduced new Clorox Healthcare VersaSure Cleaner Disinfectant Wipes, an innovative, alcohol-free quat solution versatile enough to use on common healthcare surfaces with the assurance of broad-spectrum disinfection.

Clorox Healthcare VersaSure Cleaner Disinfectant Wipes are Environmental Protection Agency (EPA) registered to kill 44 pathogens, including bacteria, viruses and fungi, in two minutes or less. The unique, low odor, low residue formula features patented technology that enhances quat activity on surfaces to deliver broader efficacy and faster kill times without co-actives. The result is a versatile, one-step cleaner disinfectant wipe with the speed and efficacy healthcare facilities rely on and superior aesthetics, wetness and cleaning power needed for convenient, compliant use facility-wide.

Clorox Healthcare VersaSure Cleaner Disinfectant Wipes' innovative new formula provides:

- **Speed and Strength Against Key Pathogens:** VersaSure is EPA-registered to kill 44 microorganisms, including 14 multi-drug resistant pathogens, in two minutes or less. VersaSure kills influenza viruses, respiratory syncytial virus (RSV), measles, mumps and other viruses in 30 seconds and kills bacteria and fungi, including methicillin-resistant *Staphylococcus aureus* (MRSA), Vancomycin resistant *Enterococcus faecalis* (VRE), *Escherichia coli* (E. coli), salmonella, *Mycobacterium bovis* (TB) and *Candida albicans*, in two minutes.
- **Excellent Aesthetics and Cleaning Power:** Patented alcohol-free quat technology and innovative wipe design combine to provide excellent aesthetics, wetness and cleaning power. The low residue formula is designed for superior staff and patient comfort with

## Market Trends

no harsh chemical fumes or odors. Durable, low-linting wipes are textured for greater strength. Excellent wetness provides greater surface coverage compared with competitor quat and quat-alcohol disinfectant wipes and assurance that treated surfaces will remain wet for the full contact time.

- Convenient, Compatible Use: VersaSure wipes are ready-to-use, fast acting and compatible with a broad range of hard, non-porous surfaces found in healthcare settings. A variety of sizes, including multipurpose wipes in 85 and 150 count canisters and 30 count flat packs, and terminal wipes for everyday cleaning and disinfecting of large spaces, available in 110 count buckets and refill pouches, makes VersaSure convenient for both nurses and environmental services teams to use facility-wide.

"Not all disinfectants are created equal and many don't have the optimal balance of attributes to meet users' needs. For example, a conventional quat or alcohol-based product might offer good compatibility, but have limited kill claims or evaporate from surfaces before meeting the required contact time," says Brian Thompson, department manager – R&D, Clorox Healthcare. "We believe healthcare facilities shouldn't have to make those trade-offs and with VersaSure, they don't. Our R&D teams refused to make compromises between efficacy, aesthetics, wetness and cleaning power, and today we are excited to offer a one-step, 'use everywhere' wipe with broad-spectrum efficacy healthcare facilities can trust." (Source from: "www.convertingguide.com")

### K-C to expand North Carolina nonwovens plant

**\$30 million, two-year expansion will create new jobs in Hendersonville**

Kimberly-Clark Corporation has approved \$30 million for expansion and improvements to its nonwovens manufacturing facility in Hendersonville, NC. The plant produces nonwoven materials for Kimberly-Clark's North American adult and feminine care brands including Depend, Poise and U by Kotex.

The two-year project will focus on expanding the plant's production capacity and efficiency and is expected to add 14 new jobs at the site, while maintaining current employment.

"The Berkeley Mill team is proud about the

role we will play in supporting the future growth of Kimberly-Clark's adult and feminine care business in North America," said Ernest Humphries, plant manager, Kimberly-Clark's Berkeley Mill. "This investment, combined with the commitment of our employees and the support of the local community, will bolster the mill's competitiveness and position us for continued success."

"Henderson County is very proud to support Berkeley Mill's expansion," says Michael Edney, chairman of the Henderson County Board of Commissioners. "Kimberly-Clark is a legacy employer in our county, and we are proud to play a key role in the company's future. We look forward to many more years together."

The expansion plan comes following a restructuring announcement at K-C. The company announced in January it would close 10 jobs and eliminate 5000-5500 jobs as part of its global restructuring plan. The sites known to be affected by this plan two plants in Wisconsin—one making nonwovens and another making Depend adult incontinence items—and one in California, which makes consumer products like Scott toilet tissue and Kleenex as well as professional products including KimWipes and KayDry wipers. (Source from: "www.nonwovens-industry.com")

### JX Nippon ANCI launches Milife

JX Nippon ANCI, Inc. headquartered in Kennesaw, Georgia, with manufacturing in Roanoke, AL and composite manufacturing in Dalton, Georgia, will launch, Milife®, their fine denier polyester nonwoven in January 2018 for filtration applications.

Milife is a continuous fiber product but is made by a propriety technology that is not like spunbond. It utilizes a nonwoven process with continuous, oriented filaments, with machine and cross direction fibers alignment. Milife is available as MD only or with MD and CD strands. Milife is manufactured in Japan by a sister company under stringent quality procedures and is exclusively distributed by JX Nippon ANCI, Inc. – Kennesaw GA.

The technology allows very fine fiber sizes. Milife normally has fiber diameters of 10 microns (1 dpf) and Milife Microfiber has fiber diameters of 2.7 microns. This places Milife fiber sizes between spunbond and meltblown

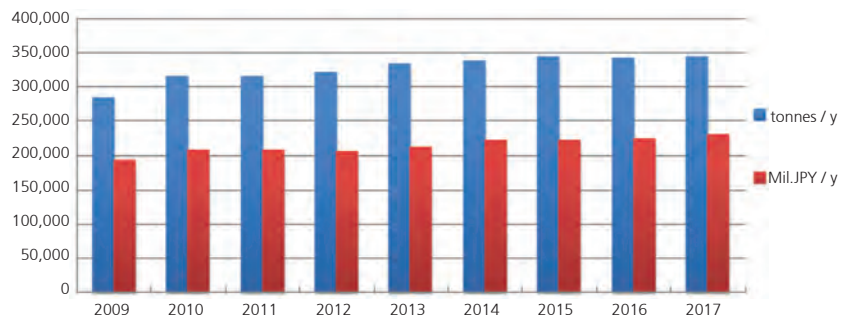
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## 2017 Japan nonwovens production

### Japan nonwovens production (2009~2017)

Source: METI

	2009	2010	2011	2012	2013	2014	2015	2016	2017
K tonnes	283.4	313.4	313.0	320.9	331.5	336.3	342.0	339.6	342.1
Bil. JPY	191.0	206.9	205.7	203.5	210.2	221.3	220.6	223.5	229.2
JPY/Kg	674	660	657	634	634	658	645	658	670

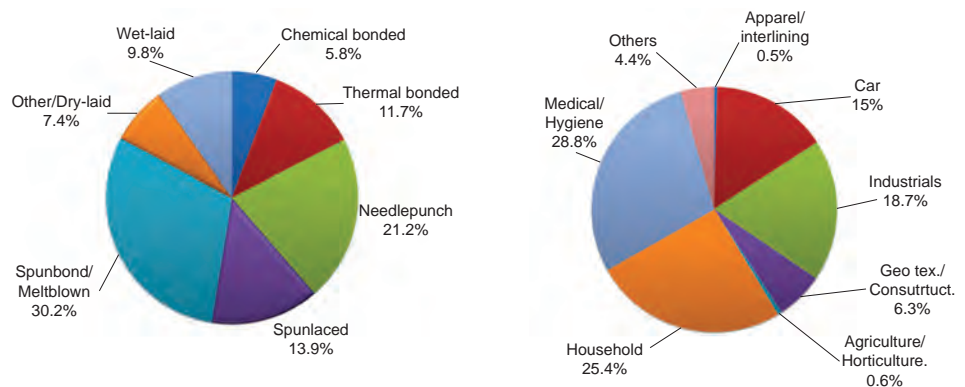


[Ref.] Nonwovens production in foreign countries by Japanese companies (capitalization ratio: 49% or more)  
 2012: 165.1 K tonnes, 62.3 B yen, 2013: 196.3 K tonnes, 84.1 B yen  
 2014: 227.5 K tonnes, 103.2 B yen, 2015: 259.1 K tonnes, 120.1 B yen  
 2016: 266.4 K tonnes, 107.5 B yen

Source: ANNA

### Japan nonwovens production by technology & application (2017) (342.1 K tonnes)

Source: METI



### Japan trend in export & import (2010-2017)

Source : Ministry of Finance

		2010	2011	2012	2013	2014	2015	2016	2017
Weight (K tons/y)	Export	49.8	48.9	50.5	53.3	56.4	51.3	52.0	55.0
	Import	108.3	122.2	129.6	142.8	163.0	189.8	211.2	240.5
Amount (B. JPY/y)	Export	57.9	54.8	54.4	63.1	70.1	73.0	71.2	77.0
	Import	37.5	43.1	45.6	56.2	69.2	82.0	77.5	91.2
Unit (JPY/kg)	Export	1,163	1,121	1,077	1,184	1,243	1,423	1,369	1,400
	Import	346	353	352	394	425	432	367	379



## Trend of Nonwoven producing machine for Hygiene - Medical application

KCS FUSO CO., LTD  
Kimihiko "KIMI" KIMURA Managing director

### Contents

- Application
- Classification by process
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- Wet laid- process - Flushable wipes - process after winding (1)
- Spooling
- Wet tissue making machine
- Mask making machine
- Machine suppliers (1) system suppliers
- Machine suppliers (2) carding, cross lapping
- Machine suppliers (3) Spooling, Wet tissue making machine

### Application

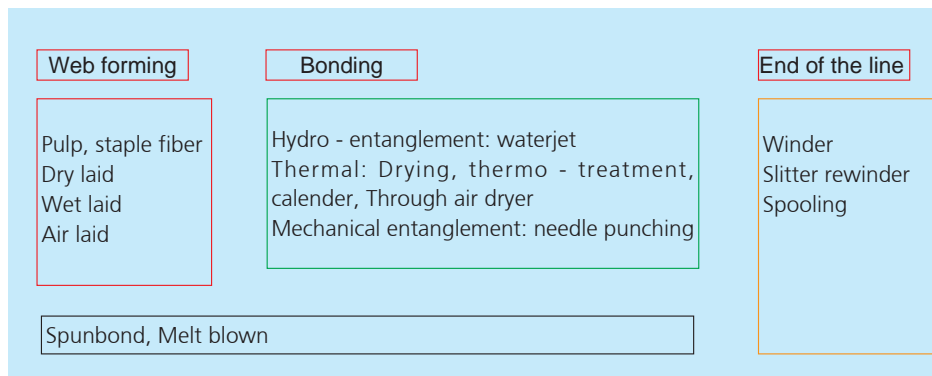


\*Nonwoven required: lighter, softer, cleaner, more beautiful, low cost and easy converting.....

\*Production line required: faster, low draft, easy maintenance, reliable.....

### From web forming through making nonwoven

Classification by process ~ web forming - winding



### Dry laid

- Wider carding machine: up to 6m
- Faster speed spunlacing: 300m/min. or more
- Wider TAD: up to 4m
- \*TAD = Trough air dryer

### Wet laid

Response to new application such as flushable wipes

### Spunbond

Higher weight (~20gsm) collateralizing high speed operation

#### Latest dry laid process - spun lace

Application: Hygiene, wipes Medical use  
Production: gsm 50gsm x Product width 5.0m x line speed 300m/min. x 60min. /1000 = 4.5ton /h

Opening & blending → Carding 2sets  
→ Hydro - entanglement → Drying → Calendering → winding

Production: gsm 25gsm x Web width 3.0m x line speed 120m/min. x 60min. /1000 = 540kg/h

Opening & blending → Carding → Cross lapping → Drafting → Hydro - entanglement → Drying → Winding

#### Latest dry laid process - spun lace (2)

-Carding - Bonding WJ - Drying - Winding -  
Production: 50gsm x 3.3m at winder x 250m/min x 60min. /1000 = 2.5ton/h  
50gsm x 4.4m at winder x 250m/min x 60min. /1000 = 3.3ton/h

Line types	Fabrics	Line speed	Working width	Capacity	End uses
Direct	20-120 gsm	up to 400 m/min	5.0-6.0 m	25,000 T/a	wipes, medical, hygiene

The direct line configurations are mainly designed for lightweight spunlace fabrics.



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#### Latest dry laid process - Through air bonding

- Carding - Bonding TAD - Winding -

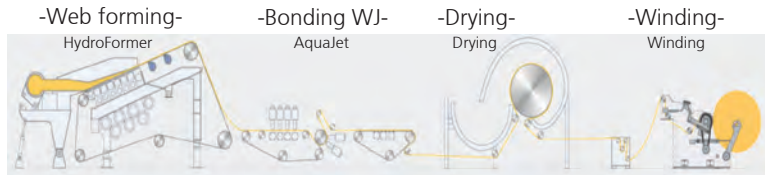
## Technology News

Production:  
30gsm x product width 4.0m x line speed  
200m/min. x 60min. /1000 = 1.4ton

Opening & blending → Carding → Through  
air bonding → Calendering → Winding

Application: Top sheet / back sheet for  
diaper, ADL, sanitary medical use

Latest wet laid process - flushable wipes



COPYRIGHT: TRUETZSCHLER NONWOVEN

## Process after winding ~ from Slitter & rewinder to Spooling ~

### Currently

Making pancakes by slitter - rewinder from  
mother roll

### Task

- \* Increasing switching times of pancakes due  
to converting speed up
- \* Request from converters → Longer length  
of strip

### Future

- \* From pancakes to spool
- \* Length of spools is 10 times longer than  
pancakes.
- depending on product

### Process after winding



Φ1200mm,  
70mmwidth strip in  
pancake → 3500m  
(3.5km)



Φ1200mm x 850mm strip in spool → 35km

\* Number of production of diaper  
700pcs / min.

\* Converting speed 350m.min.

\* Every 10mini. To change pancake  
VS  
Spool: 100 branch



**1/10 !!!!**

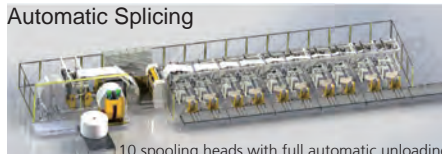
Decreasing working load  
for roll handling

## Spooling



10 spooling heads

### Automatic Splicing



10 spooling heads with full automatic unloading

COPYRIGHT: SPOOLEX Group

Mother roll dia.: ~2.0m  
Mother roll length: ~1m  
Spool dia. ~1.2m  
Spool length: ~0.85m  
Spooling speed: 600m/min.

## Wet tissue making machine

Automatic cross fold wet wipe converting  
machine



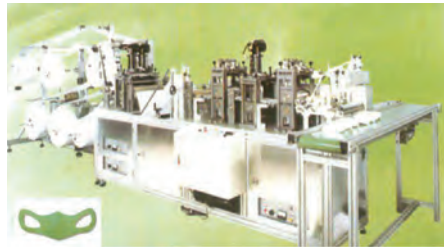


Ear looping sealing: 25pcs/min.

## Mask making machine



Mask blank making machine: 120pcs/min.



Dust mask making machine: 60pcs /min.

Mask making machine made in china sweeping the world with its domestic strong demand and low price as weapons.

## Machine suppliers

System supplier: carding machine, cross lapper, water jet, drafter



URL: <http://www.autefa.com>



URL: <http://www.dilo.de>



URL: <http://www.andritz.com/other-industries-and-products/oi-nonwovens-textile.htm>



URL: <http://www.truetzschler-nonwovens.de>

## Carding machine



<http://nonwoven.fivesgroup.com/production-line/equipment/carding-machine.html>



<http://www.bonino1913.it>



<http://www.automatec.it/it/prodotti-it>



<http://www.techno-plants.com>

## Spooling



<http://www.spoolex.com/>



<http://www.acelli.it>

## Wet tissue making



<http://www.kansanmak.com>

(Source from: "ANEX2018 Asia Nonwovens Exhibition and Conference, this article extract")

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On the air filtration side, reducing emissions into the environment has been an increasing demand from customers. Lydall air filtration media are used to control air emissions and dust pollution from various industrial processes, including power, cement, asphalt, incineration, food, pharmaceuticals, and other industries. In general, Lydall's customers are looking to minimize the impact of their manufacturing on both the local and global environment, but increasing requirements from regulatory agencies are also growing the need for better performing filtration products. The company has recognized this need to reduce emission levels across the globe over the last three to five years and expects this trend to continue in various regional markets.

New proprietary product designs developed by Lydall have helped to attain its customers' goals in this sector. Its latest technologies include Microfelt, Zerolox and Microvel, high performance air filtration products that help to significantly reduce emissions. In many cases, these products can exceed the dust control regulatory requirements by a substantial amount – up to 80% or more reduction versus specific government regulations. These products help Lydall's customers' facilities meet current requirements and the environmental needs of today, but also address regulations that may come along in the future.

Meanwhile, in the automotive market, Lydall continues to see opportunities to convert traditional vehicle components that may have been made from metal and solid plastic materials to felt-based products. Here, there continues to be a focus on reducing weight in vehicles, improving acoustic performance and

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# Technical Trends

## Needle market report Growth in core markets has led to investments around the world

The last several years have seen a steady stream of needlepunch investments across the globe. Growth in core markets like filtration, automotive and geotextiles has manufacturers eager to expand capacity to meet growing demand for the technology.

“There is a growing demand in needle spunbond applications for geotextiles. Technical applications e.g. the filtration business and particularly the growing demand for PTFE filters is another category. In Asia we see an increasing demand for artificial leather mainly for clothing, furniture and for the automotive sector. This requires a higher number of new needle looms,” says André Imhof, COO of Autefa Solutions, a full line supplier offering a range of fiber preparation, carding, needling, thermobonding, hydroentanglement, drying and end-of-line equipment.

Recent investments in new needlepunch equipment span from the U.S. (Foss Floors) and Mexico (Autoneum) to Europe (TTL), Turkey (Hassan Tekstil) and Asia (Autotech), just to name a few.

Machinery producer Andritz Nonwoven is seeing strong growth for needlepunch especially in the automotive sector. “Nonwoven is extending its end uses, not only in car interiors, with light nonwoven fabric spunlaced and/or needlepunched as separating layers, but also around the engine, mainly for noise insulation purposes,” says Jean-Philippe Dumon, sales director, Nonwoven, Andritz Asselin-Thibeau. “With nonwovens being lighter and offering better sound insulation capabilities than other components, more opportunities are arising. Automotive is also using economical PET fibers, and inline velouring is becoming more popular in order to process them with minimum breakage. In this way, the fibers have less time to dry before completing the full needling process.”

Andritz recently installed a complete, high-capacity needlepunch eXcelle line - from webforming to needlepunching - to EcoTechnilin. The British-owned company runs a factory in France and an R&D center in the U.K., and this newest line was delivered

to a new factory in Poland.

According to Karim Behlouli, managing director at EcoTechnilin, Poland was an ideal location for the new facility because it is centrally located to serve customers in the Czech Republic, Slovakia, Poland and Germany.

EcoTechnilin mainly serves the automotive/transportation industry with its natural fiber (flax)/polypropylene-based products. “Flax is a very good choice because the strength of this fiber is very high and the density is low, so we can reduce the weight of the composite to reduce the car weight, the car consumption and, at the end, also reduce the CO<sub>2</sub> emissions,” Behlouli says.

Overall, EcoTechnilin is optimistic about the company’s future, as it has already seen a recent trend of 20% growth each year. “We will continue to put a lot of money in R&D to develop new solutions in the building industry, filtration, aeronautics and others,” he adds.

The company’s new line has a production capacity of about 1000 kg/h and produces nonwovens made of natural fibers, glass fibers and polypropylene from 300 to 2400 gsm. This line complements its two other Andritz needlepunch lines in France, and the company now has more than 10,000 tons of annual capacity.

Another recent investor in Andritz technology is TTL (Technische Textilien Lörrach), Germany, which develops, manufactures and sells needlefelt for technical applications under its three divisions: industrial filtration, industrial laundry and industrial textiles.

The scope of supply includes opening and blending equipment, Dynamic card, and crosslapper in combination with Andritz technology for drafting, needling, and unwinding/combining. Andritz has also supplied the process control as well as the unique, closed-loop ProDyn system, thus providing continuous web monitoring and optimization of the end product.

While the company won’t say how many lines it is running, TTL’s CEO Roland Jaehn says the new line is replacing an older line. “[The new line] allows us to widen [our] product range and fulfill customers’ inquiries that we had to

## Technical Trends

refuse until now," he says.

The Andritz needlepunch neXline eXcelle line is expected to manufacture individual products for different dedicated technical applications, for example, for protection against fire and heat in the automotive and electrical industries.

Jaehn notes that while the needlepunch market is mature and potential in industrialized countries is limited, growth can be achieved in regions of the world that haven't yet caught up with developed countries.

One of these regions is India, where Autotech Nonwovens recently invested in an Andritz line. According to Ankit Desai, director, Autotech Nonwovens, when the company was founded in 2012, the Indian automotive market was going through a lean patch. Sales were unusually stagnant for the passenger car segment between 2011-2013 and cost reduction was a priority. "The growth potential, however, was never under question and it was just a matter of time before the market would revive given the demographic trends of a young population combined with a high GDP growth rate. Today, as expected, the Indian automotive market is projected to exceed five million cars by 2020," he says.

Several carmakers such as Ford, Tata and Suzuki are in the process of making investments in the western region of India (Gujarat), so Desai is hopeful about the future.

Autotech, which is based in Gujarat, can produce all 'A' surface face fabrics including, but not limited to, floor carpet, headliner, parcel tray, load shelf, seat back carpet and trunk and side trim. Autotech has more recently penetrated into other applications including automotive filter fabric, hot flue gas and liquid filtration applications.

The young company has already captured over 35% of market share in India for headliners. Autotech manufactures high quality, lightweight headliners that offer excellent wear and tear resistance, long durability and are economically competitive compared to other materials. These features have allowed OEMs to shift from the traditional bi or tri-laminate fabrics/foam backed fabrics thereby reducing weight and

improving on cost and other benefits brought by lightweighting, according to Desai.

"With the shift towards differentiation as well as to give customers a premium, tailored and personalized feel to their cars, printed nonwovens are a strong alternative to much more expensive knitted/foam-backed headliner fabrics which are commonly used the luxury segment," he says. "Printed nonwoven headliner fabrics allows OEM designers the flexibility to customize and personalize unique patterns and colors, add three-dimensional textures and antimicrobial finishes to their headliners while maintaining a high abrasion resistance and providing a premium feel to the cabin interior."

Other than Freudenberg-Vilene, Autotech is the only Asian nonwovens manufacturer making printed nonwoven headliners in-house and was the first company to introduce this type of product locally produced in India, Desai says.

Since its capacity expansion with an Andritz neXline needlepunch line at the end of 2016, as well as other processing and finishing machinery from Europe, Autotech has been able to produce an entire range of automotive trims, filtration media and several industrial felts. "This is one-of-its-kind line in India," Desai says.

On both this new line and its first line, Autotech will be able to manufacture fabrics from the range of 80 gsm to 2000 gsm in a range of fiber types and deniers. "With two complete new needlepunch machines in place capable of offering a single, bi/tri layer product coupled with processing facility to laminate and extrude, printing, calendaring and singeing – our product portfolio and business potential has expanded manifold," he says.

While Autotech began its business with a focus on the Indian market, this latest capacity expansion will help supply exports of automotive fabrics this year. The company will also begin supplying hot flue gas filtration media to the U.S. market in 2018.

Another player in the automotive market, Autoneum, recently ordered an Andritz neXline needlepunch eXcelle line for its plant in San Luis Potosi, Mexico. The line will produce needlepunched velour felts from

## Technical Trends

300 to 900 gsm for the automotive market. The fabrics will be used in the manufacturing of carpet systems, inner dashes and floor insulators. Autoneum already operates several Andritz lines in Bloomsburg, PA, and Jeffersonville, IN, as well as several lines in Europe.

Meanwhile, German nonwovens producer Sandler is also seeing greater demand for needlepunched nonwovens in the automotive/transportation sector, where a wide range of the fabric is already being applied in areas such as absorber materials in the cabin and the engine compartment, as well as nonwovens for seat upholstery. But, according to Gerhard Klier, sales director Technical Products, nonwovens continue to tap into new markets and new areas of application. "For example, nonwovens are currently making a name for themselves in aircraft or rail vehicles, and answering challenges presented by new transportation concepts such as electro mobility," he says.

Sandler is also seeing greater demand for the fabric in interior acoustics, where open-plan office designs are in high demand, creating demand for efficient sound insulation. "Architects are looking for materials which provide this function while also supporting interior design," Klier says. "Offering this combination, nonwovens are currently making inroads into this market and opening up new growth opportunities."

Sandler manufactures efficient sound insulators in the form of self-supporting panels of various thicknesses and densities. They can be printed, embossed, laminated with colored fabric, cut to a specific shape or even enhanced with a coating made of natural materials such as hay or cornflowers. "These nonwovens provide ample opportunity for realizing individual design concepts," Klier says.

While Sandler's newest lines in Schwarzenbach, Germany, and Perry, GA (U.S.), aren't producing needlepunch—the company's most recent investment in the technology was at the Schwarzenbach site in 2013—Klier says that the company plans to expand its business with needlepunched nonwovens for acoustics in the North American market down the road.

Up to the Task

As more and more needlepunch producers invest in new technology, manufacturers of the machinery and equipment that make up complete lines are keeping pace by improving their technologies.

For Andritz Nonwoven, it's been important for the company to evolve its technology over the years, working in close cooperation with nonwovens producers. "We have designed new machines and solutions to improve fabric weight evenness, bring added value to nonwoven webs through additional fabric performance, and develop systems to optimize productivity and minimize maintenance requirements," says Andritz's Dumon.

Currently being launched in the market is its new ProWid system, a system that regulates the card web weight before the web enters the crosslapper in order to lay a fiber mat with lighter edges. It thus anticipates later fabric deformation caused by the bonding process. The CV percentage is generally improved by a factor of 2, in particular when the CV percentage is in excess of 3% without the ProWid system, Dumon says. ProWid can be delivered with an individual Andritz crosslapper to enhance performance in existing carding lines.

In order to enhance line flexibility, Andritz is also offering new solutions in supervision. "As supervision is becoming a must in production management to ensure traceability, parameters are now easier to set and record," Dumon explains. "Our supervision system gives producers the capability to evaluate their manufacturing costs for every production batch."

Meanwhile, Autefa Solutions has seen the importance of digitalization and Industry 4.0 entering the nonwovens market. According to Imhof, the product quality in Autefa's needling lines can be monitored and improved with its Closed Loop Control System. A scanner determines the weight distribution of the final product while the control system corrects the profile in the crosslapper and the feeding section of the card. Autefa's crosslapper Topliner in combination of Web Profile Control WebMax prevents the increased weight of the fabric in the edge areas. This compensates for the smile effect caused by material shrinkage. "WebMax profiling is also integrated into the

## Technical Trends

Closed Loop Control System which ensures that the fabric is profiled equally in both material direction and cross direction,” he adds.

DiloGroup, which has designed needlepunch equipment since 1950s, also offers complete lines for the production of needlepunched nonwovens including fiber preparation, opening and blending equipment, carding, crosslapping, needling and winding.

A recent development from its DiloTemafa unit offers new possibilities for the gentle opening of longer fibers at high throughput speeds using several opening stages. Meanwhile, DiloSpinnbau, another unit of DiloGroup, offers more flexibility with the VectorQuadroCard. This development combines different types of cards within one card by a simple and fast changeover of the intermediate section. The newly designed delivery system is also flexible to allow the production of parallel, random or condensed webs. The new card feeding system Unifeed combines the principles of a volumetric system allowing fine dosing with the advantages of an open vibration chute feed.

Dilo’s horizontal crosslayer DLSC 200 from DiloMachines is another new offering, and sets new standards in crosslapping technology, according to the company, with an electro-mechanical web infeed speed of 200 m/min depending on the fibers used. These are just a few of the technological advancements Dilo has been working on recently.

According to Johann Philipp Dilo, CEO, DiloGroup, the company has seen more investment in recent years; in fact, its own business has grown in the past years, about 20% annually, because of demand. “The consumption of needlepunched material is growing in an average rate worldwide between 6% and 7% per annum,” he says. “This is because needlepunching technology is highly productive and versatile in terms of fiber types employed, process parameters and eventual fabric weight. Therefore, the needlepunch product can be easily adapted and engineered according to its intended function in an increasing range of applications.”

One company taking advantage of Dilo’s latest technology is Foss Floors of Rome, GA. Its new complete needlepunch line is suitable for the production of floor covering felts, and

includes a DiloTemafa opening and blending line, DiloSpinnbau MC 3-5 carding machine three meter wide, a DiloMachines crosslapper DLBS 30/50 with CV1 system, two needlelooms DI-LOOM series together with an integrated process control system DILO-PCS.

Foss Floors operates several other Dilo production lines including high speed patterning DI-LOOP units.

Meanwhile, Turkish company Hassan Tekstil, which makes nonwovens used in the automotives, wipes, insulation and geotextile markets, has also invested in new Dilo equipment. The company recently ordered opening and blending equipment, a Multi-Feed card feeder, MultiCard and lap drafter, DLS crosslapper and highspeed hyper punch needlelooms in large working width. The investment will allow Hassan Tekstil to improve its product quality and increase its production capacity, according to Ahmet Sisman, managing director of Hassan Tekstil. Delivery is scheduled for March 2018 and it will begin production in October 2018.

### Moving Forward

Manchester, CT-based Lydall Inc. has been hard at work integrating its latest acquisitions—Canadian needlepuncher Texel and German-based needlepunch manufacturer Gutsche. With these purchases, Lydall has been able to diversify both from a product and market perspective, as well as geographically—today the company’s Technical Nonwovens segment runs facilities in the U.S., Canada, Germany, the U.K. and China. The successful integration thus far has allowed the companies to share information in terms of product capabilities, manufacturing, best practices and supplier relationships, which has helped Lydall to position its business well to better serve its customers. Texel and Gutsche were integrated into Lydall’s Technical Nonwovens segment, which serves two primary segments—Industrial Filtration and Advanced Materials.

Within Industrial Filtration, Lydall primarily serves the air and liquid filtration markets, while in Advanced Materials, the company supplies to markets such as geosynthetics, automotive, medical, safety apparel and others. Specifically, Lydall continues to witness growing opportunities in air filtration and automotive.

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# Product News

## Diamond Wipes introduces perfect Plate Wipes

Professional Chef Wipes for Perfecting the Art of Food Plating

One season, - Diamond Wipes International, Inc. (Diamond Wipes; www.diamondwipes.com), a California-based wet wipe manufacturer, announced today the new wet wipes for foodservice professionals. Perfect Plate™ Wipes are inspired by the art of food plating. These wipes are designed by chefs for chefs who are continuously pursuing culinary excellence.

"When I first saw these wipes I said, 'Wow, what a great idea,'" says chef Ralph C. Feraco, CEC, AAC. "As chefs, we always need that clean, damp towel to wipe our plates during service. We now have Perfect Plate Wipes around the kitchen. So, when we need to wipe a plate, we are ready. The rice wine vinegar and lemon oil is much more pleasant than the straight white vinegar we once used."

Perfect Plate Wipes include rice vinegar and natural oil extracted from lemon skin. The formulation is made with locally-sourced, highly purified water and natural, food-safe ingredients to achieve optimal cleaning performance. The wipes can effectively touch up the edges of plates for presentation that impress. They can also quickly clean other utensils in the kitchen. Moreover, using a fresh Perfect Plate Wipe each time is sanitary.

"We are excited to bring this new wipe concept to the foodservice market," says Eve Yen, founder of Diamond Wipes. "As a proud American manufacturer, we have focused on servicing foodservice industry from day one. Our Perfect Plate Wipes are food safe, and according to our research, as cost effective as any typical linen service you might hire for your restaurant. Just imagine - pristine kitchen counter, no more linen piling up in the back of the kitchen. Perfect!"  
(Source from: "http://finance.yahoo.com")

## Avgol brings a new dimension to nonwovens with launch of Wave form 3D™ Technology

Avgol, a global leader in the manufacture of nonwoven fabric solutions, is to launch a new three-dimensional concept for fabrics

to extend innovation capabilities in hygiene applications.

Waveform 3D™ Technology is a process which enables the modification of nonwoven fabrics for the baby diaper, adult incontinence and feminine hygiene markets. The technology enables varying three-dimensional profiles to be incorporated into Avgol's range of standard and custom designed fabrics to further enhance performance and comfort for consumers.

Through using this technology, beneficial fiber structures with distinctive surface patterns can be imparted. This generates a three-dimensional composition within flat fabrics, providing a number of additional benefits including advanced skin wellness, increased cushioning and enhanced cotton-feel. Thanks to combination with Avgol's 'FIT' family of technologies, specially designed precursor fabrics can be used which then result in further enhanced liquid management qualities.

Nick Carter, Director, Market Business Intelligence and Intellectual Property, at Avgol, said: "Investment in Waveform 3D Technology enables Avgol to offer high-performance nonwoven fabrics without compromising comfort. The ability to choose whether to use solid, apertured or combination patterns allows the product designer to truly tailor a solution for their application including how the fabric feels, how the fabric functions and how the fabric looks.

"Waveform 3DTechnology is part of an exciting programme of novel solutions to meet the ever-evolving regional needs of our customers and deliver added value through leading-edge developments, quality and service."

(Source from: "www.avgol.com")

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increasing the recyclability of components. And because of the unique characteristics of needlepunch, Lydall can provide different performance functions in one solution; acoustic performance, weight reduction and aesthetic properties can be developed all in one design versus traditional solutions made with two to three components to achieve the same result, the company says.

(Source from: "www.nonwovens-industry.com")





## 行业信息

### 第七届亚洲过滤与分离工业展览会暨 第十届中国国际过滤与分离工业展览 会展商预览



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网址：[www.tsi.com](http://www.tsi.com)

TSI公司研究、确定和解决各种测量问题，为全球市场服务。作为精密仪器设计和生产的行业领导者，TSI与世界各地的科研机构和合作，确立与气溶胶科学、气流、健康和空气、室内空气质量、流体力学及生物危害检测有关的测量标准。

TSI在环境监测、健康影响研究、燃烧研究、汽车排放测试、空气过滤器测试、给药开发和纳米材料合成等方面提供有关气溶胶粒子粒径测量、计算、形成和扩散的应用。TSI的纳米技术用于表征和制备气溶胶和液体形态纳米材料的高分辨率、高灵敏度纳米粒子测量解决方案。目标领域包括研究与开发、吸入毒理学、电子制造和暴露测量。扫描电迁移粒径谱仪用于亚微米气溶胶颗粒物直径测量的非官方参照标准。TSI在实验室和现场进行发动机排放测试，并提供各种测量解决方案。所需仪器包括专为排放研究和表征排气后处理装置而设计的粒子粒径谱仪和计算器；有助于基于粒子的发动机排放测试的稀释调节系统；提供完全满足欧盟和中国法规针对发动机排放PN测试的解决方案；可以用来跟踪排放扩散的手持式粒子计算器。TSI的全自动滤料测试工业用产品，用于测定滤料中最容易渗透的粒径，测量各种过滤产品（包括呼吸器过滤器）的效率以达到质量控制的目的，广泛地应用于全球权威医疗和滤料检测机构和工厂。

TSI总部位于美国，在欧洲和亚洲设有代表处，在其服务的全球各个市场建立了机构。



**Palas GmbH** C21

网址：[www.palas.de](http://www.palas.de)

30多年来，Palas®已经在气溶胶和颗粒技术领域拥有60多项专利。通过不断创新，产品达到世界一流品质。

## 行业信息

宗旨是为客户提供独特的技术和高性价比的产品。Palas®确定了自己气溶胶生成、气溶胶稀释和气溶胶粒子测试技术领域的全球市场领导地位。全球超过60个国家的著名企业、大学和科研机构信任Palas®的精密技术，选择Palas®的产品。

核心竞争力：

过滤器/滤材测试系统、气溶胶粒径谱仪、超细粉尘监测系统、纳米颗粒测量技术、颗粒发生系统、稀释系统、洁净室颗粒技术等。



**BinNova Microfiltration GmbH** D30

网址：[www.binnova.de](http://www.binnova.de)

BinNova现代化的工厂位于图林根州的鲁多尔斯塔特。公司团队研发和生产由玻纤和人造纤维制成的具有创新性的先进过滤材料，以便更好地适应未来的各种应用。公司生产的产品主要运用于空气滤材、工业和发动机应用的液体过滤介质、气液分离和液体分离用聚合滤材等。



**芬兰ACA系统有限公司** A10

网址：[www.aca.fi](http://www.aca.fi)

1986年创立于芬兰波尔维耶尔维的ACA系统有限公司致力于开发用于造纸、滤材、塑料薄膜等过程工业的分析仪表。自2001年推出的Permi在线透气度/压降分析仪已在全球售卖超过200套。该分析仪为整卷的滤材作全幅连续测量，既能对品质作严格监控，又能优化生产过程。稳定的生产过程可确保品质稳定、生产效率最大化。Permi所提供对滤材的分析让客户可以保持在最佳生产状态。



**TEXTTEST AG** B21

网址：[www.textest.ch](http://www.textest.ch)

TEXTTEST 公司自1969年开始制造测试透气性、透水性、透湿率等的仪器，尤其擅于透气性测量。所有TEXTTEST 产品都是瑞士设计和制造。



**江西国桥实业有限公司** D37

网址：[www.jxnbi.com.cn](http://www.jxnbi.com.cn)

江西国桥实业有限公司成立于2003年5月，现已拥有四条国内外先进的PET纺粘长纤的热轧、针刺无纺布高科技生产线及多条特殊功能无纺布后加工生产线，年产PET纺粘长纤级无纺布近万吨，年加工功能性无纺布3000吨，是集无纺布生产、研发、加工、销售及无纺布专业设备研发设计、加工制作为一体的实业公司。

该公司生产产能领先、工艺技术先进、品种规格齐全、产品质量优良、产业功能延伸、均能较好的满足市场客户的需求，已形成集“国桥工程无纺布”、“国桥防水无纺布”、“国桥过滤无纺布”、“国桥车用无纺布”、“国桥降解无纺布”、“国桥功能无纺布”等七大系列国家产业用无纺布。并以国家七大注册商标品牌和四项发明专利、21项实用型专利享誉业内，是国内PET纺粘长纤级产业用无纺布的领军企业，尤其“国桥过滤无纺布”产品畅销国内外，市场占有率持续领先同行业厂商前三甲之列。



**杰斯曼（上海）国际贸易有限公司** E30

网址：[www.jm.com](http://www.jm.com)

杰斯曼公司是Berkshire Hathaway集团旗下的企业，是全球优质建筑保温、机械保温、商业屋面、屋面保温材料的领先制造商和销售商，也是商用/工业/住宅应用所需的纤维和无纺布制造商和销售商。杰斯曼所服务的市场包括航空航天、汽车、运输、空气处理、机械、空调暖通系统、管道、设备、过滤、防水、建筑、地板、内衬材料和风能领域。杰斯曼公司成立于1858年，总部位于美国丹佛市，年销售额约30亿美元，在其产品所涉及的主要市场中均处于领先地位。公司拥有约7,500名员工，在北美洲、欧洲和中国经营43家制造厂。

过滤业务隶属于杰斯曼三大战略事业部之一的工程产品事业部（Engineer Product Group, EPG）。从20世纪40年代开始，杰斯曼就致力于为全球市场提供高品质的过滤材料，并成为全球过滤材料种类覆盖最

## 行业信息

多的制造商之一。杰斯曼拥有众多的产品科技来服务过滤市场，既提供合成纤维产品，又提供玻璃纤维产品。其中，合成纤维产品包括聚酯纺粘（PET），丙纶熔喷（PP），聚酯熔喷（PBT）等。玻璃纤维产品涵盖玻纤空气滤料、玻纤纱和超细玻璃纤维。多样化的产品组合允许我们去灵活的设计和定制解决方案，以满足现有市场和新兴市场的不同需求。



**天津泰达洁净材料有限公司** G20

网址: [www.tedafilters.com](http://www.tedafilters.com)

天津泰达洁净材料有限公司是以熔喷技术为核心，生产空气过滤材料、口罩滤材、液体过滤材料、服装保暖材料、吸音隔热材料等环保化纤类材料的专业生产商。公司现拥有六条熔喷生产线（分别从美国及德国引进），熔喷总产能达到8000吨/年。有能力生产亚微米熔喷材料和原料为PBT, PET, PPS的特殊用途熔喷材料。



**中材科技膜材料公司** G50

网址: [www.fiberglasschina.com](http://www.fiberglasschina.com)

中材科技膜材料公司专注于玻璃纤维湿法产品的研发和制造，目前形成国内玻璃纤维湿法制品最大的生产基地，主要从事环保过滤材料、电池材料、空气净化过滤材料及功能性有机膜材料的研发、生产、销售。过滤材料产品品种覆盖室内空气过滤、工业洁净室过滤、无菌生产车间过滤、聚结过滤、抗菌过滤、高温过滤、液体过滤等，其中空气过滤材料有ASHRAE、HEAP、ULPA各等级的七个系列产品，液体精度覆盖1 μm—30 μm，适用于航空燃油、液压油、润滑油、预过滤等，为各行业提供过滤的解决方案。



**泉州新日成热熔胶设备有限公司** C30

网址: [www.ndccn.com](http://www.ndccn.com)

热熔胶纤维喷胶复合设备

新日成是亚太地区最早致力于热熔胶喷涂设备系统研发及批量生产的专业制造商之一。设备及技术能满足不同生产线上所需环节及整体系统的解决方案。如今，新日成已为30多个国家提供了设备及方案，

并以稳定的质量、可靠的性能及优质的服务，受到国内外客户的一致好评。主要产品：热熔胶机、热熔胶涂布机、热熔胶纤维喷胶复合设备等。



**石家庄辰泰滤纸有限公司**

D21

网址: [www.chentai.net](http://www.chentai.net)

石家庄辰泰滤纸有限公司作为专业生产滤纸的厂家，据1990建厂已有20多年的生产经验，产品包括空气滤纸、机油滤纸、燃油滤纸、空调滤纸、燃机滤纸、除尘滤纸等，根据不同的应用领域，在生产中使用木浆纤维/合成纤维和纳米纤维来提高滤纸的过滤效率和使用寿命。辰泰滤纸有限公司一直在不断努力成为滤纸行业的专家。不仅注重产品质量，更重视专业化的售后服务，为客户提供及时、准确无误的反馈。辰泰滤纸有限公司会一直保持高昂的激情成为世界级的环保型企业。

### Web Industries提供微分切技术

可将络筒材料分切到1毫米

食品、个人护理、工业和可替代能源市场的制造商们正在寻找更大的生产能力，其材料在1毫米宽的范围内，Web Industries可以做到，宽度窄，精密分切，灵活成网，缠绕在大容量的线轴上。

据Web Industries公司的运营总监James G. Oas称，胶片和层板可以根据客户规格精确分割，并缠绕在线轴上，长度超过13万纵尺，用于贮存或联机生产等各种应用中。超长的线轴可减少生产商转换和拼接的需要来节省停机时间。

微宽、柔性材料最终用途包括个人护理产品、食品的应用，如口香糖和奶酪包装，以及工业和替代能源设备的金属化薄膜。

Oas说：“缠绕的材料类型通常取决于摩擦系数(COF)、抗拉强度、交叉污染问题等其他因素。”Web Industries公司采用客户的样品材料，并快速确定它是否具备精密微切和络筒的必要品质。“精确的微切材料必须有足够精度的缠绕在线轴上以保持稳定。”

Oas说，“络筒有很多情况。为了确保材

## 行业信息

料的完整性，我们在整个过程中保持适当的张力。传统的工艺缺乏这种稳健性，在转换过程中经常变形或损坏材料。我们对材料质量的关注，结合了Web Industries公司的能力，精确地将材料制成线轴，在0.25 mm的客户规格变化中，为市场带来了一套独特的精确转换能力。”

Web Industries公司开发了微宽、柔性材料的络筒。

(资料来源:“www.convertguide.com”)

### Diamond Wipes和美国乒乓球队的合作

#### 为这项运动开发新系列的湿巾

美国湿巾制造商Diamond Wipes国际有限公司和美国乒乓球队(USATT)——美国国家体育管理机构，宣布了一项多年的合作伙伴关系，以支持目前和未来的美国精英团队和运动员，更好地促进美国乒乓球运动的发展。

作为多方合作伙伴关系的一部分，Diamond Wipes将在USATT的国家队队服上展示Diamond Wipes标识，并在国内和国际比赛中使用。

“我对这种伙伴关系感到高兴。我在台湾长大，一直是乒乓球的超级粉丝。支持USATT及与其合作是一种荣誉，”Diamond Wipes的CEO、创始人、老板Eve Yen说。

“我的丈夫James很喜欢这项运动，只要我们在一起，他就是一个狂热的乒乓球运动员。在他退休之前，我们的员工称他为‘乒乓球先生’，希望越来越多的人了解这项独特而有趣的运动。”

美国乒乓球队的CEO Gordon Kaye说：“很高兴有Eve，James和整个Diamond Wipes团队加入我们的大家庭，我为这一合作关系的发展感到非常高兴。”与Diamond Wipes公司——一个创新的、具有创业精神的美国公司合作，将为我们的运动员在世界舞台上更好的竞争提供资源和机会。

除了赞助USATT的国家队队服外，Diamond Wipes还为乒乓球社区开发了一种新的湿巾产品系列。这种独特的湿巾是为方便和快速地清洁乒乓球拍，同时保持它的抓

力。为了该项运动，该产品将会是第一个有许多创新的湿巾。球拍清洁湿巾在夏季上市，销售所得部分将受益于USATT。

(资料来源:“www.convertguide.com”)

### 研发一款新型的差异化柔软非织造布

#### 主要优势

- 增强了柔滑而棉质的柔软触感
- 提高了舒适性
- 稳定的质量
- 稳定的高速加工性
- 创造差异化卫生产品的机会

JOFO（潍坊）非织造布有限公司开发了一种新型差异化非织造布，通过在ExxonMobil™聚丙烯（PP）树脂配方中增加Vistamaxx™性能聚合物的剂量，该树脂大约在五年前首次为其“SilkSoft”产品所开发。新型优质无纺布R1通过提供超柔软触感，低绒毛，稳定的质量和稳定的高速加工性，满足品牌所有者的需求。Vistamaxx聚合物提供的柔软触感，并结合了棉质丝绸般的柔软度，与普通的透气无纺布相当。埃克森美孚PP3155E3树脂具有出色的可纺性和产品质量的稳定性。

多年来，柔软性已成为非织造布的基本要求，因为它多应用于婴儿尿布/成人失禁产品的底片和腰带等舒适性要求较高的产品。目前，品牌所有者正在寻求提升其卫生产品的材料，这种产品具有优异的柔软性和加工性能。

#### 合作取得成功

JOFO（潍坊）是中国主要的国际品牌无纺布供应商之一，他们热切地回应埃克森美孚。两家公司有着10年的长期合作和共同发展的历史，促使JOFO（潍坊）成为第一家成功实现Vistamaxx聚合物基柔软非织造布商业化的客户。

JOFO（潍坊）非织造布有限公司工厂经理彭文忠说：“多年来我们与埃克森美孚的合作一直是双方成功建立关系的关键”。

“除了具有稳定的产品质量和可靠的供应的高性能材料外，他们还提供价值链参与的专业知识。这对于帮助塑造柔软非织造布市场和影响下游决策者是非常宝贵的。”

## 行业信息



### 研发一款差异化柔软非织造布

为研发一款新型的更柔软的非织造布，公司首先研究了现有的“SilkSoft”配方，这种非织造布自推出以来已被证明是成功的。该配方包含Vistamaxx聚合物与埃克森美孚PP3155E3树脂的稀混合物。

“埃克森美孚PP3155E3非常适合纺粘工艺，因为它将高且稳定的质量与高速加工性相结合，”彭经理说。“Vistamaxx聚合物是一种溶液，在与PP干混时具有独特的柔软性。”

经过对不同配方的测试，发现增加Vistamaxx聚合物的用量可在尿片生产线上实现具有柔滑和棉质感的超柔软触感的非织造布，稳定的产品质量和稳定的高速加工性能。

### 品牌拥有者的突破

新型优质无纺布R1已经在国内和国际品牌拥有者中获得成功。

“反馈非常积极，这很重要，因为柔软性非常主观，”彭经理说。“品牌所有者现在正在升级和差异化他们的产品组合，以满足下游需求，而且我们已经看到了与主要行业参与者取得的重大突破。”

(资料来源：“www.exxonmobilchemical.com/vistamaxx-nonwovens”)

### 安德里茨凸显其最先进技术

格拉茨，2018年8月9日讯。国际技术集团安德里茨展示其创新的非织造布生产工艺和产品整理技术。作为吸收性卫生用品的干法成网、纺丝、热粘合、湿法成网和转换工艺先进技术的全球市场领导者之一，安德里茨提供可靠而独特的解决方案，以满足每个客户的个性化需求。

### 安德里茨（中国）有限公司无锡分公司 - 亚洲非织造布行业的合作伙伴

服务于本地和国际市场，中国非织造布市场的产能和优质的卷材质量都在不断提高。安德里茨（中国）有限公司无锡分公司是一家经验丰富的集生产、服务和研发能力为一体的技术中心，专门适用于亚洲非织造布行业。专注于亚洲市场，它设计和制造尖端的非织造机器设备，以补足安德里茨aXcess产品系列。

安德里茨建立了与欧洲标准相当的无锡工厂，以更好地服务于非织造布生产商，并迅速响应客户的需求，提供高端优质产品。安德里茨无锡分公司现在的结构优化，专注于提高效率和缩短交货时间。经欧洲专家培训，当地的项目管理团队亦受益于顶级的专业知识，设计部门亦使用最先进的软件。为增强及时交付并提供出色的客户支持，一个新的服务组织已经建立。

公司邻近客户，确保提供全方位服务，包括配备最先进磨削设备的轧辊服务中心和各种轧辊的试验台。这就是为什么所有卷筒类型都可以在现场进行修理、翻新和升级的原因。

安德里茨aXcess产品系列适用于中等容量生产作为非织造布行业的全方位合作伙伴，安德里茨开发出非织造布aXcess系列产品，特别适合具有中等产能要求的生产商的需求，特别是在新兴市场。安德里茨aXcess产品系列包括用于热风穿透粘合、针刺、水刺、湿法成网和轧光工艺的生产线和单机，使其成为进入中等产能生产的非织造布市场的理想产品。

aXcess系列的最新发展，专为中低产能生产而设计的neXline aXcess湿法成网，为生产商提供附加值。紧凑的生产线使运输变得简单，并且它们和集装箱的完美匹配，使得运输快捷。和操作员友好的配置结构及其通用性设计确保了以可承受的投资成本实现高效的、简单直接生产。

### 更多详情请联系：

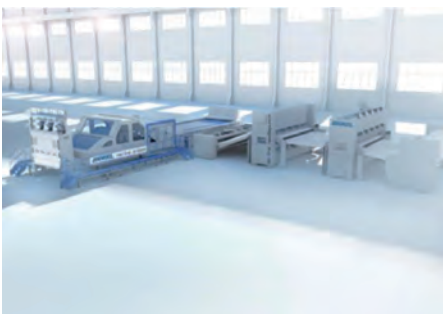
michael.buchbauer@andritz.com  
www.andritz.com

(<<< 上接42页)

“并不是所有的消毒剂都是一样的，很多都没有最优化平衡属性来满足用户的需求。例如，传统的季铵盐或季铵盐酒精产品可以提供良好的兼容性，但它们有限的杀菌要求在满足所需的接触时间之前从表面蒸发。”Clorox Healthcare研发部经理布莱恩·汤普森说。“我们相信医疗机构不应该进行这些权衡，VersaSure也不会这样做。我们的研发团队拒绝在功效、美学、润湿和清洁能力之间做出妥协，今天我们很高兴能提供一步的“随处可见”的广谱高效擦拭巾，值得医疗机构信任。”(资料来源：“www.convertingguide.com”)



安德里茨 neXline aXcess水刺生产线



安德里茨neXline aXcess针刺生产线

# 市场动态

## Canopus进入印度湿巾市场

新的厂商希望在印度日益壮大的中产阶级市场中占有份额

对于非织造布和卫生相关的企业来说，在印度建厂已经成为了一种趋势。由于产品在印度中产阶级的渗透率低，且可支配收入在增加，企业家们看到了印度市场的商机。

技术纺织品顾问A. R. Kulkarni先生说：“随着工业化和女性就业率的上升，为生活带来便利的产品需求也在增长，湿巾是其中之一”，他写了各种博客，并在重要的研讨会上发表演讲，包括在Karnataka的投资。

他补充说：“IT产业在印度的发展中走在前沿。”“如今普通的印度人，有较高的可支配收入，湿巾对于中、高阶层的人来说是可以负担得起。因此，印度市场已经做好了接受新产品的准备。”

根据Canopus湿巾公司董事长Ashok Kulkarni在印度进行的一项市场调查，销售额占比最高的是婴儿湿巾，因此在印度企业和海外进口产品中很普遍。由于印度是一个不断增长的经济体，印度湿巾市场的年增长率为23%。

Canopus湿巾公司成立于2017年2月，力求用不同类型的湿巾服务于印度越来越多的中产阶级和上层阶级。该公司位于印度的Karnataka，近期将开始投入运行，生产卫生湿巾（婴儿、私密、手）、化妆用和脸部护理湿巾、中型浴巾和家用擦拭巾（家具、玻璃清洗）等。

在位于Ramanagara地区KIADB工业区里的Harohalli，Canopus的占地12000平方英尺的工厂，以年生产1500万块湿巾的深加工制品生产线开始运行。根据ISO9001:2015的标准要求，公司已采取一切措施，以高标准建造工厂，并希望尽快获得美国和欧盟的认证。

最初，该公司出口自有品牌的擦拭产品，后来打算在当地推出自己的品牌，名为Canopus。该公司还计划在六个月内增加两条深加工制品生产线来扩大运营，并在一段时间后继续进一步投资。

Canopus从竞争中脱颖而出的策略之一是推出印度消费者前所未有的创新产品。这些产品之一是运动湿巾，公司表示，该产品还没有在印度湿巾市场出现。

“如欧盟制造商一样，我们坚持三层的包装技术，而整个印度市场使用两层包装材料。这样，水和化学成分将保持一段较长的时间，”Kulkarni先生补充说。“我们的产品和包装质量将是我们的特点。在印度，很少有公司遵守EUP、INDA、EDANA的标准。我们的湿巾是可以消费得起，且有最好的质量和容易在最近的商店买到。”  
(资料来源：“www.nonwovens-industry.com”)

## GDM于5月举办创新周

该公司展示其多种形式的解决方案和服务组合

GDM是一次性卫生用品行业的全球领导者，致力于为开放式婴儿尿布、婴儿裤、成人失禁内裤和女性卫生巾的生产提供创新的制品和包装解决方案。客户信赖我们，得益于我们通过遍布全球的Coesia网络在意大利、巴西、中国和美国以及其他28个国家运营网点，Coesia是一家全球性创新型工业解决方案公司，总部位于意大利的Bologna。

2018年创新周，于5月7日至11日举行。2018年在GDM意大利总部，该公司通过直播和4K视频展示其解决方案和服务的组合以及最新的研究发展。

在这次活动中，GDM创建了一个“产品体验”区域，与会者将进行一次全球一次性用品市场的旅程，深入了解产品功能和区域特性的最新趋势，高度关注制品解决方案的总体拥有成本。他们还有独家机会参观幕后，并发现GDM的最新研发进展。

焦点在于GDM最新开发的BP8 Red：旨在生产婴儿裤，确保最佳吸收和自由运动，保持婴儿皮肤和产品表面干爽。

BP8 Red的生产速度为800 ppm，通过最佳总体拥有成本提供竞争优势。该生产线可实现优质的材料加工，为H型产品提供最高品质和最佳的多功能性和舒适性。

# 市场动态

BP8 Red的设计重点在于原材料控制和张力，同时利用技术解决方案来优化生产和产品成本。

此外，流程的精益设计为操作员创造了更直观和更容易的界面，为机器操作和运用带来显著的优势。  
(资料来源:“www.convertguide.com”)

## Jet.com推出自有品牌

Uniquely的品牌特色是多功能擦拭巾

Jet.com是美国增长最快的电商公司之一，正式推出其新的品牌Uniquely J。Uniquely J由Jet.com一个忙碌的、眼光敏锐的消费者设计提出。在它推出时，消费者可以购买Uniquely J精心设计的50多个类型的产品，如咖啡、清洁、洗衣、餐具、纸张和食品储存等。所有产品都有大胆而美观的包装，由Jet.com及世界各地的艺术家专门设计。

Uniquely J的产品是根据Jet.com线上购物者所要求的关键品质开发的，包括：清洁产品的植物成分；美国农业部认证的有机咖啡豆和公平贸易认证的咖啡豆；不含BPA塑料的食品储存袋。Uniquely J在其发布的视频中说到他们的目标是为客户提供日常用品，并且客户将无需权衡。

Jet.com的总裁Liza Landsman表示：“我们很高兴向消费者推出Uniquely J并且相信消费者会爱上这些商品，很快他们就会意识到Uniquely J在日常购物中的重要性。Uniquely J不仅仅是Jet.com的自有品牌，它还使我们努力地为都市消费者提供精选的优质产品，同时为他们提供丰富的购物体验。

Uniquely J推出的50多个单品中，包括多功能擦拭巾。

Jet.com与Walmart电商公司自有品牌总经理Dan Hooker补充说到：“Uniquely J是为了让忙碌的消费者能够便捷地购买日常必需品，而不影响他们做其他关心的事情。有了Uniquely J，每一个产品都能够提供质量、风格和价值三方面的保证，消费者将无需权衡，作出购买的决定变得容易。”

消费者可以在www.jet.com/uniquelyj上购买Uniquely J的商品，并预期未来几个月内

将有更多产品上线。  
(资料来源:“www.nonwovens-industry.com”)

## 越南公司在古巴生产尿裤、垫

泰彬投资贸易公司(Thai Binh Investment Trading Corporation)将在岛上投资900万美元

一家越南公司将在明年上半年开始在古巴马里尔特别开发区(ZEDM)开始生产一次性尿片和卫生巾，此项目是该岛上最大的项目，旨在吸引外国投资者。

公司总干事Vi Nguyen Phuong表示，该项目正在建设中，投资超过900万美元，预计每年将生产4000万片尿片和1.5亿片卫生巾。

据岛内媒体引述，这家越南公司在古巴已经有近20年的历史，并在2016年批准投资，目的是“向消费者提供在古巴生产的优质物品”。

尽管古巴的产品需求量很大，但目前古巴还没有即弃尿裤生产，但据报道，在位于古巴哈瓦那以西约45公里处的商业中心和商业港ZEDM处，有意大利公司将建厂。

泰彬投资贸易公司还计划在Mariel地区建一座每年可生产5万吨清洁剂的工厂。这个新项目将与古巴贸易公司“Industrias Nexus S.A.”合作完成。他们打算向Mariel办事处提交该提案，并计划在2020年启动。  
(资料来源:“www.nonwovens-industry.com”)

## 东丽在印度拓展业务

基地	生产能力 (吨/年)	未来运营计划 (吨/年)
[韩国]东丽先进材料韩国股份有限公司	43000	(2018年4月) 18000
[中国]东丽高新聚化(南通)有限公司	73000	
[印度尼西亚]雅加达东丽高新聚化有限公司	37000	
[中国]东丽高新聚化(佛山)有限公司	-	(2019) 20000
[印度]东丽工业(印度)私人有限公司	-	(2020) 18000
集团总值	153000	

东丽工业宣布在安得拉邦的Sri城购入了一个面积约35万平方米的商业地块，作为其当地子公司东丽工业(印度)私人有限公司(TID)的新基地。东丽将这个新设施作

# 市场动态

为东丽集团高新材料业务的重要基地，计划积极投资管理资源，并将其作为全球运营基地，主要应对印度国内需求，将南亚在各个商业领域预期扩大的需求作为目标市场。

首先，东丽决定为其聚丙烯（PP）纺粘卫生材料业务建立一个新的基地，随着一次性尿片需求的日益增长，PP纺粘市场有望扩大。该公司将确保满足印度一次性尿裤的需求，并且以强大的生产平台和成本竞争力优势加速PP纺粘产品的全球业务拓展。新工厂的年生产能力约为18000吨，预计将于2020年4月投产。

下一步，考虑到汽车市场的扩张，东丽计划为尼龙和PBT树脂化合物建立一个新的基地以满足对高性能树脂的需求。

印度经济前景看好，预计从2016年至2030年，印度经济将以每年6%的速度增长，包括制造业在内的各个行业的全球业务，如汽车、家用电器、化学品、制药和建筑机械，以及零售业和金融业正在向该国进军。

PP纺粘法非织材料主要用于一次性尿裤，随着经济发展，收入增加，导致生活方式的改变，预计需求将迅速增加。出生率也有望提高，该国人口居全球第二（按2017年联合国统计，约为13.4亿人），并且为了应对不断扩大的尿裤需求，主要卫生材料制造商一直在积极拓展他们在印度的业务，这是一个潜在的市场。

此外，由于经济的发展，预计到2025年，印度的汽车市场将以每年7%的速度增长。另外，考虑到近年来对环境限制的加强，消费者需求更成熟，相信对高性能汽车零部件的需求将不断扩大，对东丽高性能材料的需求将会增加。作为回应，东丽计划在印度建立尼龙树脂和PBT树脂化合物基地，占领日益增长的印度市场。

从2011年成立东丽国际印度私人有限公司（简称TIID）这个贸易公司开始，东丽2014年在印度成立东丽工业（印度）私人有限公司（简称TID），这是一家当地的子公司，负责开展市场调查并支持东丽集团公司的业务扩张和进入印度市场，并

于2016年开始在东丽集团印度的首个制造基地东丽Kusumgar先进纺织私人有限公司（简称TKAT）生产和分销安全气囊织物。

作为2017年4月启动的中期管理项目“AP-G 2019计划”的基本战略之一，东丽集团追求全球业务的拓展和推进，并一直致力于“AE项目”，在全球范围内的新兴国家和地区捕捉获利机会，以扩大其全球业务。购买新的商业地块并在印度开展业务是“AE计划”的一部分。东丽集团将继续进一步加强日本以外基地之间的有机合作，大力拓展新的市场。

（资料来源：“www.texdata.com”）

**告别妥协，向Pampers纯净保护问好**  
推出新品帮宝适纯净尿片和湿巾系列，采用0%氯漂白、香料、对羟基苯甲酸酯实现100%帮宝适保护

新帮宝适纯净系列“天然”类别为寻找尿片和湿巾，且不想牺牲性能的父母提供了选项。这是有史以来第一次使用优质棉花和其他精心挑选的材料、时尚印花，帮宝适是世界各地的父母消费者所熟知，并信赖的产品。这一切都是从帮宝适的一位妈妈开始的。

在生下双胞胎女儿之后，帮宝适的科学家Sara Giovanni在她女儿挑选尿片和湿巾的时候，找不到她所需要产品。她讨厌在柔软性，保护性或风格上作出妥协，并且知道许多其他父母也有同样感受。

她说：“母性使我非常清楚并专注于我为我的女儿们做出的每一个决定。当我的选择转向更天然优质的产品时，我发现目前的尿片和湿巾还不具备这些选项。我渴望得到一种保护和性能兼具同时也反映我生活方式的选择，我知道我在帮宝适的工作给了我独一无二的帮助。”

灵感来自于她自己的经历，Sara的任务是帮助开发一种帮宝适尿片产品，该产品由优质棉花、植物性材料和其他柔软材料制成，可以像帮宝适一样防止泄漏，并且看起来可爱又时尚。这成为新帮宝适纯净系列背后的灵感来源，它采用0%氯漂白、香料、对羟基苯甲酸酯和100%帮宝适保护。



# 市场动态

## 帮宝适纯净尿片和湿巾是：

不含氯漂白剂、香料、护肤液、对羟基苯甲酸酯、天然橡胶乳胶和欧盟确定的26种过敏源；皮肤学测试和临床证明对婴儿娇嫩的皮肤是低过敏性和温和的；使用帮宝适可靠的防漏和干燥保护。

Pamper纯净保护尿片被皮肤健康联盟独立审查和认证为对皮肤安全的产品。帮宝适一纯净保护尿片的每个尺寸选项都有不同的风格，有趣的印花图案（美洲驼、小狗和树懒、天哪！）以及备受喜爱的湿度指示器。

帮宝适水纯净湿巾旨在给父母提供帮宝适最高含水量的湿巾，同时仍然提供卓越的皮肤保护。湿巾采用精心挑选的材料精制而成，包括99%的纯净水和优质棉花，即使在娇嫩的新生儿脸部、手部和臀部也能保持安全柔软。

“家长们理所当然地期待这一切，但当涉及到尿片和湿巾类别时，许多人被迫做出妥协，”宝洁公司婴儿护理副总裁E. Yuri Hermida说。“我们已经和成千上万的父母谈过，听说如今的天然尿片和湿巾产品提供了父母想要的某些特质，但他们很难找到一种能够提供泄漏保护，风格和功能集于一身的产品。事实上，57%的妈妈为自己的宝宝使用天然产品，其中只有3%经常购买天然尿片。我们很高兴能够通过我们新推出的帮宝适纯净系列扩大我们的产品范围，为父母们提供给宝宝的另一个值得信赖的选择。”

帮宝适纯净系列拥有与所有帮宝适产品相同的安全标准。每天有超过2500万名婴儿和学步的孩子使用帮宝适，使其成为世界上最安全的产品之一。

帮宝适纯净系列尿片的尺码从N到5，建议零售价为11.99美元。帮宝适水纯净湿巾的建议零售价为5.97美元。定价由零售商自行决定。

(资料来源：“<http://news.pg.com>”)

## Nanoval在亚洲销售纺粘生产线

这是其新颖的1.6米宽纺丝粘系列的首次销售。德国柏林的Nanoval公司以其独特的连续纺粘工艺，出售了第一条独特工艺的连续长

丝的纺粘非织造布生产线。

2017年9月完成的1.6米宽生产线的销售，由一家亚洲制造商用于制造基重为20-50gsm的聚丙烯（PP）和聚对苯二甲酸乙二醇酯（PET）过滤介质。

自从Nanoval于2002年开始开发这项技术以来，该公司仅销售了基于该工艺的两条试生产线。该公司的项目和质量经理Christian Gerking认为，商业化的主要障碍是产品重量缺乏一致性。然而，在2016年下半年，Nanoval终于解决了这个问题。

Nanoval由Gerking的父亲和现任总经理Lüder于1987年创立，旨在利用由特定气流制造小圆形金属粉末引起的分裂效应。在20世纪60年代和70年代，在德国Weinheim和Kaiserlauten为Freudenberg开发非织造布的过程中，Lüder Gerking也意识到了制造产品技术的潜力。

与传统方法相比，Nanoval工艺的主要优点是简单、便宜且坚固，并且比制造等效熔喷网所需的能量和空气消耗更少。该方法可应用于一系列聚合物，包括纤维素和莱赛尔。

在纤维素的情况下，该方法可以用廉价的纸浆，包括废纸，作为原料。然而，Nanoval认为，与使用短纤维制成的纤维素/莱赛尔纺粘物相比，其纤维素/莱赛尔纺粘物的主要优点是连续长丝的细度，其直径小于10μm。常规短纤维的最小纤度为1.3dtex（直径为10.5μm）。

遗憾的是纤维素产品的生产率仍低于潜在客户的要求。2017年，公司成功地将每米工作宽度的生产率提高到12 kg.h<sup>-1</sup>，潜在客户要求超过20 kg.h<sup>-1</sup>。

(资料来源：“[www.nonwovens-industry.com](http://www.nonwovens-industry.com)”)

## Norafin在美国开新厂

一年之内，我们在Mills River建立了一个新的生产厂，拥有最先进的水刺生产线和现代化的实验室和办公室。到2018年底，我们将创造约45个新职位。

随着公司第一个美国工厂的建立，我们将继续创造佳绩。20世纪80年代，Norafin在欧

# 市场动态

洲开发了第一条水刺生产线，并在那里开始商业化生产。在接下来的几年里，我们在Mildenau的德国生产基地不断发展，并通过我们的针刺和水刺生产线提高了我们的知识。2013年，Norafin通过第二条水刺生产线扩大其生产基地，以满足对专业非织造布的日益增长的需求，并扩大其高品质的技术纺织品的种类。目前，该公司在Mildenau的员工是180名。

随着股东的变化和扩大Norafin在美国的生产能力的决定，我们的下一个重要里程碑就是我们的未来。2017年6月7日，我们在北卡罗来纳州Mills River的111校舍公路举办了奠基仪式。在德国投资者VR Equitypartner、Maxburg Capital和公司管理层的一些成员的帮助下，Norafin在过去12个月内在新生产设备中投资了大约2000万欧元。

一年后，即2018年6月7日，Mills River新水刺生产线的落成邀请嘉宾出席，其中包括来自经济、政治和工业部门的代表以及公司的员工。新生产线能够生产宽度达2.8米/110英寸，重量在20-500克/平方米/0.6-14.75盎司/平方英尺之间的技术非织造布。化学生产的高性能纤维（聚酯、P84、间位/对位芳族聚酰胺）和天然纤维（粘胶、天丝）均可在此装置上加工。

该定制单元的合作伙伴是，开松和梳理的Temafa和Spinnbau的Dilo集团，水刺的AquaJet的Trützschler非织造布公司，干燥和拉伸的电源机架的Brückner公司，卷绕机和分切机的Menzel公司。

凭借优秀的团队和高质量的标准，新的水刺生产线使Norafin能够更好地满足美国市场的需求。进一步扩大了专业非织造布的选择范围，从而加强了我们在美国市场的长期存在。Norafins的第三条水刺生产线将生产美国制造的产品。

(资料来源:“www.norafin.com”)

## Glatfelter收购G-P的欧洲非织造布业务

G-P位于德国Steinfurt的工厂生产用于桌面、擦拭巾、卫生用品、食品垫和其它市场的干法造纸产品

全球特种纸和工程材料供应商Glatfelter宣布已签署最终协议，以1.85亿美元收购Georgia-Pacific的欧洲非织造布业务，但需

按惯例进行收购价调整。

拟议的交易包括Georgia-Pacific在德国Steinfurt的业务，以及位于法国和意大利的销售办事处。Steinfurt工厂生产用于桌面、擦拭巾、卫生用品、食品垫和其它非织造材料市场的高品质干法造纸产品，与非织造技术和基材，以及主要专注于基于消费者的最终用途应用的其它材料竞争市场。Steinfurt工厂是一个拥有32,000吨生产能力先进的工厂，员工约220名。Glatfelter公司董事长兼首席执行官Dante C. Parrini表示，“Glatfelter收购欧洲非织造布业务的协议表明，我们致力于在全球工程材料增长市场建立领先地位。”

“Steinfurt的产品和技术很好地补充了我们目前的干法造纸业务，此次收购提供了协同产能增加的机会和改进的成本结构，以支持我们在不断增长的消费者和工业市场中为客户提供服务的能力。从财务角度来看，投资提供了有吸引力的资本回报，会立即增值，并将在不断增长的市场中提供具有吸引力的折旧及摊销前的利润。”2017年，G-P的欧洲非织造布业务净销售额为9900万美元，折旧及摊销前的利润为1800万美元。该公司预计在三年内实现每年超过约600万美元的协同效应，并预计将产生约700万美元的一次性交易费用和整合费用。Glatfelter计划通过手头现金和现有循环信贷额度下的借款来融资收购。拟议的交易须遵守惯例成交条件，包括获得必要的监管批准。瑞士信贷（Credit Suisse）担任该交易的财务顾问，Shearman & Sterling LLP担任法律顾问。预计交易将在第四季度完成。

(资料来源:“www.glatfelter.com”)

(<<< 上接46页)

与此同时，在汽车领域，Lydall也看到了广阔的市场，用毛毡产品代替传统的汽车零部件（可能由金属和固体塑料材料制成）。由此车身自重大大减少，且提高了隔音性能并增加了部件的可回收性。由于针刺的独特特性，Lydall可以在一个解决方案中提供不同的性能功能；隔音性、质轻和美观可以在一个产品的设计实现，而传统解决方案则需由两到三个部件制成，才能达到相同的效果。

(资料来源:“www.nonwovens-industry.com”)

# 市场趋势

## MANN-FILTER推出了一种创新产品，利用回收纤维制成空气过滤材料

新型MANN-FILTER C 24 005空气滤清器提供了一种由回收合成纤维制成的新型过滤介质。“一平方米的过滤材料包含来自两个1.5升聚酯瓶的塑料。因此，该过滤器为资源保护做出了重要贡献，”曼胡默尔综合空气过滤元件专家Till Batt博士解释道。“我们的目标是在新开发的材料中将回收纤维的含量增加到80%。”



新型MANN-FILTER C 24 005空气滤清器

由于采用了多层MICROGRADE A-S介质，空气过滤材料展现了卓越的过滤效果，并且对0.001至0.352毫米范围内的灰尘颗粒的过滤效率达到99.5%。通过对比，人头发的直径为0.05-0.07毫米。凭借它在整个使用期间的高容尘量，该空气过滤器仅需要传统空气过滤器（基于纤维素纤维）30%的过滤介质面积。即使在尘土飞扬的条件下，C 24 005也符合汽车制造商规定的更换周期，并具有阻燃特性。C 24 005与其他空气过滤器看起来不同，其回收纤维的绿色使其具有独特的外观。新型MANN-FILTER C 24 005空气滤清器于2017年11月在欧洲市场上以原厂商质量标准用于各种丰田车型。具有创新型介质的其他空气过滤器已经准备就绪。

多年来，过滤专家曼胡默尔一直在倡导林业的可持续发展，并使用环境友好的空气过滤器滤材。除了符合技术规范之外，公司以可持续和环保的方式开展业务作为首要任务。资源的保护是一个重要因素。因此曼胡默尔有两个生产基地得到森林管理委员会（FSC）指导方针的认证，以便能够使用经认证的来源生产含木材含量的产品。

通过与各种过滤介质制造商合作，曼胡默尔不断改进其过滤介质，以保持技术领先地位。  
(资料来源:“www.mann-filter.com”)

## 可冲散妊娠测试材料获得FDA批准

Lia Diagnostics声称，它在妊娠测试材料中不需要塑料

Lia Diagnostics, Inc.宣布美国食品药品监督管理局（FDA）510（k）批准Lia妊娠测试非处方使用许可，该试验是第一次也是唯一一次经FDA批准的可冲散、可生物降

解的妊娠测试材料。Lia采用专利的涂层技术，结合非织造材料和纸张技术，无需使用塑料，从而创造出一种新型的水分散型环保诊断系统。

Lia为重视隐私的女性而设计的，赋予用户选择是否分享结果的权利。Lia为用户提供了便利来冲散测试的结果，消除了妊娠测试的证据。Lia在预计期间那些天使用，准确率超过99%。

Lia是经过多年研究的成果，它将谨慎的行事风格与可持续材料和新颖设计相结合，成为不损害地球的妊娠测试。Lia采用与大多数卫生纸相同的天然植物纤维制成，重量比六英寸见方的三层卫生纸还要轻。

“1987年，我们迎来了第一部手机、便携音箱、苹果个人电脑以及在家妊娠测试，我们进入便携式个人设备的时代，这改变了我们交流的方式以及我们如何分享新闻。”联合创始人兼首席执行官Bethany Edwards表示：“自1987年以来的30年间，这些革命性创新都取得了显着进步，除了一项：在家妊娠测试”。“由于缺乏隐私，在电影中显示了同样突兀的塑料废弃物，但是现在有人看到垃圾中的积极的一面，并且可以打破之前的新闻！它们更糟糕的是，由于体积庞大、价格昂贵，并且在美国的垃圾填埋场每年需要增加200万英镑的费用对其进行塑料和数码垃圾处理。在Lia，我们对妊娠测试，废弃塑料和不必要的电子设备进行了现代化改造，为环境保护提供了替代方案，并且对用户更加谨慎。”

联合创始人兼首席产品官员Anna Couturier Simpson表示：“妊娠测试中的塑料垃圾足够从费城前往空间站往返七次，Lia是唯一谨慎的妊娠测试，不使用玻璃纤维、电池、塑料或硝基纤维素—这些材料目前覆盖了市场上几乎所有一次性产品。迄今为止，只有Lia提供了的可持续方案。”

Lia于2017年12月4日在TechCrunch Disrupt Berlin的Startup Battlefield全球首次亮相，Startup Battlefield是全球领先的技术变革和革命性创业比赛，并且Lia被评为五名决赛选手之一。

## 市场趋势

作为Lia对妇女的持续承诺的一部分，消费者可以通过全球妇女健康组织捐款Lia，来支持妇女的生殖健康。10美元的捐赠将通过www.meetlia.com为包括计划生育、计划生育全球、惠特曼沃克健康、PreserveFertility.org和SOS Grossesse在内的非营利组织提供一次Lia妊娠测试。Lia预计在2018年中期向消费者提供。  
(资料来源：“www.nonwovens-industry.com”)

### 3M推出支持蓝牙的HVAC空气过滤器

Filtrete智能空气过滤器包含压力传感器，可在过滤器需要更换时通知用户

3M公司的Filtrete品牌宣布Filtrete智能空气过滤器的推出，这是首款蓝牙HVAC家用空气过滤器。新的过滤器可以在需要更换过滤器时进行提示，并提供其他相关信息，以便用户能够控制自己家中的空气。

Filtrete智能空气过滤器包含一个蓝牙压力传感器，当与新的Filtrete智能应用程序配对使用时，将根据空气流量和过滤器的使用情况（而不仅仅是时间）在需要更换时通知用户。Filtrete智能应用程序还提供有关室外空气质量的数据，并提供帮助改善室内空气质量的有用提示。用户可以通过选择特定的智能手机通知来决定他们与Filtrete智能应用程序进行互动，以提醒他们何时需要更换过滤器，并在室外空气质量差时警示。

“当我们与消费者交谈时，许多人都知道他们的空气过滤器的设计平均使用三个月，但每个家庭的情况都不一样。用户不确定他们家的环境如何影响室内空气以及更换空气过滤器的最佳时间，而且，他们经常忘记重要的细节，例如在需要更换过滤器时忘了它的尺寸和类型，”全球业务部门Filtrete品牌经理Amanda Dauphinais说，“Filtrete智能空气过滤器将排除猜测，帮助用户掌控家中的空气。”

虽然美国环保署建议每月检查一次空气过滤器，并至少每季度更换一次，但Filtrete的调查研究表明消费者更换滤芯时间更长的并不少见。

“Filtrete智能空气过滤器有助于监测与室内空气质量相关的因素，并提供数据驱动的警报和更换提醒，这很重要，

因为大多数人在室内度过的时间高达90%。”Dauphinais继续说道，“当与独特的3M过滤技术相结合时，Filtrete智能空气过滤器是一种强大而智能的方式，可为家中提供更清洁、更清新的空气。”

Filtrete智能应用程序根据家中的位置记录室外空气质量信息，并向用户提供如何改善室内空气质量的提示。每个家庭都是不同的环境，各种因素影响空气过滤器的使用寿命。例如，家庭活动如吸尘、烹饪、改建项目或宠物的存在会影响空气过滤器的使用时间。天气和其他环境问题（如烟雾和湿度）也会影响住宅内的空气质量，可能会影响滤芯的更换频率。

Filtrete智能空气过滤器于2018年春季在全国范围内的签约零售商处推出。根据过滤级别，MSRP的价格范围为21.99-29.99美元，并与iOS和Android设备兼容。  
(资料来源：“www.convertinggguide.com”)

### 3D非织造布技术用于开发纹理非织造布

当您正在寻找一种可以提高性能、认可度和独特性产品时，结构化非织造布是一个很好的选择。结构化产品减少与皮肤接触的面积，增加额外容积，由于孔隙率的改变而达到更好的持液性。这些优点受到卫生市场极大的关注，例如可用于尿片和女性卫生用品的顶层、背层或功能层。

目前结构化非织造布的工艺，如水刺，速度慢且价格贵。近来由REICOFIL与ALBANY International合作开发的新技术使结构化产品的生产更加快速高效（该专利正在申请中）。该工艺基本上可以用于所有现有的REICOFIL线，使产品升级成为可能。

#### 新工艺：使用结构化纺丝传送带

在REICOFIL工艺中，长丝被收集并预粘合在机织传送带上。该新技术给纺丝传送带提供了内部或表面的结构，导致传送带空气渗透率的局部变化，影响纤维堆积，使产品具有三维凹凸结构。长丝优先沉积在空气流量大的区域，使非织造布重量不同，厚度不同。

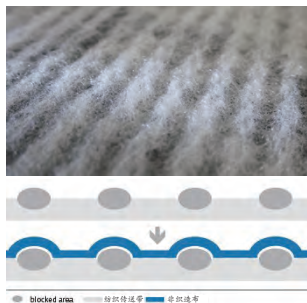
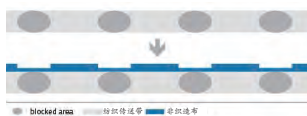
#### 纺丝传送带的功能



结构化纺丝传送带主要有两个功能：在非织造布中形成所需的图案，并通过合适的纺丝传送带，确保加工的稳定（纺丝传送带的类型、编织方式、底部传送带与结构化传送带的透气性的对比等）。

### 如何实现该功能？

为了实现上述功能，一种方式是改变传送带组织结构（如不同的网眼密度、使用较粗的经纱使传送带表面形成凸起结构）；另一种方式是在传送带上添加其它材料，该方法灵活多变，可以得到多种图案；第三种方式是在传送带下方局部抽吸风。这些方法都能产生纵向的线条纹路。



### 方案一

- 通过局部遮挡输带来调节传送带的透气性
- 生成例如线、点或符号图案
- 传送带表面仍然是均匀平整的
- 可以使用热轧或热风进行粘合
- 该产品显示出产品重量的局部变化，导致不同的厚度分布，形成三维图案的非织造布

### 方案二

- 在传送带顶部为凸起结构
- 生成例如线、点或各种符号的图案
- 在结构化传送带上优先选择热风粘合，例如：制备“高度蓬松”产品（使用PP/PE卷曲纤维）或皮层为PE，芯层为PP的皮芯纤维
- 该产品具有十分独特的三维表面结构  
(资料来源:“[www.reicofil.com](http://www.reicofil.com)”)

## 沃尔沃力图在2025年新车中使用回收再生塑料的比例达到25%

公司推出了其XC60T8插电式混合动力SUV的特殊版本，该产品包含回收塑料

高级汽车制造商沃尔沃汽车公司宣布其目标，到2025年，在每款新推出的沃尔沃汽车的塑料零件中至少采用25%的再生塑料材料。沃尔沃汽车公司还敦促汽车工业供应商与汽车制造商更密切合作，开发的下一代零部件也尽可能符合可持续发展，尤其是在含有更多可回收塑料方面。

为证明这一目标的可行性，该公司推出了XC60T8插电式混合动力SUV的特殊版本，它看起来与现有车型完全相同，但已经将其一

些塑料部件替换成含有再生材料的产品。

沃尔沃汽车公司总裁兼首席执行官Hakan Samuelsson表示：“沃尔沃汽车致力于最大限度地减少全球环境足迹，环境保护是沃尔沃的核心价值观之一，我们将继续寻找新的方法把这一点纳入我们的业务。这款车和我们采用再生塑料的目标是进一步兑现承诺的例子。”

该款XC60系列车的内饰有一个副仪表板换挡操纵台架，它是从废弃渔网和船用绳索上回收的再生纤维和塑料制成。在地板上，地毯是由聚酯塑料瓶制成的纤维和从服装生产商的边角料中回收的再生棉，座椅也使用了由塑料瓶制成的聚酯纤维。旧沃尔沃汽车的旧汽车座椅被用来制造汽车引擎盖下的吸音材料。

沃尔沃汽车公司全球采购部高级副总裁Martina Buchhauser说：“我们已经和一些主要的、有前瞻性的供应商合作，然而，如果我们要使我们的抱负成为现实，我们确实需要增加再生塑料的实用性。这就是为什么我们呼吁更多的供应商和新的合作伙伴加入我们对再生塑料的投资，并帮助我们实现我们的目标。”

再生塑料款XC60是在全球顶尖法人沃尔沃环球帆船赛哥德堡站期间亮相的。该赛事致力于可持续发展的核心与联合国环境署清洁海洋运动建立伙伴关系，号召为“力挽塑料狂澜”而行动。

联合国环境署负责人Erik Solheim说：“塑料的广泛回收和再利用对于我们致力于扭转塑料污染至关重要。沃尔沃将塑料废弃物整合到下一批汽车的设计中，为汽车行业树立了全新的典范，希望业界其他公司会跟进。这证明了塑料污染问题可以通过设计和创新来解决。”

相比其他豪华汽车生产商，沃尔沃汽车发布的再生塑料目标的声明极具超前性。进一步履行了其减少公司运营活动和产品对环境影响的承诺。上个月，沃尔沃汽车承诺在2019年底之前在所有经营场所和活动中取消一次性塑料的使用。

(资料来源:“<https://archibaldandshorter.co.nz>”)

## 市场趋势

### Clorox Healthcare公司推出VersaSure清洁消毒擦拭巾

擦拭巾经EPA注册可杀死44种病原体

Clorox Healthcare公司推出了新的Clorox卫生保健品VersaSure清洁消毒擦拭巾，一种创新的、无酒精季铵盐溶液的多用途产品，广泛应用于健康护理，确保广谱消毒。

Clorox Healthcare VersaSure清洁剂擦拭巾是在环境保护署（EPA）注册的，在两分钟或更短的时间内杀死44种病原体，包括细菌、病毒和真菌。独特的、低气味、低残留物配方的专利技术提高了季铵盐表面活性，从而在没有其他活性材料的情况下提供更广泛的功效和更快的杀灭时间。清洁消毒剂擦拭巾具有多功能一步清洁，并兼具速度和功效，优越的美学设计，适当的润湿和所需的清洁能力，且使用便利。

Clorox Healthcare VersaSure清洁消毒擦拭巾的创新功效如下：

- 快速和强力对抗主要病原体：VersaSure是经EPA注册的在两分钟或更短时间内可杀死44种微生物，包括14个多重耐药病原体。VersaSure在30秒内可杀死流感病毒、呼吸道合胞病毒（RSV）、麻疹、腮腺炎和其他病毒，在两分钟内可杀死细菌和真菌，包括耐甲氧西林金黄色葡萄球菌（MRSA）、抗万古霉素的大肠球菌（VRE）、大肠杆菌（E. coli）、沙门氏菌，牛分枝杆菌（TB）和白色念珠菌。
- 卓越的美学设计和清洁能力：专利的无酒精季铵盐技术和创新的擦拭设计相结合，提供优良的美学、润湿和清洁能力。低残留配方没有严重的化学烟雾或气味，是专为特殊人群和病人感到舒适而设计。耐用、低掉屑擦拭巾结构使其具有更高的强度。与竞争对手季铵盐和季铵盐酒精消毒剂擦拭巾相比，良好的润湿性提供更大的表面覆盖率，并确保经过处理的表面在整个接触时间内保持湿润。
- 方便、兼容的使用：VersaSure擦拭巾随时可用，速效，并且与面积大的硬且表面无孔的医疗保健设置具有兼容性。各种尺寸，包括多种用途的85片和150片的擦拭巾的灌装及30片一包的扁平包装，大空间日常清洁和消毒用终端擦拭巾，可使用110片的桶和填充袋中，因种类齐全使得护士和环境服务团队都很方便使用。

(>>> 下转33页)

### 金佰利扩大北卡罗莱纳非织造布厂

3000万美元，两年的扩张将在亨德森维尔创造新的就业机会

金佰利克拉克公司已经批准了3000万美元用于北卡亨德森维尔的非织造布生产设施的扩建和改善。该工厂金佰利北美成人和女性护理品牌生产的非织造材料，北美成人和女性护理品牌包括Depend、Poise和U by Kotex。

(>>> 下转50页)

### JX Nippon ANCI推出Milife

JX Nippon ANCI总部设在乔治亚州的Kennesawde，生产在阿拉巴马州的Roanoke，复合材料制造在乔治亚州的Dalton，在2018年1月推出Milife®产品，一种用于过滤材料的细旦聚酯非织造布。

Milife是一种连续的长纤维产品，但它是由一种与纺粘不同的专有技术制成的。它采用一种非织造工艺，具有连续的、定向的长丝，具有纵向和横向纤维排列。Milife可只做纵向排列，也可纵向向排列。Milife是由日本的一家姊妹公司在严格的质量程序下制造的，并由JX Nippon ANCI公司独家销售。

该技术得到的纤维尺寸非常细。Milife通常具有10微米（1 dpf）的纤维直径，Milife超细纤维具有2.7微米的纤维直径。这就产生了纤维尺寸在纺粘和熔喷之间的Milife纤维，以及Milife超细纤维直径比熔喷法更小或相等。Milife纤维尺寸填补了现有非织造纤维尺寸的空白。

Milife是一种薄型产品，具有纤维尺寸分布非常窄，低延伸率，尺寸稳定，以及优异的纤网均匀性。它的重量可以达到8gsm到60gsm之间。Milife目前用于豪华包装、室内装潢、特种胶带、医疗等工业应用领域。Milife可以用作过滤作为支撑材料，作为过滤介质或复合材料中的细旦成分。

JX Nippon ANCI销售和市場副總裁Gabriel Cuellar指出，“我们对启动Milife过滤应用感到兴奋，并且相信Milife凭借其独特的性能为过滤器制造商提供了额外的和新的选择。”

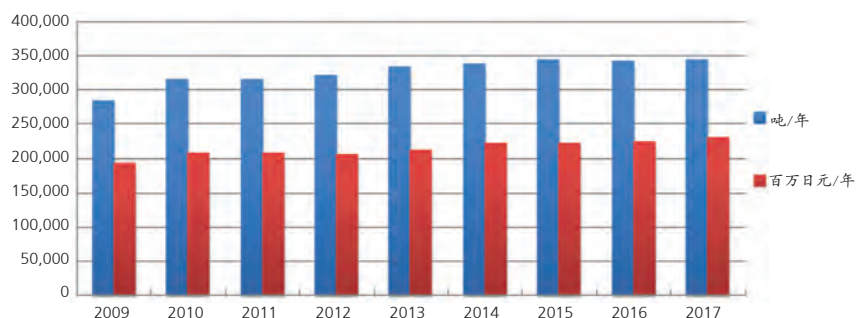
(资料来源：“<http://fiberjournal.com>”)

## 2017年日本 非织造材料 产量

### 日本非织造材料产量 (2009~2017)

资料来源: METI

	2009	2010	2011	2012	2013	2014	2015	2016	2017
千吨	283.4	313.4	313.0	320.9	331.5	336.3	342.0	339.6	342.1
十亿 日元	191.0	206.9	205.7	203.5	210.2	221.3	220.6	223.5	229.2
日元/公斤	674	660	657	634	634	658	645	658	670

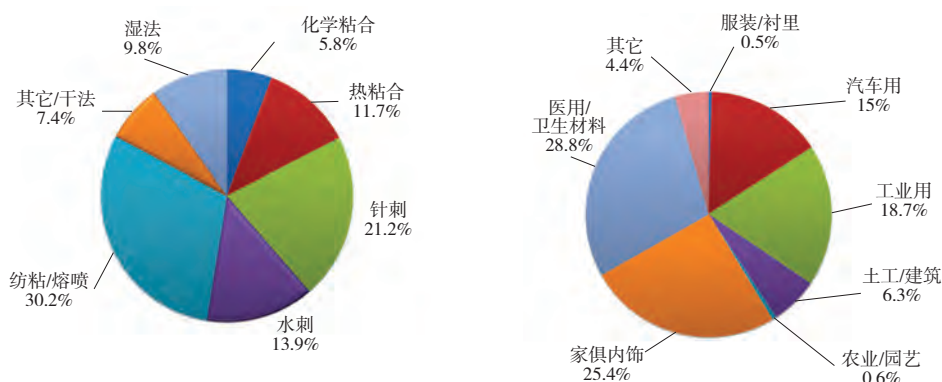


【注】日本本土外的非织造材料产量 (投资额: 49%或以上)  
 2012: 165.1 千吨, 623 亿日元, 2013: 196.3 千吨, 841 亿日元  
 2014: 227.5 千吨, 1032 亿日元, 2015: 259.1 千吨, 1201 亿日元  
 2016: 266.4 千吨, 1075 亿日元

资料来源: ANNA

### 按工艺和应用分类的非织造材料产量 (2017) (342.1千吨)

资料来源: METI



### 日本非织造材料进出口趋势 (2010-2017)

资料来源: Ministry of Finance

		2010	2011	2012	2013	2014	2015	2016	2017
重量 (千吨/年)	出口	49.8	48.9	50.5	53.3	56.4	51.3	52.0	55.0
	进口	108.3	122.2	129.6	142.8	163.0	189.8	211.2	240.5
金额 (十亿日元/年)	出口	57.9	54.8	54.4	63.1	70.1	73.0	71.2	77.0
	进口	37.5	43.1	45.6	56.2	69.2	82.0	77.5	91.2
单位 (日元/公斤)	出口	1,163	1,121	1,077	1,184	1,243	1,423	1,369	1,400
	进口	346	353	352	394	425	432	367	379

## 医疗卫生用非织造布生产设备的趋势

KCS 扶桑株式会社 Kimihiko "KIMI"  
KIMORA  
经理

### 目录

- 应用
- 按工艺分类
- 按工艺分类 (2)
- 干法工艺-水刺-(1)
- 干法工艺-水刺-(2)
- 干法工艺-热风粘合-(1)
- 干法工艺-热风粘合-(2)
- 湿法工艺-可冲散湿巾-
- 卷绕后的工序
- 条卷
- 湿巾制造机
- 口罩制造机
- 机器供应商(1) 系统供应商
- 机器供应商(2) 梳理, 交叉铺网
- 机器供应商(3) 条卷, 湿巾制造机

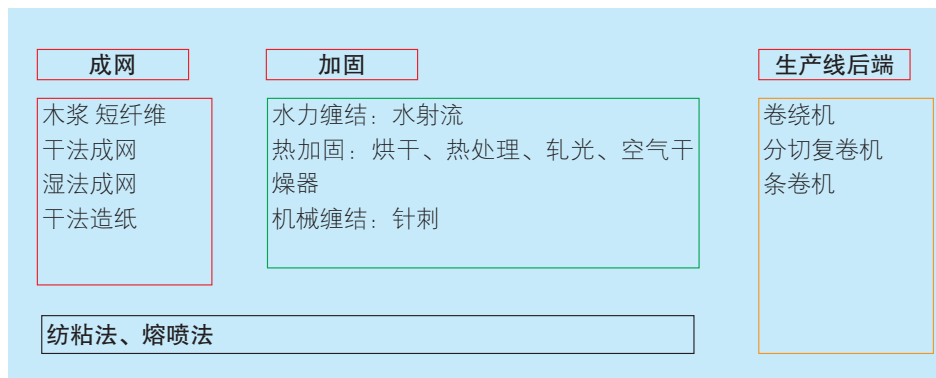
### 应用



非织造布要求: 更轻、更柔软、更干净、更美观、低成本、易转换……  
生产线要求: 更快、牵伸低、易维护、安全可靠……

### 从成网到非织造布

按工艺分: 成网-卷绕



### 干法

- 宽幅梳理机: 达6m
- 高速水刺机: 300m/min, 甚至更高
- 宽幅烘箱: 达4m

### 湿法

有新的应用如可冲散湿巾

### 纺粘

克重高 (~20gsm) 且生产速度快

### 最新的干法成网工艺—水刺

应用: 卫生材料、医用湿巾  
产量: 50gsm × 产品幅宽5.0m × 生产线速度300m/min. × 60min./1000=4.5ton/h  
开松&混合→梳理(2台)→水刺→干燥→轧光→卷绕

产量: 25gsm × 纤网幅宽3.0m × 生产线速度120m/min. × 60min./1000=540Kg/h  
开松&混合→梳理→交叉铺网→牵伸→水刺→干燥→卷绕

### 最新的干法成网工艺—水刺(2)

-梳理-水刺加固-干燥-卷绕  
产量:  
50gsm × 卷绕机3.3m × 250m/min. × 60min./1000=2.5ton/h  
50gsm × 卷绕机4.4m × 250m/min. × 60min./1000=3.3ton/h

类型	克重	线速度	工作幅宽	产量	最终用途
直铺	20-120 gsm	达400 m/min	5.0-6.0 m	25000 T/a	湿巾, 医用, 卫生用

直铺类型的生产线主要是用于克重轻的水刺非织造产品



版权: 安德里茨

### 最新的干法成网工艺—热风粘合

-梳理-热风粘合-卷绕-  
产量:  
30gsm × 产品幅宽4.0m × 生产线速度200m/min. × 60min./1000=1.4ton/h

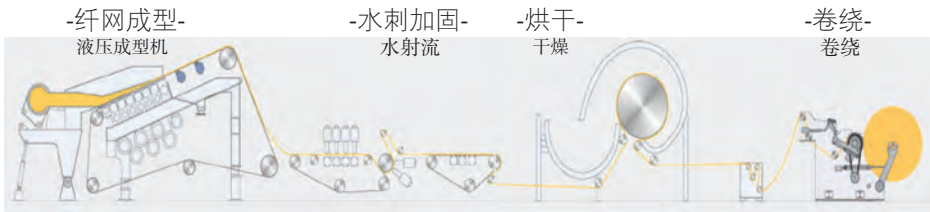
开松&混合→梳理→热风粘合→轧光→卷绕



## 技术信息

应用：尿片的表层/底层，ADL，卫生用品，医用

最新的湿法成网工艺—可冲散湿巾



版权：特吕茨非织造



版权：SpoolEX公司

母卷直径：~2m  
 母卷宽长度：~1m  
 条卷筒直径：~1.2m  
 条卷宽度：~0.85m  
 条卷卷绕速度：600m/min

### 卷绕后的工艺~从分切&复绕到条卷筒机目前

分切制作-再卷绕

#### 任务

- \* 由于复制速度提高，增加饼卷时间
- \* 来自复制生产者要求→更长的条卷

#### 未来

从饼状卷装到条卷  
 条卷筒长度比薄饼状卷长10倍。  
 \*取决于产品

#### 卷绕后续工作

直径1200mm, 70mm宽饼卷 →3500m(3.5Km)

\* 尿布产量：700pcs/min

\* 转换速度350m.min

每10mini.换一次饼卷到条卷

降低换卷工作强度至1/10

直径1200mm × 850mm 条卷→35Km

#### 条卷筒



10个条卷头

### 湿巾制造机

自动交叉折叠湿巾制造机



### 口罩制造机



平面口罩制造机：120pcs/min



防尘口罩制造机：60pcs/min

国产口罩制造机以其强劲的国内需求和低廉的价格作为武器席卷全球。



耳环焊接: 25pcs/min

## 设备供应商

系统供应商: 梳理机、交叉铺网机、水刺机、牵伸机



URL: <http://www.autefa.com>



URL: <http://www.dilo.de>



URL: <http://www.andritz.com/other-industries-and-products/oi-nonwovens-textile.htm>



URL: <http://www.truetzschler-nonwovens.de>

## 梳理机



<http://nonwoven.fivesgroup.com/production-line/equipment/carding-machine.html>

## Cross lapper



<http://www.automatec.it/it/prodotti-it>



<http://www.bonino1913.it>



<http://www.techno-plants.com>

## 条卷机



<http://www.spoolex.com/>



<http://www.acelli.it>

## 湿巾制造机



<http://www.kansanmak.com>

(资料来源: "ANEX 2018 亚洲非织造材料展览会与研讨会", 本编已节选)

(<<< 上接49页)

设备, DLS交叉铺网机和高速超级针刺机, 工作幅宽大。Hassan Tekstil的董事总经理 Ahmet Sisman表示, 这项投资将使Hassan Tekstil提高产品质量及产能。交货时间定于2018年3月, 并将于2018年10月开始生产。

## 向前进

总部位于美国康涅狄格州曼彻斯特的 Lydall Inc.一直在努力整合其最新的收购项目——收购了加拿大针刺生产商Texel和德国针刺制造商Gutsche。通过收购这两家公司, Lydall能够从产品和市场的角度以及地理位置上实现多元化。今天, 该公司的非织造材料部门在美国、加拿大、德国、英国和中国都有运营设施。迄今为止, 成功的整合使公司能够在产品功能、制造、最佳实践和供应商关系方面共享信息, 这帮助Lydall更好地定位自己的业务, 以更好地为客户服务。Texel和Gutsche被纳入Lydall的非织造材料部门, 该部门涉及两个主要领域: 工业过滤和先进材料。

在工业过滤领域, Lydall主要服务于空气和液体过滤市场, 而在先进材料方面, 公司则为土工合成材料、汽车、医疗、防护服

等市场提供产品。具体而言, Lydall继续目睹空气过滤和汽车行业的增长机会。

在空气过滤方面, 减少对环境的排放一直是客户日益增长的需求。Lydall空气过滤介质用于控制各种工业过程包括电力、水泥、沥青、焚烧、食品、制药和其他行业的空气排放和粉尘污染。一般而言, Lydall的客户正在寻求其制造业对本地和全球环境的影响降到最低, 监管机构不断增加的要求也越来越需要更好的过滤产品。在过去的三到五年里, 该公司已经认识到在全球范围内降低排放水平, 并预计这种趋势在各个区域市场将继续存在。

Lydall开发的新专有产品设计有助于实现客户在该领域的目标。其最新技术包括 Microfelt、ZeroIox和Microvel高性能空气过滤产品, 有助于大幅减少排放。在许多情况下, 这些产品已经大大超出防尘法规的要求, 相对于特定的政府法规, 可降低80%或更多。这些产品帮助Lydall的客户设施满足当前的要求和当今的环境需求, 同时也应对了未来可能出现的法律法规。

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## 技术发展趋势

### 针刺市场报告——核心市场的增长引导了全球性的投资

过去几年来，全球在针刺市场的投资一直稳步增长。诸如过滤、汽车产业和土工布等核心市场的增长使制造商渴望扩大产能以满足日益增长的技术需求。

“对针刺纺粘土工织物的应用需求在不断增长。另一需求不断增长的是过滤领域，特别是PTFE过滤器。在亚洲、人造皮革的需求在不断增长，其主要用于服装、家具和汽车行业。这就需要更多数量的新型针织机。” Autefa Solutions的首席运营官，Andrélmhof说到。Autefa Solutions作为一家全系列供应商，可提供纤维开松、梳理、针刺、热粘合、水刺、烘干机等一系列生产线终端设备。

最近在新型针刺设备方面的投资数不胜数，例如美国（Foss Floors）和墨西哥（Autoneum）、再到欧洲（TTL）、土耳其（Hassan Tekstil）和亚洲（Autotech）等。

著名机械制造商Andritz Nonwovens看到针刺产品的强劲增长，尤其是在汽车领域。

“非织造布的最终用途不仅是汽车内饰，还可用于噪音隔离层，采用水刺和（或）针刺非织造布作为发动机隔离层以降低噪音，”非织造布销售总监Jean-Philippe Dumon说，“由于非织造布比其他材料更轻、隔音能力更强，因此前景广阔。使用廉价的PET纤维，结合在线牵伸技术以保证处理的过程破损最小。该工艺可以减少在整个针刺过程之前干燥纤维的时间。”

安德里茨最近给EcoTechnilin公司安装了一套从铺网到针刺的Excele系列针刺生产线，可实现高产量。EcoTechnilin公司在法国有一家工厂同时在英国设立了研发中心，这条最新的生产线将安装在波兰的新工厂。

根据EcoTechnilin公司总经理Karim Behloui的说法，波兰是投放新设施理想的地点，因为它位于捷克共和国、斯洛伐克、波兰和德国的客户中心。

EcoTechnilin公司主要以天然纤维（亚麻）/聚丙烯为原料，产品服务于汽车/交通运输行业。“亚麻是一个非常好的原料，它的

强度高、密度低，可以减少复合材料的重量，从而减少车身重量，降低汽车能耗，最终还可以减少CO<sub>2</sub>排放量。” Behloui说。

总的来说，EcoTechnilin对公司未来持乐观态度，因为他已经看到了每年20%的增长趋势。“我们将继续投入大量资金用于研发，以开发建筑行业、过滤、航空和其他领域的新解决方案。”他补充道。

该公司新生产线的产能约为1000kg/h，生产由天然纤维、玻璃纤维和聚丙烯制成的非织造布，产品的克重范围在300~2400g/m<sup>2</sup>。这条生产线是对法国另外两条Andritz针刺生产线的补充，现在该公司的年产量超过10000吨。

德国TTL公司（Technische Textilien Lörrach）是另一家引进安德里茨技术的公司，其开发、制造和销售针刺毡，用于工业过滤、工业洗衣和工业用纺织品。

供应设备范围包括开松混合机、Dynamic梳理机、交叉铺网机，再与安德里茨技术（该技术可用于牵、针刺和退卷/组合）相结合。安德里茨还提供过程控制以及独特的ProDyn闭环系统，从而持续监控生产和优化最终产品。

虽然该公司没有提到它们有多少条生产线在运行，但TTL的首席执行官Roland Jaehn表示，新线路将取代旧线路。他说：“（新生产线）使我们能够扩大产品范围，满足（在此之前我们不得不拒绝）客户的要求。”

Andritz neXline针刺生产线预计将生产用于不同特殊应用的独立产品，例如在汽车和电力工业中防火和防高温产品。

Jaehn还指出，尽管针刺市场已经相当成熟且工业化国家潜力有限，但在世界各地的发展中国家，增长是可以实现的。

其中一个地区是印度，Autotech Nonwovens最近投资安德里茨生产线。根据Autotech Nonwovens公司董事Ankit Desai的说法，该公司于2012年成立时，印度汽车市场正在经历一个低潮期。2011-2013

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年乘用车领域的销售异常停滞，降低成本成为重中之重。“然而，增长潜力从未受到质疑，考虑到年轻人口的增长趋势与高GDP增长率相结合，市场复苏只是时间问题。预期到2020年印度汽车市场将超过500万辆。”他说。

福特，塔塔和铃木等几家汽车制造商正在印度西部地区（古吉拉特邦）进行投资，因此Desai对未来充满希望。

位于古吉拉特邦的Autotech公司可以生产所有“A”表面产品，可应用于地毯、顶篷、包裹托盘、货架、座椅靠背地毯以及后备箱和侧边饰件。最近该产品的应用已渗透到其他领域，包括汽车滤布、热烟气和液体过滤应用。

这家年轻的公司占据了35%以上的市场份额。Autotech生产高品质、轻质的车顶内衬，与其他材料相比，它具有出色的耐磨损性、耐用性和性价比。据Desai称，这些功能使原始设备制造商可以从传统的双层或三层复合产品/泡沫背面产品实现转变，从而减轻重量，并改善轻量化带来的成本和其他好处。

“随着向差异化转变，并为顾客提供高级、量身定制和个性化的产品，印花非织造布是昂贵的针织/泡沫衬里顶篷面料强有力的替代品，这种面料通常被用于奢侈品领域，”他说，“印花非织造顶篷面料使OEM设计师能够灵活地定制和个性化独特的图案和颜色，为其顶篷增加三维纹理和抗菌饰面，同时保持高耐磨性并为客舱内部提供优质感。”

“除了Freudenberg-Vilene之外，Autotech是唯一一家在印度制造印花非织造床单的亚洲非织造布生产商，也是第一家在印度推出这类产品的公司。”Desai说。

自2016年底安德里茨nexline针刺生产线扩大生产能力以及欧洲其他加工和精加工机械以来，Autotech已经能够生产全系列的汽车饰件、过滤介质和多种工业毛毡。“这在印度是独一无二的。”Desai说。

在这条新生产线和第一条生产线的基础

上，Autotech将能够使用各种类型和数量的纤维生产克重在80~2000g/m<sup>2</sup>范围内的非织造布。“两台全新的针刺机能够提供单层、双层或三层产品，以及配备了可用于层压和挤出、印刷、压延和烧毛的加工设备——我们的产品组合和业务潜力扩大了许多倍。”他说。

虽然Autotech开始以印度市场为重点，但最新的产能扩张将有助于今年汽车面料的出口。该公司还于2018年开始向美国市场供应热烟气过滤介质。

汽车市场的另一家公司Autoneum最近为其位于墨西哥San Luis Potosi的工厂订购了Andritz eXcelle系列生产线。该生产线将为汽车市场生产300-900g/m<sup>2</sup>的针刺簇绒毡。这些产品将用于制造地毯、内饰和地板绝缘材料。Autoneum在宾夕法尼亚州的Bloomsburg、印第安纳州的Jeffersonville以及欧洲的几条生产线上都采用安德里茨的生产线。

与此同时，德国非织造布生产商Sandler在汽车/运输领域也看到了对针刺非织造布的更大需求，其中很多应用于机舱和发动机舱的吸音材料以及非织造布座椅装饰。但是，根据技术产品销售总监Gerhard Klier的说法，非织造布将进军新的市场和新的应用领域。“例如，非织造布目前正在飞机或铁路车辆中占据一席之地，并迎接由电动汽车等新运输概念带来的挑战。”他说。

与此同时，德国的非织造布生产商Sandler公司在室内声学领域也看到了非织造布巨大的市场，尤其是开放式办公室的设计对高效隔音的需求。“建筑师正在寻找提供这种功能的材料，同时也满足室内设计，”Klier说，“提供这种组合，非织造布正在进入这个市场，并开辟新的增长机会。”

Sandler公司以各种厚度和密度的自支撑面板的形式生产高效隔音材料。它们可以印刷、压花、用有色产品层压，切割成特定形状，甚至可以用天然材料（如干草或矢车菊）制成的涂层增强。“这些非织造布为实现个人设计理念提供了极大的可能性。”Klier说。

尽管Sandler公司在德国Schwarzenbach和美

## 技术发展趋势

美国乔治亚州Perry的最新生产线并未生产针刺非织造材料，该公司最近对该技术的投资于2013年在Schwarzenbach的工厂进行，Klier表示该公司计划扩大其业务范围以满足北美市场对隔音针刺非织造布的需求。

### 可胜任任务

随着越来越多的针刺生产商投资新技术，构成整条生产线的机械设备制造商通过改进技术来跟上步伐。

对于Andritz Nonwoven来说，公司多年来一直致力于发展技术，与非织造布生产商密切合作，这是非常重要的。“我们设计了新机器和解决方案，以提高非织造布克重的均匀性，通过增加产品性能为非织造纤维网带来附加价值，并开发系统以优化生产力并最大限度地减少维护要求，”安德里茨的Dumon说。

目前市场上推出的是其新的ProWid系统，该系统在纤维网进入交叉铺网机之前调节梳理网的重量，以便铺设具有较轻边缘的纤维网。这考虑到随后的粘合过程会导致非织造布的变形。Dumon说，CV%（不匀率）通常会得到改善，减小到2%，特别是当没有ProWid系统时，CV%超过3%。ProWid可与单独的Andritz交叉铺网机搭配使用，以提高现有梳理生产线的性能。

为了增强生产线灵活性，安德里茨还提供了监控方面的新解决方案。“在生产管理中，为了确保可追踪性，监控是必不可少的，使得参数的设置和记录更加容易。”Dumon解释说，“我们的监控系统使生产者能够评估每批生产的制造成本。”

同时，Autefa Solutions看到了数字化和工业4.0进入非织造布市场的重要性。根据Imhof的说法，Autefa针刺生产线的产品质量可以通过其闭环控制系统进行监控和改进。通过纠偏系统校准梳理单元的喂入情况，决定了最终产品的质量分布的均匀性。Autefa的交叉铺网机Topliner与Web Profile Control WebMax相结合，可防止边缘区域的纤维重量增加。这补偿了材料收缩造成的“微笑效应”。“WebMax分析功能也集成到闭环控制系统中，确保产品在MD和CD方向上均匀分布。”他补充道。

DiloGroup公司从20世纪50年代开始设计了针刺设备，也提供针刺非织造布的完整生产线，包括纤维准备、开松和混合设备、梳理、交叉铺网、针刺和卷绕。

DiloTemafa设备的最新发展为使用多个开放阶段的高吞吐速度及长纤维的开松提供了新的可能性。同时，DiloGroup的另一个部门DiloSpinnbau为VectorQuadroCard提供了更多的灵活性。通过中间部分简单和快速转换，该开发将不同的梳理设备结合起来。新设计的输送系统也非常灵活，可以生产平行、随机或凝聚网。新型梳棉机喂料系统Unifeed结合了容量系统的原理，可以实现精确配料和开放式振动溜槽喂料的优点。

据Dilo Machines的Dilo横向交叉层DLSC 200是另一种新产品，并在交叉铺网技术方面树立了新的标准，根据所用纤维的不同，纤维网的进给速度为200米/分钟。这些研究只是Dilo最近技术进步中的一小部分。

根据DiloGroup首席执行官Johann Philipp Dilo的说法，该公司近年来看到了更多投资，事实上，由于需求的增加，企业在过去几年里增长了大约20%。他说：“针刺材料的消费量在全球平均增长率在6%-7%之间。这是因为针刺技术生产效率高、用途广泛、工艺参数和最终产品重量可调范围广。因此，针刺产品可以根据其预期的功能在不断增加的应用范围内进行调整和设计。”

一家利用Dilo最新技术的公司是Foss Floors of Rome, GA。其新型完整针刺生产线适用于生产地毯，包括DiloTemafa开松和混合生产线，3米宽的DiloSpinnbau MC 3-5梳理机，CV1系统的DiloMachines crosslapper DLBS 30/50，双针床式DI-LOOM系列以及集成的过程控制系统DILO-PCS。

Foss Floors经营其他几条Dilo生产线，包括高速提花DI-LOOP装置。

与此同时，土耳其公司Hassan Tekstil也投入新型Dilo设备，公司生产用于汽车、擦布、绝缘材料和土工布市场的非织造布。该公司最近订购了开松和混合机、多料斗梳理喂入设备，多级梳理机和搭接式牵伸

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## 产品集锦

### Diamond Wipes公司推出新产品 Perfect Plate Wipes

专业厨师级擦巾用于完善摆盘艺术

2018年一季度，加州湿巾生产商Diamond Wipes International, Inc. (Diamond Wipes; [www.diamondwipes.com](http://www.diamondwipes.com)) 宣布为餐饮服务专业人士推出一款新型擦巾。Perfect Plate™湿巾受到食品摆盘艺术的启发。是为不断追求卓越烹饪的厨师所设计。

“当我第一次看到这些擦巾时，说：哇，这真是个好创意，” AAC CEC主厨Ralph C. Feraco说。“作为厨师，在服务过程中总是需要用干净的湿毛巾擦拭盘子，现在我们厨房备有Perfect Plate Wipes擦巾。所以，当我们需要擦拭盘子时，我们已经准备好了。因此米酒醋和柠檬油比我们曾经使用的纯白醋更受欢迎。”

Perfect Plate Wipes是从米醋和柠檬皮中提取的天然油，采用当地的高纯度水和天然食品安全配料制成，以达到最佳清洁效果。擦巾可以有效地触及案板的边缘以呈现印象。他们也可以快速清理厨房里的其他用具。而且，每次使用新的Perfect Plate Wipe擦巾都很卫生。

Diamond Wipes的创始人Eve Yen说：“我们很高兴能够将这一新的擦拭概念带入餐饮服务市场，作为一个引以为傲的美国制造商，我们从一开始就专注于食品服务行业。Perfect Plate Wipes是食品安全级别的，根据我们的研究，新产品和餐厅使用的任何典型亚麻布一样有成本效益。想象一下，厨房的后面不再堆放亚麻布，是多么完美！”

(资料来源：“<https://finance.yahoo.com>”)

### Avgol公司通过推出Waveform 3D™技术为非织造布带来新的维度

Avgol公司是全球领先的非织造材料制造商，推出一种新的三维概念产品，扩展卫材应用的创新力。

Waveform 3D™技术是一种能够改进婴儿尿布、成人失禁产品和女性卫生巾的工艺。该技术可将不同的三维轮廓融入Avgol的标准和定制设计系列中，进一步为消费者提供高性能和舒适度的产品。

通过使用该技术，可以让纤维表面结构具有独特的表面图案。这种技术能够在平面产品内产生三维凸起结构，并带来许多额外的好处，包括皮肤接触的舒适感，增加缓冲性能和增强棉柔性。由于与Avgol的“FIT”系列技术相结合，可以使用特殊设计的前体产品，从而进一步提高材料的持液性。

Avgol公司市场商业智能和知识产权总监Nick Carter表示：“对Waveform 3D技术的投资使Avgol公司能够在不影响舒适性的条件下提供高性能非织造布。选择是否使用实体图案、开孔图案还是组合图案的能力，使产品设计师能够真正为其应用定制解决方案，包括面料的触感、面料的功能以及面料的外观。”“Waveform 3D™技术是一项令人兴奋且新颖的解决方案，旨在满足客户不断变化的区域需求，并通过领先的开发、质量和提供服务提供额外附加值。”

(资料来源：“[www.avgol.com](http://www.avgol.com)”)

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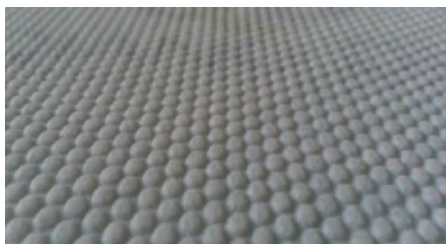
为期两年的项目将集中于扩大工厂的生产能力和效率，在保持现有就业的情况下预计将增加14个新的工作岗位。

“Berkeley Mill团队为我们在支持金佰利在北美的成人和女性护理事业的未来发展方面所扮演的角色感到骄傲。”金佰利Berkeley Mill的工厂经理Ernest Humphries说。“这项投资将增强工厂的竞争力，并使我们继续取得成功，因为它结合了我们员工的承诺和当地社区的支持。”

“Henderson县为支持Berkeley的扩张而感到自豪，”Henderson县委员会主席Michael Edney说，“金佰利是我们县的老雇主，我们很自豪能在公司的未来中发挥关键作用。我们期待着在一起更多的岁月。”

”扩张计划是在金佰利的重组公告之后进行的。该公司在一月宣布作为其全球重组计划的一部分将关闭10个生产厂，取消5000至5500个工作岗位。受该计划影响的地点在威斯康星州有两个工厂，一个是非织造布，另一个是成人失禁产品，还有一家加利福尼亚州生产消费品的工厂，如Scott卫生纸和Kleenex面纸以及包括KimWipes和KayDry湿巾的专业产品。

(资料来源：“[www.nonwovens-industry.com](http://www.nonwovens-industry.com)”)





# 第七届亚洲过滤 与分离工业展览会

The 7<sup>th</sup> Filtration & Separation Asia



# 第十届中国国际 过滤与分离工业展览会

The 10<sup>th</sup> China International Filtration  
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## 2018.12.05-12.07

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