

Asia's Only Regional Bilingual Magazine for the Nonwovens Industry

# NonwovensAsia

亚洲非织造材料工业

ノンウーブンス・アジア

부직포 아시아

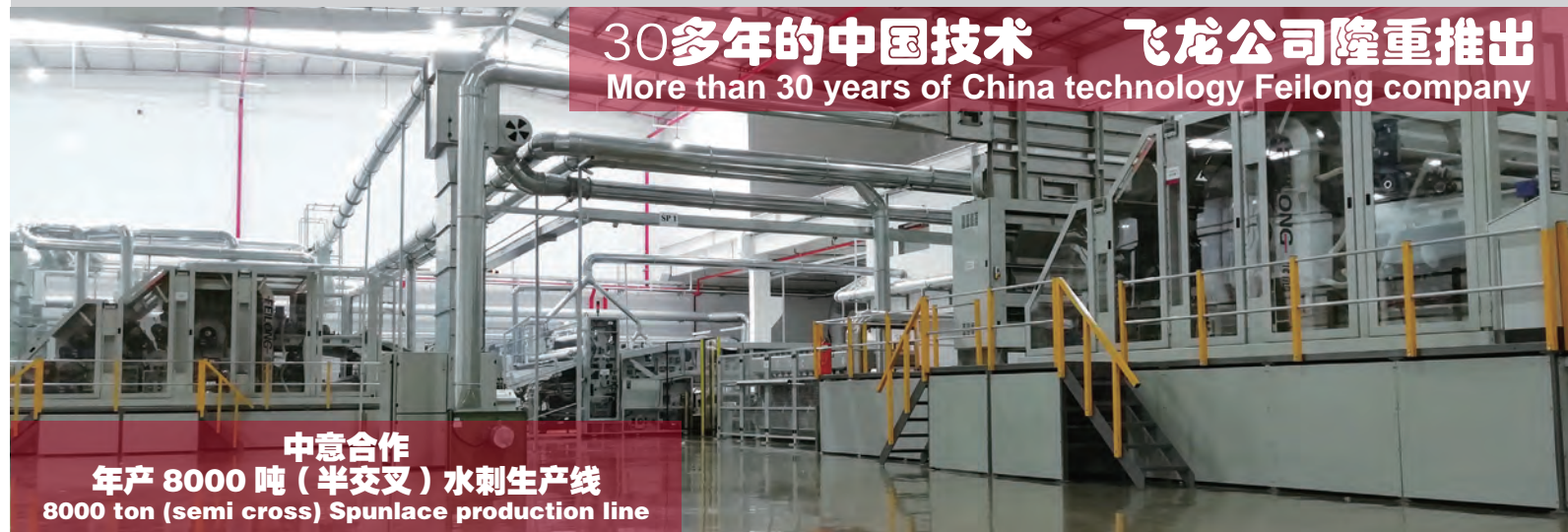
## 常熟市飞龙无纺机械有限公司

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非织造行业实现高质量发展

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## LYG Boulder Industrial Co.,Ltd

连云港柏德实业有限公司位于中国江苏省连云港市东海经济开发区，创建于2007年11月，主要从事医用防护材料生产和销售。2013年4月投产的SMMS纺熔复合无纺布生产线，汇集国内外高新技术，并延揽行业内精英人才，根据医用无纺布的需求特点进行专门设计，拥有多项独特技术。可以生产SS，SMS，SMMS等各种规格，各种颜色无纺布产品。并可以进行亲水、抗静电、抗酒精、抗油、抗血等处理。产品纤维细度好，手感柔软，熔喷层具有良好的阻隔性能，适用于医疗及卫生等领域，如：隔离衣、手术衣、手术铺单、纸尿裤、成人失禁品等。



LYG Boulder Industrial Co. Ltd is located in DongHai Economic Development Zone, LianYungang, JiangSu Province, established on Nov.2007, mainly engaged in producing and selling medical protective and hygiene materials. We designed SMMS line for medical use, having unique technology. Our line can produce SS, SMS, SMMS, etc. with hydrophilic, antistatic, alcohol repellent and other treatment. We have owned fine fiber technology with excellent barrier property and better hand feel, mainly used for protective apparels such as isolation gowns, surgical gowns, surgical drapes, also can be used for hygiene field as well.



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High-speed carding machine

机器宽幅: 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



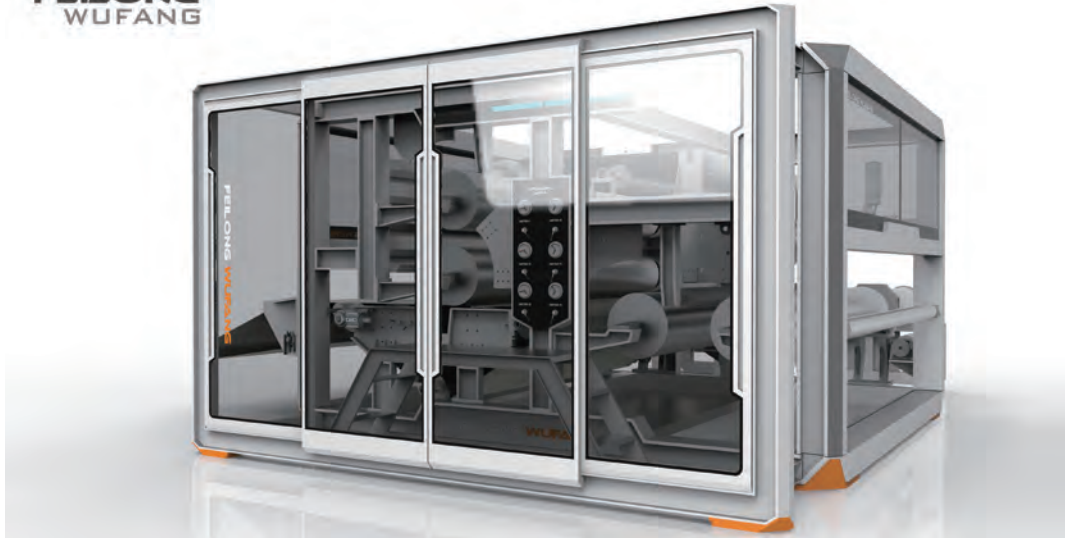
**120M新型热风无纺布生产线**

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Hot air setting machine

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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

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**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

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**Application:**

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INDEX2020

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TB2400 Breathable Coating Lamination Machine

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**Application:**

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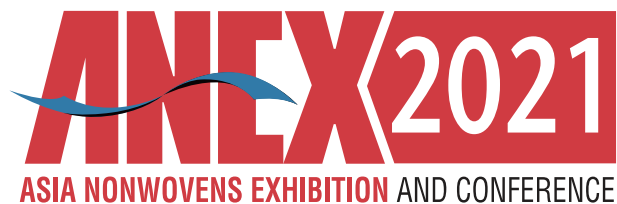
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2021.05

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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厂有限公司新厂区，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、汕头市装备制造业重点企业，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。

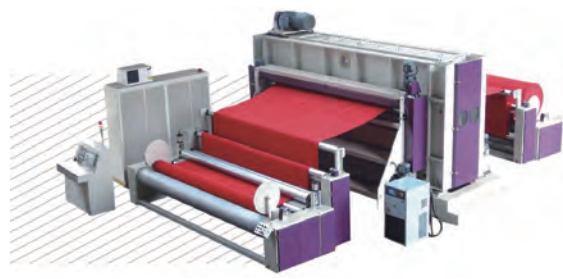
公司坚持“工艺主导、联通产研，科技创新、引领行业”的研发方针，承担多项国家、省、市科研项目，获得国家、省、市科技进步一、二、三等奖，拥有如“宽幅高频起绒针刺机”等一批具有自主知识产权的高新技术产品，多项技术填补国内行业空白，处于国内领先国际先进水平。自主研制的针刺法非织造机械有八大类50多个品种，主销国内高端市场，并已出口欧亚等地，可提供产品定位、工艺制定、设备选型、安装调试、人员培训、设备保养等交钥匙工程。

### 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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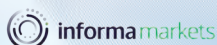
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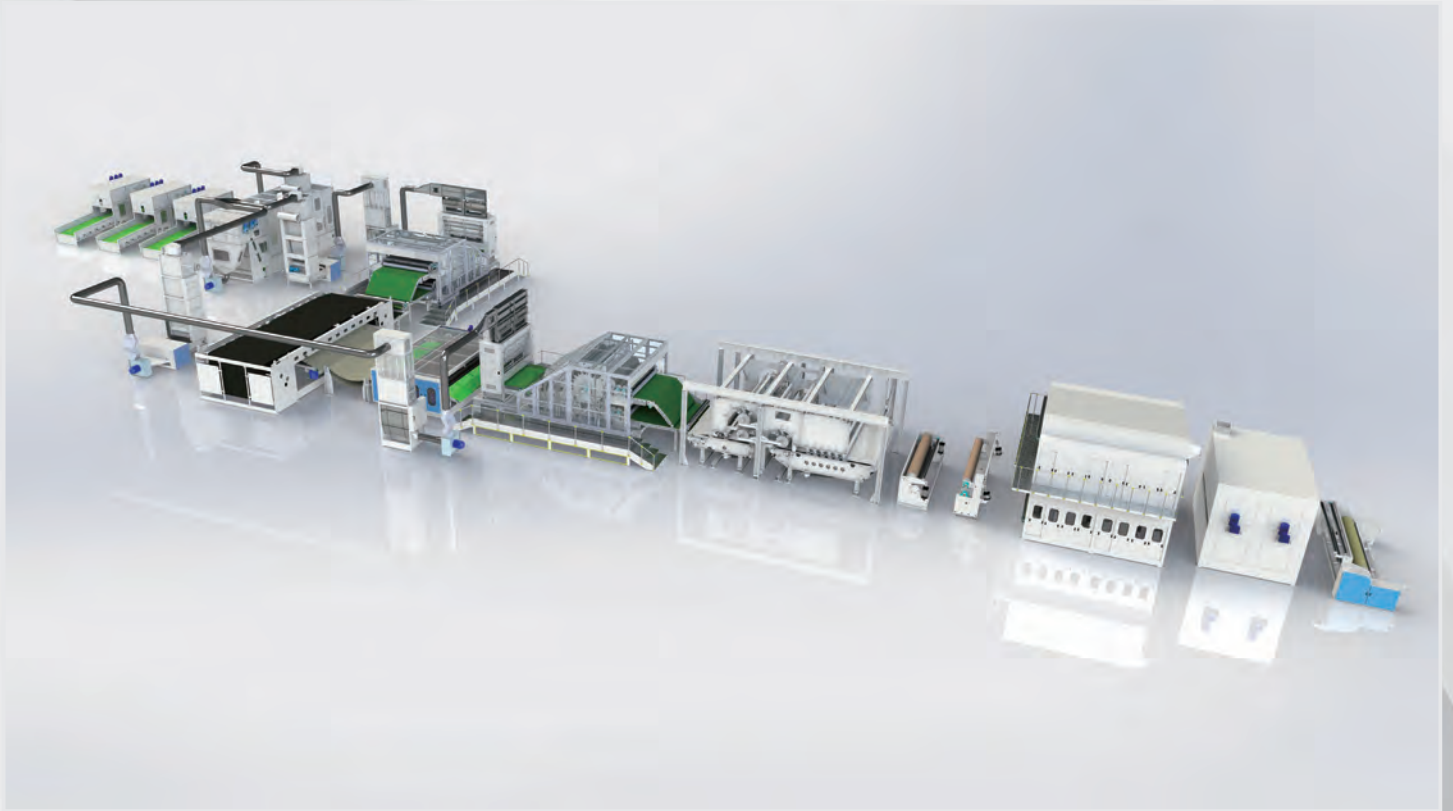
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SPUNLACE MACHINE

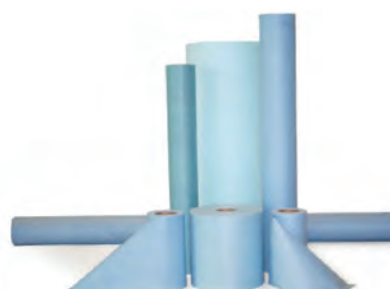
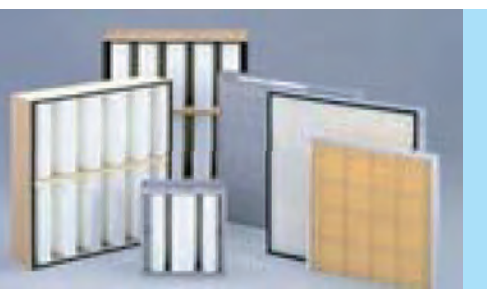


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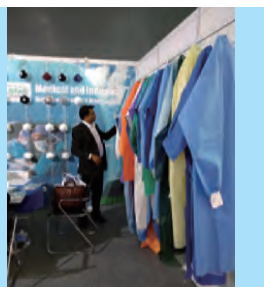
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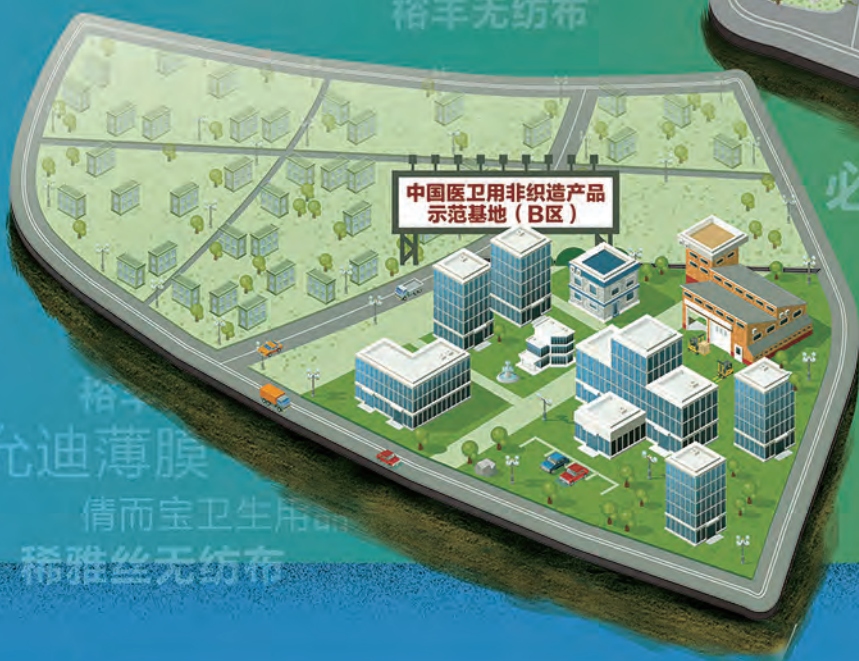


# 中国医卫用非织造产品 示范基地

医卫用为核心

生活用为重点

工业用为辅助



中国医卫用非织造产品  
示范基地 (B区)



中国医卫用非织造产品  
示范基地 (A区)

- ◆ 龙头企业引领，共筑医卫用魔幻版图、无纺布全产业链闭环
- ◆ 功能分区明确，基础配套成熟，形成原材料、配材、成品加工、物流仓配的完整链条
- ◆ 立体跨越式深度发展，横态完善医卫用非织造产品成品下游生态链，纵态融合商贸+教育+旅游等关联产业
- ◆ 重点面向国内外医卫用非织造及纸品优质企业，同时向机械装备制造、高端工业环保滤材、汽车内饰配件等领域拓展

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## Business News

### Berry increases production in China to aid in coronavirus protection

Nonwovens produced at Nanhai and Suzhou facilities are used in face masks, N95 respirators and protective apparel

Jan. 31, in response to questions from the investment community on its recent quarterly call, Berry Global Group, Inc. reports it is prioritizing the production of nonwoven healthcare products in its Nanhai, China, and Suzhou, China, facilities, which are used to manufacture products that can help protect against airborne particles like the Coronavirus.

Nonwoven materials produced at the facilities are used in face masks, N95 respirators, and protective apparel, all of which have recently been in high demand in the plan to prevent the spread of not only the Coronavirus, but also other communicable diseases.

"Our thoughts go out to those affected by the Coronavirus. Our dedicated teams are working around the clock to manufacture as much of these materials as possible to help prevent the spread of the virus," says Curt Begle, president of Berry's Health, Hygiene, and Specialties Division.

Berry has advised employees in the affected areas to use extra caution including the use of company-issued face masks, hand sanitizer and hand soaps.

(Source from: "http://ir.berryglobal.com")

### Asahi Kasei Medical acquires ViruSure

Asahi Kasei Medical has acquired Virusure Forschung und Entwicklung GmbH (Virusure), an Austrian provider of biosafety testing services.

The acquisition is part of a strategic expansion and reinforcement of Asahi Kasei Medical's bioprocess business, centered on Planova™ virus removal filters used in the manufacturing process for biotherapeutics such as plasma derivatives and biopharmaceuticals. It is indicative of Asahi Kasei Medical's continuing strategic efforts to develop businesses that contribute to the safety of and efficient manufacture of biotherapeutics.

Because biologically derived substances are used in the process of manufacturing biotherapeutics, biosafety tests are required at each step of research, development, and manufacture to prevent harm from viruses or other infectious agents. Driven by strong growth in the biotherapeutics industry, demand for ViruSure's biosafety testing services and cell banking services thus continues to increase year by year. Such services not only heighten safety but also facilitate the development of pharmaceutical products and contribute to the widespread adoption of high-quality therapies.

By enhancing Asahi Kasei Medical's ability to provide wide-ranging support to manufacturers of biotherapeutics, including broader services related to bioprocess development and manufacturing, this acquisition expands Asahi Kasei Medical's sphere of operations and creates new opportunities for further growth. Asahi Kasei Medical will continue to contribute to the safety of biotherapeutics and their efficient manufacture through the provision of innovative and reliable bioprocess products, equipment, and scientific services.

(Source from: "www.asahi-kasei.co.jp")

### Edison Nation announces exclusive distribution partnership with global award-winning baby essentials brand Mother-K

PHILLIPSBURG, N.J. - (BUSINESS WIRE) - Edison Nation, Inc., a multifaceted ecosystem which fosters innovation and drives IP, media and consumer products is excited to announce the exclusive distribution partnership to introduce Mother K to the US market.

Mother-K was founded in 2010 in South Korea with the sole purpose of providing safe, trustworthy baby essentials for new families. The global, award-winning company thoughtfully designs and produces with an effort to bring eco-friendly products that are safe for babies as well as the environment. The collection includes maternity care items, baby bottles, eco-storage bags, wipes, diapers and a line of cleaning products. The line is set to launch on Amazon at the end of December 2019.

Edison Nation will launch Mother-K in the

## Business News

US as an extension of their Cloud b brand, which is already a renowned brand name in the Baby Products market. The Cloud b brand ([www.cloudb.com](http://www.cloudb.com)) is a pioneer in creating products to help children sleep by soothing the senses. Their "Plush with a Purpose" products comfort children and give peace of mind to parents. Developed in consultation with an Advisory Board of pediatricians and specialists, Cloud b has won multiple awards and become a trusted name with parents worldwide.

"We are excited to introduce Mother-K products to US consumers. The modern designs and mindfully sourced materials will appeal to the most discerning parents," said Linda Suh, Cloud b Co-Founder and Edison Nation's Chief Business Development Officer. "Like Cloud b, Mother-K is constantly focusing on research and development to create high-quality innovative products that can help make raising a child a truly enjoyable experience, which makes them a perfect partner for Edison Nation."

MinJung Kim, CEO of Mother-K, commented, "I am really excited about the partnership and launching Mother-K in the US." (Source from: "[www.investors.edisonnation.com](http://www.investors.edisonnation.com)")

### Lumi by Pampers debuts

**All-in-one connected baby care system provides real-time view of baby's sleep, feeding and diapering patterns**

Lumi by Pampers, the world's first all-in-one connected baby care system, is being showcased at the Consumer Electronics Show (CES) 2020.

"Figuring out your baby's needs can be tricky," says Omer Sher, head of the Start-up Pampers team who founded the product. "When developing Lumi we focused on solving real problems parents have. Lumi lets you see and know how your baby is doing right now at a glance, anticipate their needs and build your rhythm as a family."

Lumi uniquely combines a smart HD video monitor with an activity sensor and brings the information together in an easy-to-use app, so parents have a real-time holistic view of their baby's sleep, feeding and diapering patterns, all in one place - 24/7.

Lumi goes beyond the marriage of video monitoring and automated baby tracking, transforming that data into unique, tangible insights and actionable tips to coach parents as their baby develops and grows. As an exclusive partner of The Wonder Weeks (leading baby development experts) Lumi also offers parents direct access to the 10 mental development leaps and even more personalized insights specific to their baby's unique development journey.

"Parenting is the most important job you've never done, and it was clear there was an opportunity to enable parents to better anticipate their baby's needs. Lumi solves this by helping parents blend real tracking data with their own intuition in a frictionless way as they find their rhythm as a family," Sher says.

(Source from: "[www.nonwovens-industry.com](http://www.nonwovens-industry.com)")

### Nan Liu Enterprises building site in India

**Production to start later this year**

Nan Liu Enterprise, a Taiwanese nonwovens producer, has begun to construct a production site in India.

The company has already been making spunlaced and thermal bonded nonwovens at one factory in China and at three in Taiwan with a total output between 65,000-70,000 tons per year. The company has produced wet tissue, face mask and gown and drape for the operating room.

The new Indian facility is expected to begin operation in the third quarter of 2020 and will eventually make wet tissue and face masks in addition to nonwovens.

(Source from: "[www.nonwovens-industry.com](http://www.nonwovens-industry.com)")

### General nonwovens to invest in latest Reicofil 5+ technology

**New line will add 25,000 tons of capacity to the company's operation**

General Nonwovens, a member of Imam Kayali Holding, announces its latest investment in Reicofil 5 plus technology which sets new standards for spunbond and composite nonwovens.

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# Market News

## Superior felt opens office in Mexico

Site will aid in expansion in the region

Superior Felt and Filtration has added a new location in Aguascalientes Mexico, its second expansion in the last two years. The new location will allow Superior Felt & Filtration to increase its global presence as an industry-leading manufacturer, distributor and converter of felt and filtration products.

The new office will serve as the primary location for regional sales manager, Daniel Villalobos. Villalobos will service accounts in Latin America and Canada. Daniel brings a wealth of knowledge and experience from the industrial and filtration markets to the region. His addition to the Superior team will better support existing customers and continue to strengthen its valued partnerships, according to the company. (Source from: "www.nonwovens-industry.com")

capacity that will enable further development of our offering for the Asian industrial and transportation filtration markets

"The investment supports Ahlstrom-Munksjö's strategic ambition to maintain a leading position in selected niches of the global fiber-based solutions market that offer positive growth outlook and are supported by sustainable market drivers," says Daniele Borlatto, Executive Vice President of Filtration & Performance Solutions business area. "The company has responded to growing customer demand by successively expanding its filtration manufacturing capabilities globally through several new and expansionary investments in the past few years."

The total investment will be approximately EUR 28 million, as announced in June 2018, and the entire project is expected to be fully completed in the second half of 2021.

## Ahlstrom-Munksjö strengthens manufacturing platform for high performance filtration and energy storage applications

JANUARY 16, 2020, Ahlstrom-Munksjö has completed the initial analysis and design phase of its ongoing project to strengthen manufacturing platform for high performance filtration and energy storage applications. In response to growing customer demand, the company has now decided to proceed with the second phase of the project, which consists of a significant expansion of its micro glass capacity and a further growth in industrial filtration capacity. Actions in the second phase include:

- Industrial filtration production capacity expansion at the Malmedy plant, Belgium, that will be implemented without affecting our ability to continue to serve existing customer base in the future
- Micro-glass based media production capacity expansion at the Fabriano plant, Italy
- Micro-glass based media fully dedicated new line at the Turin plant, Italy. This line will be specifically designed to serve applications where micro-glass is required, supporting our growth initiatives in industrial and automotive filtration as well as energy storage applications, such as Absorbed Glass Matt (AGM)
- A machine rebuild at the Binzhou plant, China, adding capabilities and production

Ahlstrom-Munksjö's Filtration business develops and produces filtration materials for engine oils, fuels and air, as well as industrial air, used in vehicles or for industrial purposes. The Filtration business also has applications and is further developing filtration solutions for hybrid and fully electric vehicles. Close to 20% of sales are generated in industrial applications and around 80% of sales derive from transportation applications, both for passenger cars and heavier duty applications such as truck and heavy machineries. In transportation applications, sales come primarily from the aftermarket.

## Ahlstrom-Munksjö acquires converting operations in China, U.S.

Uired converting operations in China and the U.S. from Shunde Lucas and Altior Industries. Through the transaction, Ahlstrom-Munksjö will have local filter converting capacity in China and a foothold for expanding sales of other products within the Advanced Liquid Technologies business. Local presence in Asia will shorten delivery lead times and enable Ahlstrom-Munksjö to serve its customers even better.

Net sales of the acquired operations are approximately \$7 million and comparable EBITDA \$2 million annually, meeting the group's comparable EBITDA margin target

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of above 14%. Their product offering of hot cooking oil filters is used in quick service restaurants and food service operations, mainly in China and the U.S. The combined operations are expected to generate substantial synergy benefits. The debt free purchase price is approximately \$11 million.

"I'm pleased that the new foothold in China will facilitate growth for a wide range of our product offering within our highly attractive Advanced Liquid Technologies business. This deal will also double the company's sales in fry oil filters and make us a global leader in this niche business - a foundation for creating long term value for our stakeholders. In the future our ambition is to expand the Advanced Liquid Technologies business even more through organic growth and acquisitions," says president and CEO Hans Sohlström.

Ahlstrom-Munksjö aims to strengthen its market position in life science and laboratory product segment through further product development and partnerships. In water purification, the business will build market awareness of its proprietary Disruptor technology and confirm technology adoption in existing target segments, while proceeding with initiatives to broaden the scope of the technology. In the food and beverage processing segment, market position will be further reinforced.

### Ahlstrom-Munksjö finalizes sale of glass fiber reinforcement business

Last year, Ahlstrom-Munksjö completed the sale of its glass fiber reinforcement business in Mikkeli, Finland, to Vitrolan Composites Oy, a fully owned subsidiary of Vitrolan Group and part of the family-owned industrial holding Adcuram Group.

Ahlstrom-Munksjö's Mikkeli plant produces glass and carbon based reinforcement fabrics. Main product offering consist of specialty glass fiber reinforcements for wind energy applications as well as for other end-uses including marine and transportation applications as currently manufactured in Mikkeli. At the end of 2018 the plant employed about 100 people. Net sales were approximately €30 million and the divestment will not have a material impact on group's

comparable EBITDA. The debt free purchase price is €6.5 million.

Ahlstrom-Munksjö continues to produce glass fiber tissue at its plants in Karhula, Finland, and Tver, Russia. The company will defend and grow its leadership position in glass fiber tissue, where it has unique technical expertise and close customer relationships. In flooring applications, the company is a global leader and intends to expand its portfolio further.

The transaction was announced on November 21, 2019.

(Source from: "www.ahlstrom-munksjo.com")

### Intimate wipes launch

Rosebud Woman Refresh Intimate & Body Cleansing Wipes are made with OEKO-TEX certified sustainable bamboo

Rosebud Woman intimate skincare is launching an all-new, clean beauty-inspired Refresh Intimate & Body Cleansing Wipes, now available online and through retail partners including Neiman Marcus, Nordstrom, Shen Beauty, The Detox Market, Well, Free People, Thrive, Take Care Apothecary and more.

The individually-wrapped Refresh Wipes feature OEKO-TEX certified sustainable bamboo cloths with gentle but effective leave-on cleansers and toners in a base of aloe, purified water and witch hazel, along with tea tree, lavender and H2O2. The attractive packaging offers a discreet and portable option for woman on-the-go, and the wipes can be used for all parts of the body.

"We are happy to share our Refresh Wipes as another way to support sexual health and confidence through all cycles of a woman's life," says Rosebud Woman founder Christine Marie Mason. "The vulvar and vaginal skin is the most absorbent area on the human body, so we developed our OBGYN-approved Refresh Wipes with the highest-quality, safe ingredients in mind that maintain a healthy Ph balance."

Refresh wipes are the latest addition to Rosebud Woman's luxury curation of vulva and intimate skin care formulas including: Honor Everyday Balm, Arouse Stimulating Serum, Soothe Calming Cream. The collection integrates love for the intimate self

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into women's daily routines with the purest, plant-based ingredients available. Rosebud Woman was recently named a finalist for three awards at the Indie Beauty Expo in 2019: Best in Personal Intimate Care, Best in Sexual Wellness and Best in Branding.  
(Source from: "www.nonwovens-industry.com")

### Fitesa buys Freudenberg's South American hygiene business

**Brazilian site has developed nonwovens for the hygiene market since 1985**

Global nonwovens producer Fitesa is acquiring the South American hygiene nonwoven business from Freudenberg, the global technology group. Fitesa is one of the main suppliers of nonwovens to the global hygiene market and intends to further expand its portfolio. Freudenberg sees the sale of the hygiene business as the best opportunity to successfully develop this business. Both parties have agreed not to disclose the purchase price. The transaction is subject to approval by competent antitrust authorities.

"The acquisition of Freudenberg's South American hygiene business provides us with a state-of-the-art production facility as well as with a professional and well-trained workforce, which will help us to better serve the needs of our customers," states Silverio Baranzano, CEO of Fitesa.

In Brazil, Freudenberg has been successful with nonwovens for the South American hygiene market since 1985. However, in recent years, the hygiene market has shifted from a regional to a global one. "Fitesa is geared to the global hygiene market. Under this umbrella, our current regional business can develop better and grow long-term in the new structures," says Dr. Frank Heislitz, CEO Freudenberg Performance Materials. "We are very happy that with Fitesa we found a reputable and leading global player in the hygiene business, with similar values to Freudenberg. This will be a good new home for our staff."

The sale is limited to the hygiene business, which is run by Freudenberg Hygiene Brazil Ltda. The company has 100 employees. Closing is subject to the usual conditions for this type of transaction, including clearance by the antitrust authorities.  
(Source from: "www.technical-textiles.net")

### Scavone orders Dilo line

**Needlefelt line will develop nonwovens for geotextile and automotive applications**  
Scavone, based in Itatiba, Brazil, has ordered a new needlefelt line from Dilo.

With 126 years of experience Scavone is one of the most important textile companies in South America. Since its 1993 entry in technical textiles, the portfolio has expanded to filtration, shoes, geotextile, acoustic, furniture and automotive. There are four nonwoven production lines so far.

The DiloGroup plant consists of fiber preparation, MultiCard and lap drafter, as well as crosslapper and needlelooms. It is used to process PES, PP and BiCo fibers into needlefelt especially for geotextile and automotive applications. The implementation of DILO Line 4.0 offers an optimum process control and monitoring.  
(Source from: "www.textileworld.com")

### Sandler starts construction in Perry

**New line will target hygiene applications**  
Nonwoven manufacturer Sandler has broken ground on an expansion of its U.S. plant in Perry, Georgia. A new production line is scheduled to start production in fall 2020.

Plans include the construction of a 135,000-square-foot building that will house production and warehouse facilities. The new building will ultimately house a new manufacturing line for nonwovens targeting hygiene applications. The investment will create 70 new jobs in different departments at the Perry site.

Expanding its U.S. plant will enable Sandler to continue to grow in the local market. "Sandler nonwovens made in USA allow us to continuously develop and advance our longstanding business relationships to companies in the North American market. This investment is the next step towards establishing a competence center for nonwovens production here in Perry," says Tobias Baumgaertel, president of Sandler Nonwoven Corporation.

On occasion of a press conference, Dr. Christian Heinrich Sandler, President & CEO

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of Sandler AG, thanked the authorities and institutions of the State of Georgia, Houston County and the City of Perry. Above all, however, he addressed the staff members of Sandler Nonwoven Corporation. "During the past three years, a great team has been assembled here. I would like to thank "Team Perry" for their dedication, hard work, and loyalty to the company. We are proud to have you as part of the Sandler family."

This investment is part of a larger corporate-wide investment announced during the company's 140th anniversary earlier. Over the next two years, Sandler plans to invest €90 million dollars at its sites in Germany and the U.S.

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

### Asahi Kasei Medical completes new spinning plant for Planova™ filters

Asahi Kasei Medical has completed the construction of a new plant for the spinning of cellulose hollow-fiber membranes for Planova virus removal filters in Nobeoka, Miyazaki, Japan.

Virus removal filters are used to enhance safety in the production process for biotherapeutic products such as biopharmaceuticals and plasma derivatives. Asahi Kasei Medical has earned wide recognition among customers around the world for the performance and reliability of its virus removal filters—both Planova cellulose membrane filters, which were launched in 1989 as the world's first filters developed specifically for removing viruses from biotherapeutic products, and Planova BioEX hydrophilic PVDF (polyvinylidene fluoride) membrane filters, which provide superior viral clearance in high protein concentration solutions.

With heightened standards throughout the world for the viral safety of biotherapeutics and advances in the development of monoclonal antibodies and other biopharmaceuticals, global demand for Planova filters is expected to continue to grow. The new spinning plant will enable Asahi Kasei Medical to maintain stable product supply and meet rising demand. Together with a spinning plant for Planova BioEX filters completed in Oita, Japan, in 2016, the new spinning plant announced

will increase Asahi Kasei Medical's total production capacity for hollow-fiber virus removal membranes to 130,000 m<sup>2</sup>/year.

Asahi Kasei Medical will continue to contribute to greater safety of biotherapeutic products by developing high-quality and high-performance products in accordance with market needs, while proactively investing in manufacturing facilities.

Outline of the new spinning plant:

Location: Nobeoka, Miyazaki, Japan\*

Capacity: 40,000 m<sup>2</sup>/year

\* Adjacent to existing facilities for spinning hollow fiber and assembly of Planova filters (Source from: "www.asahi-kasei.co.jp")

### Freudenberg develops nonwoven crimping material for footwear market

Nonwoven enables manufacturers to reduce production costs while increasing comfort for consumers

Freudenberg Performance Materials will be presenting an innovation that meets the increasing demands of manufacturers and consumers alike in the footwear market. Made from nonwoven fabric, the innovative crimping material optimally combines high permanent moldability and shape retention with flexibility and suppleness. This unique crimping material enables manufacturers to reduce their production costs while consumers benefit from increased comfort.

Consumers are increasingly looking for ever softer, more flexible and at the same time fashionable shoes. This in turn places greater demands on shoe manufacturers in terms of production technology. Freudenberg's innovative nonwoven-based crimping material succeeds in reconciling the demands of consumers with the associated technical challenges for manufacturers.

In contrast to knitted linings, the material's multi-directional stretching properties enable uniform longitudinal and transverse stretching over the entire vamp area. The direction-independent pattern grading this enables results in up to 10% less cut waste.

Compared to conventional knitted fabric-based crimping materials, faster thermoplastic moldability means shorter production times and thus significantly reduced manufacturing costs.

## Market News

The crimping material offers better shaping, last-true vamp mold retention and optimum shape and stability. Even after more than 72 hours of wear, the molded vamp still retains 100% of its true lasted shape.

Also, the material's extremely fine fibers allow shoes to be designed that are very soft in character and provide optimum comfort. At the same time, the exceptionally high cutting-edge stability increases the range of creative design possibilities.

The significantly lower weight-to-area ratio of the nonwoven-based crimping material reduces the weight of the shoe while at the same time ensuring better shape retention.

### Freudenberg to unveil first ever 100% biodegradable padding

Weinheim/Germany, January 28, 2020: With comfortemp® Lyocell padding, Freudenberg Performance Materials Apparel is launching the first fully biodegradable padding made from sustainably produced cellulose fiber that completely degrades in soil within just under 60 days. At the same time, it meets all requirements for high-performance thermal insulation for sports and outdoor clothing. comfortemp® Lyocell padding is the result of a cooperative venture with the fiber manufacturer Lenzing.

The degradation of polyester, which is contained in 60 percent of all garments, takes an average of 500 years. In addition to reduced consumption, more recycling and increasing the quality of garments to ensure that they can be worn for longer, innovative ecological solutions are urgently needed for the end of the garment life cycle. Freudenberg is a pioneer in this field and is now launching comfortemp® Lyocell padding, the world's first 100% biodegradable padding. It is completely biodegradable within 60 days without polluting the soil.

#### Environmentally friendly production process

The padding is based on Lyocell, which is manufactured by fiber producer Lenzing. Lyocell is a cellulose produced from natural raw materials in an environmentally friendly production process using eucalyptus wood from sustainable forests. The solvent used to obtain the fibers is almost completely reused in the production cycle, which is a

clear advantage over other cellulose fibers such as viscose. The EU has presented the process with the European Award for the Environment. "This innovation is the result of intensive research and close cooperation between Freudenberg and Lenzing. As an ecologically responsible manufacturer of special fibers from the renewable raw material wood, the Lenzing Group is a perfect partner for Freudenberg", commented Benoit Cugnet, Head of Global Strategic Marketing at Freudenberg Performance Materials Apparel.

#### Warm, soft, light

The fine fibers created from the natural raw material and their innovative processing enable comfortemp® Lyocell padding to be as light as a feather and as efficient as synthetic paddings. The thermal insulation provides warmth and is both soft and highly breathable. Thanks to its excellent moisture management, the padding absorbs body moisture up to 45 percent and thus minimizes perspiration. The thermal insulation is also water-repellent, dries quickly, is antistatic and conforms to the OEKO-TEX 100 standard. Consequently, comfortemp® Lyocell padding meets the high demands placed on clothing for sports and outdoor use. "Although the end consumer usually rarely sees or even thinks about the padding, it makes a decisive contribution. After all, it needs to offer protection in all weathers and be able to handle all kinds of sporting activities", explained Benoit Cugnet, Head of Global Strategic Marketing.

#### Consistent quality, easy processing

The cohesive padding prevents fiber migration through the outer fabric and is offered by the meter. This means less time and cost for the industry and no cold bridges at the seams for the end consumer.

(Source from: "www.freudenberg-pm.com")

### Lenzing Chinese production back to full capacity

Fiber producer previously scaled back operations due to raw material supply shortages because of transport controls linked to coronavirus epidemic

Following its temporary cutting back of production at the Nanjing site in China, Lenzing has now once again ramped up operations on all production lines to reach full capacity.

## Market News

Recently supply shortages of important raw materials arose as a result of intense transport controls in connection with the current situation surrounding the coronavirus. For this reason, output from two production lines was scaled back for a short time. All production lines are now fully operational again after the successful resumption of the required supplies to the manufacturing facility. (Source from: "www.lenzing.com")

### Neenah to increase wetlaid capacity

**Investment in Cranemat will support water filtration market**

Neenah Technical Materials, a subsidiary of Neenah Inc., has announced an investment to increase production capacity for Cranemat to support continued strong growth in water filtration.

"Factors such as rapid industrialization and population development have led to a growing demand for clean water globally, which increases demand for effective reverse osmosis and other filtration solutions," says Christoph Stenzel, vice president sales & marketing Global Filtration. "This investment illustrates a strong commitment to our global strategic customers to support the rapid growth in this category as well as a great opportunity to expand into new areas and

with new customers."

Cranemat is the registered trademark name for Neenah's line of polyester and polyolefin wetlaid nonwoven membrane substrates, designed for the liquid filtration and membrane separation sectors. Known for its reliability and uniformity in the membrane casting process, Cranemat contributes to enhanced membrane performance and efficiencies. From its versatile uses in flat sheet, spiral wound elements, plate and frame for MBR, and disc filtration, Cranemat comes in various grades, designed for microfiltration, ultrafiltration, nanofiltration and reverse osmosis. These filters are used in desalination of salt, brackish and industrial process water, as well as industries such as electronics, dairy, juice, e-coat, mining, medical and pharmaceutical.

The Cranemat business, based in Pittsfield, MA, was acquired by Neenah in 2014 and has steadily grown since that time. Continuous improvements in quality and resulting increasing demand from customers have led to the need for increased capacity for Neenah's Cranemat products. Utilizing an available idled machine, with a modest capital investment the additional capacity will almost double current capacity and be available by the end of 2020.

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

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coronavirus outbreak continues to unfold."

Since most near-term needs are in existing textile composite product lines, an expedited roll trial is vital to verify producibility by defining manufacturing parameters and achieving product quality requirements, he explains. "We can move to supplemental contract production very quickly. Further, should the virus outbreak require modified or new products, Beckmann Converting can leverage capabilities in running fast, small trials and other services to support new product development."

On the wipes side, Diamond Wipes International announced that its HandyClean Steridol Wipes has demonstrated effectiveness against viruses similar to 2019 novel coronavirus (2019-nCoV) on hard, non-porous surfaces, and can be used against 2019-nCoV when used in accordance with

the directions for use against norovirus on hard, non-porous surfaces.

"We understand the severity of this outbreak and are proud to have a product that can prevent the coronavirus from spreading," says Diamond Wipes president Jessica Lum.

The HandyClean Steridol Wipes are EPA-registered and proven to kill 99.9% of microorganisms tested, including bacteria, viruses, mold and mildew. The wipes are made in the USA and are designed for use in hospitals and healthcare centers, day care centers and nursing homes, schools, cafeterias, gyms, grocery stores, restaurants and bars, public transportation hubs and any other highly-populated areas where disease can easily spread. The wipes are ammonia-free, bleach-free and phosphate-free and are packaged in a recyclable container.

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



## Market Trends

### A 500,000-ton dissolving wood pulp plant will be built in Brazil

The Lenzing Group, world market leader for wood-based cellulosic fibers, and Duratex, the largest producer of industrialized wood panels in the southern hemisphere, announce that they will build a 500,000-ton dissolving wood pulp plant in the State of Minas Gerais, near Sao Paulo (Brazil). The start-up is planned for the first half of 2022. In the joint venture, Lenzing holds a 51%, Duratex a 49% stake. The expected industrial CAPEX will be approx. USD \$1.3 billion (based on current exchange rates and customary tax refunds). The project is financed through long-term debt. The corresponding financing contracts are expected to be concluded at the end of the first quarter of 2020.

The new dissolving wood pulp plant strengthens the Lenzing Group's backward integration and cost position as well as its specialty fiber growth in line with its sCore TEN corporate strategy. The single-line dissolving wood pulp plant with an annual nameplate capacity of 500,000 tons will be the largest and most competitive production facility of its kind. Dissolving wood pulp is a key raw material required for manufacturing Lenzing's biobased fibers. The joint venture will supply the entire volume of dissolving wood pulp to the Lenzing Group.

"Wood-based cellulosic fibers offer an important contribution to enhance sustainability in the textile industry. In line with its corporate strategy sCore TEN, Lenzing is committed to drive organic growth in this market. With this investment, we will become more competitive, act more independently and subsequently strengthen our market position. The trust and support of the main shareholders of Lenzing and Duratex were of great importance for this key project," states Stefan Doboczky, CEO of the Lenzing Group.

In planning the new production facility, particular importance was given to sustainability aspects. The joint venture secured FSC-certified plantations covering an area of over 44,000 hectares to provide the necessary biomass. These plantations operate completely in accordance with the guidelines and high standards of the Lenzing Group for sourcing wood and pulp. The plant will operate among the highest productive and energy-efficient in the world and will feed

the 40% of excess bioelectricity generated on site as "green energy" into the public grid. With this project, Lenzing sets a milestone in its strategy to carbon neutrality. (Source from: "www.just-style.com")

### Herrmann announces expansion Ultrasonics specialist adding 10,000 square feet to U.S. site

Herrmann Ultrasonics is adding 10,000 square feet to their U.S. headquarters in Bartlett, IL. After almost 30 years in the U.S. market, the ultrasonic manufacturer will increase its footprint to 30,000 square feet. The expansion will support Herrmann's planned growth over the next six years, allowing for additional manufacturing space as well as increased employee growth.

"We look forward to the additional space, not only to strengthen our ability to deliver high-quality ultrasonic parts on time, but in addition the increased space will allow us to expand our workforce to include even more skilled, experienced team members." Uwe Pereg, Executive Vice President and General Manager said.

The expansion will include a new training/buy-off center for customer seminars and hands-on technology training, an all-new packaging and metals lab for material trials and testing, as well as newly designed office space.

Construction, under general contractor Reiche Construction, Inc. is expected to be complete by mid-June and upon completion of the expansion Herrmann Ultrasonics will be hosting a technology day for customers and friends. Throughout the day, inspiring ultrasonic workshops covering every aspect of ultrasonic welding will be held. Theoretical knowledge and engaging live demonstrations will also be available. Whether you have worked with ultrasonic joining technology in the past or not – they will offer a workshop increasing your ultrasonic knowledge.

Herrmann Ultrasonics has become the technology leader in ultrasonic welding by developing the most advanced products, providing ultrasonics engineering expertise and total solution offerings. They are focused on providing ultrasonic welding technology for various markets such as the medical,

## Market Trends

automotive, consumer, electronics, battery, food and hygiene industries.

Continuous growth of plastics, packaging, nonwovens and newly developed metals divisions, has allowed the company to establish technology centers throughout North America and Mexico. The expansion of the US headquarters will allow the company to support growing markets and demands. (Source from: "www.herrmannultrasonics.com")

### Canopus completes expansion

Indian wet wipes producer increased capacity from 15 million pieces to 45 million pieces per year

Canpus Wet Wipes, a Karnataka, India-based manufacturer of wet wipes for hygiene, cosmetic, facial care, medi-bath and homecare categories, among others, recently completed an expansion.

Six months after the plant went into operation--in May 2018--the company announced that it would increase capacity from 15 million pieces to 45 million pieces per year. Today, Canopus has three fully automated machines. To serve all types of requirements around the world, the company introduced Z-fold with and without interlock, one machine solely designed for Z-fold or C-fold with cross fold facility to serve beauty care five pieces to 30 pieces, as well as single or double pieces with five-fold small pouch to carry easily. The single wipe pouch serves airlines, travel, five-star hotels, conferences, etc. Currently the company has its own brand, Canopus, which is well received in India.

The factory is situated at Harohalli, KIADB Industrial Area, Ramanagara District, in a 12,000 square foot manufacturing facility.

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, furniture/glass cleaning/ multipurpose wipes, as well as eye glass cleaning wipes which the company says no other company has introduced to the Indian wipes market.

"We can manufacture at competitive rates and produce flushable wipes with GD4 certification," says Ashok. Kulkarni,

consultant for technical textiles. "We can make biodegradable wipes. Currently we have 22 variants to serve the world market, and water and chemical content will remain intact for a longer period without drying. Our quality of product and packaging will be the standout point of our company. Very few companies in India adhere to REACH, INCA, ECHA, EUP, INDA and EDANA standards. Our wipes will be affordable, the best quality and easily available in the nearest stores."

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

### Ramina launches new lines

New technology Leonardo 1.0 of spunbond, meltblown and composite lines debuted at an open house last month

During December 6-9, 2019, the Italian company Ramina opened his doors with an Open House to present its new technology Leonardo 1.0 of spunbond, meltblown and composite lines. This new technology was introduced by Ramina's R&D department striving to develop the most advanced and innovative technology to get the finest denier product, optimizing energy consumption, reduced manpower for line conduction and the minimum maintenance operations with a very cost-effective line.

This concept was presented by means of the pilot line installed in the factory, composed by two spinning beams and one meltblown beam (SMS), 1.6 meters wide, where it's possible to process not only PP but also PET and PLA polymers, with a max. reachable speed of 1000 m/min, and a production capacity of max. 200 kg/h/m for each spunbond beam and 50 kg/h/m for each meltblown beam. The line is meant to be provided in different configurations up to eight total beams, in the various format requested by the market from 1.6 meters to 5.2 meters.

During the inauguration days Ramina welcomed guests from all around the world and gave the possibility to see the line running and to spend some time together with the people who thought, designed and realized this innovative technology. This event honored also by an official ribbon cutting by the mayor of Grantorto, was a real success and gave a strong sign of Ramina's will to find its position in this market, by providing a very efficient and competitive product.

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

## Market Trends

### Lenzing invests EUR 40 mn to further improve the ecological footprint of the Lenzing site

- Construction of a new air purification and sulfur recovery plant
- Further improvement of the exhaust emission values at the Lenzing site
- Important step in achieving the CO<sub>2</sub> targets of the Lenzing Group

Lenzing – The Lenzing Group is a global leader in the climate-friendly and sustainable production of wood-based textile fibers. Lenzing announced its climate targets in August of last year. By 2030, the company aims to reduce its specific CO<sub>2</sub> emissions per ton of manufactured pulp and fibers by 50 percent. By the year 2050, the Lenzing Group will no longer generate any net CO<sub>2</sub> emissions.

Lenzing's Management Board has now resolved to invest EUR 40 mn to expand the production of the raw material sulfuric acid at the Lenzing site. This comprises an important milestone on the path towards climate neutrality. In the future, a new air purification and sulfur recovery plant will not only optimize the company's self-sufficiency for this raw material and enhance process reliability but improve environmental protection within the context of a clear forward-looking strategy.

#### Improved exhaust emission performance

The new plant represents an important contribution towards implementing the sustainability strategy of the Lenzing Group, and also helps to ensure an even higher level of environmental compatibility of all production operations at the Lenzing site. The application of state-of-the-art technologies will further improve exhaust emission values. Furthermore, the new facility will help further reduce the use of fossil fuels by generating steam which will, in turn, be converted into electricity. In this way, it will also support the energy self-sufficiency of the company's operations in Lenzing.

#### Improved CO<sub>2</sub> scorecard

As a result, the production plant in Lenzing will reduce its annual CO<sub>2</sub> emissions by 15,000 tons. This is an important step towards further advancing the company's ambitious plans in the coming years and

also strengthen Lenzing's leadership role as a driver of ecologically sustainable industry. "On the basis of these investments, Lenzing is taking the next step in achieving its climate targets. At the same time, it will also reach a significantly higher level of autonomy with respect to a vital raw material", states Stefan Doboczky, Chief Executive Officer of Lenzing. (Source from: "www.lenzing.com")

### VEOCEL™ introduces Eco Care technology to reinforce commitment to sustainable viscose

The Lenzing Group (Lenzing) announced the introduction of Eco Care technology, which enhances the production of eco-friendly viscose fibers for the nonwoven industry. Eco Care technology features an eco-responsible production process that is guided by the rules underlying the EU Ecolabel<sup>1</sup>, a label of environmental excellence that is awarded to products and services meeting high environmental standards throughout their life-cycle<sup>2</sup>. The manufacturing of VEOCEL™ Specialty Viscose fibers with Eco Care technology generates up to 50% lower emissions and water impact compared to generic viscose. According to Higg MSI tools, CO<sub>2</sub> emissions and fossil resource use are approximately half that of the industry average.

Enabled by Eco Care technology, VEOCEL Specialty Viscose fibers originate from sustainably managed wood sources and are ideal for many nonwoven applications of baby, body and home segments, especially for various types of dry and wet wipes, sanitary pads for adult and feminine uses, and diapers. VEOCEL Specialty Viscose fibers build the common ground for innovative and sustainable solutions in the nonwoven industry and represent a versatile blending partner for other cellulosic fibers such as lyocell.

"We have recently unveiled the new certification criteria for VEOCEL, helping to establish the brand as a label of trust along the entire value chain. The VEOCEL brand logo can now be featured on products which use blends of raw materials that are entirely cellulosic and biodegradable. The introduction of the Eco Care technology is another key breakthrough for the VEOCEL brand, as it

## Market Trends

now enables VEOCEL branded fibers to be used in a wider range of nonwoven products, creating a greater sustainability impact in the industry. Moving forward, VEOCEL Specialty Viscose fibers with Eco Care technology will serve as an affordable sustainable alternative for nonwoven applications by making more sustainable viscose available," said Jürgen Eizinger, vice president of Global Business Management Nonwovens, Lenzing AG.

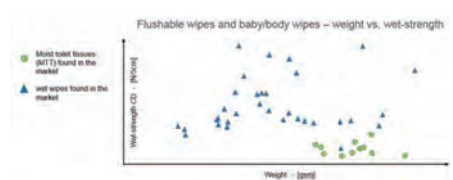
"2019 is an exciting year for VEOCEL. We will continue to drive innovation and transparency efforts in the nonwovens segment and work closely with industry partners to co-create a more nature-friendly future," added Eizinger.

VEOCEL Specialty Viscose fibers naturally attract and absorb water, enabling a homogenous distribution of liquid in nonwoven products. This feature is essential for dry and wet wipes and absorbent hygiene products as it offers a convenient way to clean and at the same time brings great comfort to the skin. Fibers produced with the Eco Care technology are certified clean and safe and are produced without any animal-derived materials. According to the Hot Button Report of Canopy, a Canadian non-profit organization, Lenzing is ranked as one of the best performing viscose producers worldwide for its sustainable wood and pulp sourcing practices.

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

### nextLevel wipes from wet-laid/spunlaced nonwovens

Truetzschler, Voith collaboration targets flushability



Assessment of flushable and wet wipes

Until 2013 wet-laid/spunlaced materials, or WLS as Voith and Truetzschler call the process, were only a tiny niche product. This changed when joining this technology with a new application – true flushable wipes entered the scene. Meanwhile, these moist toilet tissues take up several meters of shelf space in the respective departments and drugstores.

But the market for moist toilet wipes is limited – in contrast to the huge demand for single-use baby, personal care and household wipes. The trick of making flushable wipes is to lower the nonwoven's wet strength so it disperses in agitated water. Picture shows the different characteristics of both nonwoven-based flushable and wet wipes.

With the AquaJet, Truetzschler's spunlacing unit, it's easy to adapt the web bonding process to produce higher-strength, yet soft nonwovens too. So some two years ago Voith-Truetzschler started trials on making higher-strength wet-laid/spunlaced nonwovens which could compete with conventional baby and personal care wipes found in the market. The outcome are our "nextLevel wipes" which are similar to existing products – both in terms of wet strength and weight.

But besides being just another wet wipe they also are an approach to today's wet wipes dilemma: single-use wipes are hygienic, convenient and affordable – who really wants to do without them? But doesn't fit the mega-trend sustainability. Even more so because the majority of today's products contain polyester or polypropylene fibers. Which disintegrate into tiny particles, so-called micro plastics, when the wipe is disposed of carelessly.

nextLevel wipes in contrast are made from only pulp and lyocell fibers. The material is fully biodegradable, no micro plastics and no chemical binders remain after use. The fibers come from renewable resources since both "wood" pulp and lyocell fibers are derived from fast growing, regenerative trees.

In other aspects, wet strength and softness for instance, the new wipes match commercially available products. There is no paper-like or flimsy feeling consumers could disapprove of. The pulp/lyocell fiber blend can be adapted to the requirements of the end product. A voluminous, top-quality wipe could have another fiber blend and weight as a nonwoven for a standard-quality product.

And there is another big advantage: "wood" pulp is significantly cheaper than man-made fibers. So cost-wise, a nextLevel wipe can compete with wet wipes available on the market today. The time is ripe to take wipes

## Market Trends

to a new level!

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

### Mondi building line to make fully biodegradable nonwovens for wipes

**New Carded Airlaid Carded line will make a 100% cellulose nonwoven**

Mondi, a global leader in packaging and paper, has developed a new Carded Airlaid Carded (CAC) line to create a more sustainable three-layer nonwoven for wipes. These can be used for personal hygiene and cleaning purposes. This new line will use 100% cellulose content, including viscose and pulp from certified sources, resulting in a nonwoven material that is fully biodegradable.

The new technology being used for the planned CAC line—located at Mondi's plant in Ascania, Germany—will make it possible to combine three layers into a highly functional and stable composite material. This will deliver optimal absorption and lotion load for high-quality biodegradable wipes and uses fewer resources than comparable carded mono-structures. The technology will be able to produce the entire sustainable nonwoven material in-line, while enabling hydro-embossing to increase softness and improve cleaning power.

"The innovative technology means we can produce 100% biodegradable, high-performance nonwovens for wipes that are more accessible, and we are looking forward to introducing this to the market," explained Kelly Wright, Mondi's product expert for Personal Care and Components.

The new line is set to be fully operational by 2021.

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

### Industry reacts to coronavirus outbreak

**Nonwovens producers, converters and machinery suppliers are responding to increased demand for protective apparel and facemasks in China**

Feb. 6, 2020. The 2019 novel coronavirus (2019-nCoV) has sickened over 28,000 people thus far, and more than 560 deaths caused by the epidemic have been confirmed. On Monday,

China's spokesperson of the Ministry of Foreign Affairs Hua Chunying put out an urgent call for more medical supplies to help prevent the spread of coronavirus that was first identified in Wuhan, Hubei Province, China.

As of Feb. 2, Chunying announced that South Korea, Japan, the U.K., France, Turkey, Pakistan, Kazakhstan, Hungary, Iran, Belarus and Indonesia have donated epidemic prevention and control supplies. "What we urgently need at present are medical supplies for prevention and control, masks, protective suits and safety goggles among other items," she said.

Orders for nonwovens and nonwoven-based products like facemasks and personal protective apparel have surged in recent days, and production has ramped up after it was suspended during the extended Lunar New Year holiday.

The China Global Television Network (CGTN) visited a factory that produces nonwovens for masks and protective clothing in Foshan, which is operating at maximum capacity. The factory produces 80 tons of nonwovens per day that can be used to make one million surgical masks, or 400,000 protective suits, according to the report.

Cui Yanzhao, general manager of the factory, told CGTN that orders they received in just a few days were even more than the total of what they usually receive in a single month.

Meanwhile, China Central Television (CCTV news) is reporting that the major nonwoven fabric companies in Xiantao city, Hubei Province, recalled their staff to resume production following the holiday. "We urgently contacted all the employees who had been on leave to return to work at 3 p.m. on the second of February. Around 8 a.m. on the third of February we urgently organized 120 employees' return to work," a factory employee said.

Nonwovens machinery specialist A.Celli's technology, which has a large presence in China, was on display in the CCTV newscast at a Berry Global site. According to Simone Morgantini, A.Celli's marketing & communication manager, the company

## Market Trends

has been contacted by several private companies, public municipalities in China and foreign affairs offices that were all urgently researching protective material such as disposable masks and protective clothing.

As a machinery manufacturer, A.Celli was able to provide them with a list of the major spunbond producers in China, Southeast Asia, as well as in Europe and the U.S., who would be able to put them in direct contact with converters that make disposable masks and protective apparel. A.Celli is offering full support and technical advice should they plan to increase the production of nonwoven fabrics. "However, we are confident that this emergency will be resolved in the best way and in the shortest possible time," he says.

### Production Accelerates

Last week, Berry Global announced it was prioritizing the production of nonwoven healthcare products at its Nanhai, China, and Suzhou, China, facilities, which are used to manufacture products that can help protect against airborne particles like the coronavirus.

Nonwoven materials produced at the facilities are used in facemasks, N95 respirators, and protective apparel, all of which have recently been in high demand in the plan to prevent the spread of not only the coronavirus, but also other communicable diseases.

"Our thoughts go out to those affected by the coronavirus. Our dedicated teams are working around the clock to manufacture as much of these materials as possible to help prevent the spread of the virus," says Curt Begle, president of Berry's Health, Hygiene, and Specialties Division.

At the Nanhai and Suzhou sites, Berry produces spunbond, SMS, meltblown and thru air bond materials.

"Our focus right now is producing healthcare materials for masks, respirators, surgical products and protective apparel," says Amy Waterman, global marketing communications manager, Berry Global. "We have increased production of these products by shifting production away from hygiene products during this crisis."

3M is also seeing increased demand in

China and other regions responding to the coronavirus outbreak. In response, the company is increasing global production of personal protective equipment products, including respirators.

3M is working with customers, distributors, and government and health officials to help them obtain needed supplies. The company has donated medical supplies such as respirators, surgical masks and hand sanitizer in affected areas in China, and will continue to work with its humanitarian aid partners such as Wuhan Red Cross, Direct Relief and MAP International to provide needed equipment.

3M gives, the social investment arm of 3M, also pre-stocks supplies with humanitarian aid partners, and these product donations – including N95 or equivalent respirators – were provided to be rapidly deployed to affected communities. This is in addition to local 3M China product donations of respirators, surgical masks and hand sanitizer, totaling more than \$1 million to date.

For its part, KNH Enterprise of Taipei, Taiwan, is increasing its output for medical masks, while reducing the output for other types of masks such as PM2.5 masks, dust masks and industrial masks, according to Bobo Chang of KNH. Because of the shortage of raw materials, KNH is continuing to focus on acquiring new raw materials, Chang adds.

Meanwhile, Beckmann Converting, a contract textile laminator specializing in ultrasonic bonding and hot melt adhesive gravure roll bonding technologies, has implemented a Rapid Response initiative to support providers of medical products and protective clothing that may need additional production capacity as the coronavirus outbreak widens.

"Our customers making certain medical products, protective clothing, and specialty medical wipes are telling us that demand for these health-related products may outstrip their current capacity for the foreseeable future," says Ray Piascik, director of sales and marketing at Beckmann Converting. "We are able to leverage our decades of experience to provide Rapid Response services necessary to boost production volume and help customers maintain availability of critical products as the

next 10 >>>

## The statistical data analysis of nonwovens production in 2017-2019

Production of 2017-2019 Nonwovens by Technology

### 2019 Report about the development of nonwoven industry in China mainland

| Processing Technology                | 2017                |          | 2017/2016  | 2018                |          | 2018/2017  | 2019                |          | 2019/2018  |
|--------------------------------------|---------------------|----------|------------|---------------------|----------|------------|---------------------|----------|------------|
|                                      | Production (10,000) | Pct. (%) | Growth (%) | Production (10,000) | Pct. (%) | Growth (%) | Production (10,000) | Pct. (%) | Growth (%) |
| Spun-melt                            | 169.53              | 45.76    | +13.02     | 177.93              | 44.93    | +4.96      | 186.35              | 44.26    | +4.73      |
| Spunbonded (incl. S and M composite) | 163.8               | 44.21    | +13.00     | 171.9               | 43.41    | +4.95      | 180.02              | 42.76    | +4.72      |
| Melt-blown                           | 5.73                | 1.54     | +14.6      | 6.03                | 1.52     | +5.24      | 6.33                | 1.50     | +4.98      |
| Dry laid                             | 188.17              | 50.78    | +14.84     | 204.97              | 51.76    | +8.93      | 221.15              | 52.53    | +7.89      |
| Needle-punched                       | 80                  | 21.59    | +7.09      | 84.79               | 21.41    | +5.98      | 88.96               | 21.13    | +4.92      |
| Chemical-bonded                      | 13                  | 3.51     | +4         | 13.50               | 3.41     | +3.85      | 14                  | 3.33     | +3.71      |
| Thermal-bonded                       | 18.5                | 4.99     | +22.51     | 20                  | 5.05     | +8.11      | 21                  | 4.99     | +5.00      |
| Spunlaced                            | 75                  | 20.24    | +25.21     | 85                  | 21.46    | +13.33     | 95.5                | 22.68    | +12.35     |
| Stitch-bonded                        | 1.67                | 0.45     | +1.21      | 1.68                | 0.42     | +0.6       | 1.69                | 0.40     | +0.60      |
| Air-laid                             | 8.8                 | 2.38     | +2.33      | 9                   | 2.27     | +2.27      | 9.2                 | 2.19     | +2.22      |
| Wet-laid                             | 4                   | 1.08     | +12.68     | 4.1                 | 1.04     | +2.5       | 4.3                 | 1.02     | +4.80      |
| Total                                | 370.5               |          | +13.65     | 396                 |          | +6.88      | 421                 |          | +6.31      |

## 2019 Main end-uses of China mainland nonwovens

| Usage                                  | 2017               |          | 2017/2016  | 2018               |          | 2018/2017  | 2019               |          | 2019/2018  |
|--|--------------------|----------|------------|--------------------|----------|------------|--------------------|----------|------------|
|  | Production (1,000) | Pct. (%) | Growth (%) | Production (1,000) | Pct. (%) | Growth (%) | Production (1,000) | Pct. (%) | Growth (%) |
| Medical, Health care and hygiene, etc. | 1635               | 44.13    | +18.65     | 1769               | 44.67    | +8.20      | 1874               | 44.51    | +5.94      |
| Wadding                                | 250                | 6.75     | +7.76      | 260                | 6.57     | +4         | 270                | 6.41     | +3.85      |
| Packing materials                      | 325                | 8.78     | +9.06      | 350                | 8.84     | +7.69      | 378                | 8.98     | +8.00      |
| Household wipes and Cleaning Materials | 411                | 11.09    | +14.17     | 451                | 11.39    | +9.73      | 531                | 12.62    | +17.74     |
| Geosynthetics                          | 171                | 4.62     | +9.62      | 181                | 4.57     | +5.85      | 190                | 4.51     | +4.97      |
| Substrate for Coating & Lamination     | 90                 | 2.43     | +3.45      | 92                 | 2.32     | +2.22      | 94                 | 2.23     | +2.17      |
| Roofing felt                           | 108                | 2.91     | +9.09      | 113                | 2.85     | +4.63      | 118                | 2.81     | +4.42      |
| Furniture interiors                    | 79                 | 2.13     | +3.95      | 81                 | 2.05     | +2.53      | 84                 | 1.99     | +3.70      |
| Interlining                            | 50                 | 1.35     | +2.04      | 51                 | 1.29     | +2         | 52                 | 1.24     | +1.96      |
| Shoe materials                         | 48                 | 1.29     | +2.13      | 49                 | 1.24     | +2.08      | 50                 | 1.19     | +2.04      |
| Automobile interiors                   | 163                | 4.40     | +10.88     | 171                | 4.32     | +4.91      | 164                | 3.90     | -4.12      |
| Filter media                           | 276                | 7.45     | +16.46     | 290                | 7.32     | +5.07      | 300                | 7.13     | +3.45      |
| Agriculture use                        | 18                 | 0.49     | +2.27      | 18.5               | 0.47     | +2.78      | 19                 | 0.45     | +2.70      |
| Paper-making felt                      | 10.1               | 0.27     | +1.0       | 10.2               | 0.26     | +0.99      | 10.3               | 0.24     | +0.98      |
| The others                             | 70.9               | 1.91     | +6.78      | 73.3               | 1.85     | +3.39      | 75.7               | 1.80     | +3.27      |
| Total                                  | 3705               |          | +13.65     | 3960               |          | +6.88      | 4210               |          | +6.31      |

## Area Report

In general speaking, the situation of 2019 China mainland nonwovens production was totally smooth and stable and growth rate slow down, the output increased by 6.31% compared with 2018, some enterprises' profit was continuing less than before as production cost increasing, overplus capacity and excessive competition for low-middle grade products.

### As Per Processing Technology

The 2019 nonwoven production by all processing technologies increased, it is worth mentioning that dry-laid

- spunlaced production still increased by 12.35% compared with 2018 (hygienic, health care and medical products increased esp. exported products) and thermal-bonded(esp. air-through bonded) increased by 5.00% compared with 2018.

### As Per Products Usage

- Household wipes and Cleaning Materials increased by 17.74%
- Packing materials increased by 8.00%
- Medical, Health care and hygiene products increased by 5.94%
- Automobile interiors decreased by 4.2 %

### The situation about Export & Import Nonwovens in China mainland

According to the datum issued by the General Administration of Customs, P. R. China:

- The 2019 export nonwovens volume(tons)

reached 1,050,689 tons, more than 881,537 tons of 2018, the 2019 export nonwovens amount reached 3.1billion US\$, more than 2.7 billion US\$ of 2018.

- The 2019 import nonwovens volume reached 126,638 tons, more than 126,489 tons of 2018, the 2018 import nonwovens amount reached 842 million US\$, more than 827 million US\$ of 2018.

### Top 5 Counties in Export & Import Nonwovens (Tons/y)

- The export nonwovens ranking was Japan, Korea, Viet Nam, America, Indonesia.
- The import nonwovens ranking was Taiwan, Japan, America, Malaysia, Saudi Arabia.

### Challenge and Opportunity

\*\*\* China mainland nonwoven industry may be facing uncertainties and destabilizing factors of trade protectionism and Unilateralism.

- industry, product and technology structure for China mainland nonwoven industry will be continually adjusted
- continuing strengthening innovation (including technical, market and sales model innovation.)
- increasing high added value's products production

\*\*\* huge developing potentiality of nonwovens as China's industrialized, civilized in large scale, sustainable & harmonized development strategies.

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### F-coat® (Coated Metallic wire)

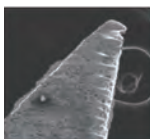
Example of effect > Comparison of Chemical accumulation

- Period of use: 3 months
- Fiber: PP, PET, Rayon / Low melting point Fiber
- Roller: Stripper
- Wire Type: ZK080RD



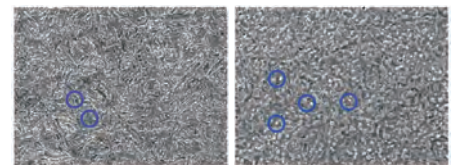
### Long Service Life

- =>Consistent quality for long period.
- Extension cycle of replacement cycle.
- > Problem; Short service life from wire wear out.
- > Influence: Inconsistent quality, productivity deterioration, Higher maintenance cost.
- > Factor: High production, Fine denier fiber / Dyed fiber.



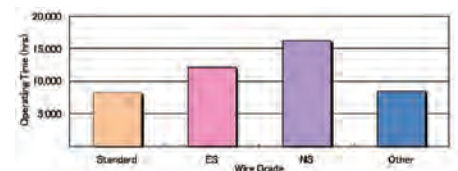
Example worn out wire (about 8,200hr.)

- ☆ Solution: Better heat treatment (ES)
- Special grade raw material (NS)



### Ex > Comparison on Service life

- Fiber: Polyester 1.7dtex~3.3dtex x51mm (Dyed fiber blended)
- Roller: Cylinder
- Wire Grade: Standard, ES, NS
- Production: 50kg/hr/m



(Source from: "ANFA conference paper, this article extract")



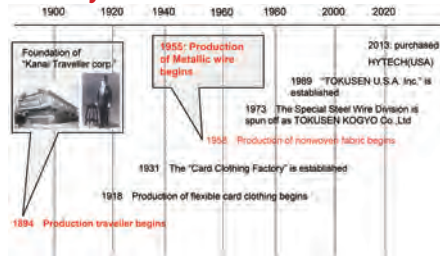
## Easy maintenance and long life metallic wires for carding machines

Wataru Oha  
Kanai Juyo Kogyo Co., Ltd.

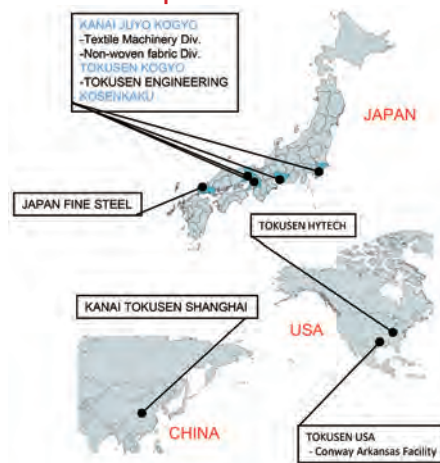
### Contents

- 1) Introduction of Kanai Group
  - \* Wire Manufacturing process
  - \* Type & Function of Carding Machine
- 2) Metallic Wire
  - \* Production Efficiency
  - \* Easy Maintenance
  - \* Long life Metallic Wire
- 3) Demands from Customers

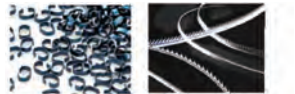
### History



### Kanai Group



KANAI JUYO KOGYO  
Textile Machinery Div.  
Non-woven Fabric Div.



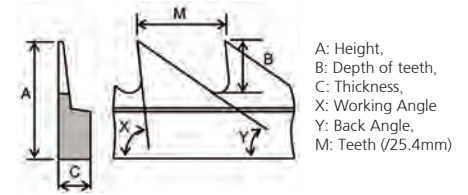
TOKUSEN KOGYO  
TOKUSEN TOKUSEN ENGINEERING  
TOKUSEN USA  
TOKUSEN HYTECH  
KANAI TOKUSEN SHANGHAI  
JAPAN FINE STEEL



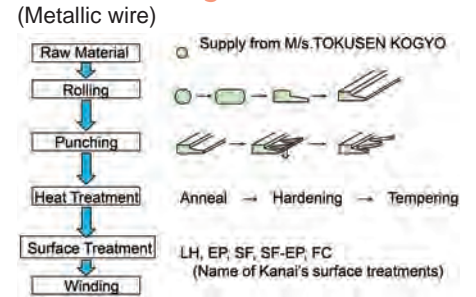
KOSENKAKU



### What's Metallic Wire ?



### Manufacturing Process (Metallic wire)

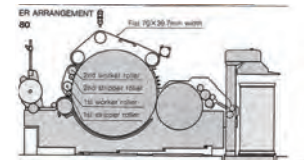


### Type of Carding Machines

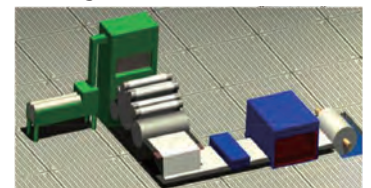
- \* Flat Carding Machine
- = Cotton, Synthetic fiber
- Fiber Length 25~38mm



- \* Combination Carding Machine
- = Synthetic fiber
- Fiber Length more than 50mm



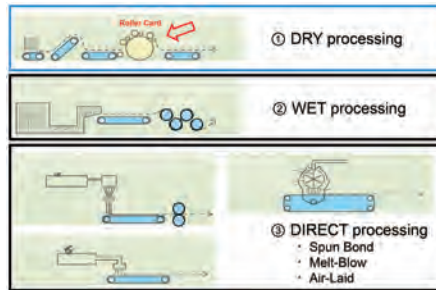
- \* Roller Carding Machine
- = Nonwoven products
- Fiber Length 15~100mm



## Technology News

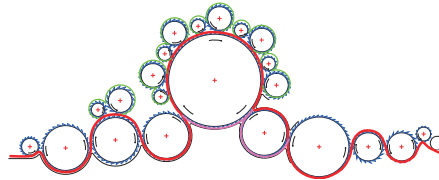
### Web Making Processes

\*SOURCE: [https://www.anna.gr.jp/\(ANNA\)](https://www.anna.gr.jp/(ANNA))



### Function of Roller Carding Machine

- \* Transfer the fiber from roller to roller
- \* Opens fiber mass
- \* Make the fiber to uniformed or random direction



### Demands from Customers

- \* Production Efficiency
  - Surface Treatment
- \* Easy Maintenance
  - Surface Treatment
- \* Long-Life Metallic Wire
  - Raw Material & Heat Treatment

### Surface Treatments

- LH Treatment
- Free Oxide Scale (Standard Treatment)



- EP Treatment
- The Galvanize plating.



- SF Treatment
- Free Oxide Scale + Smooth Surface Finish.



- SF-EP Treatment
- Combination of "SF" and "EP".



### Production efficiency ①

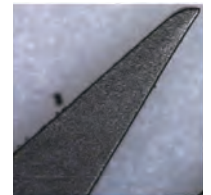
- =>Quick operation after mounting Wire
- > Problem; Dirty web from New Wire.
- > Influence; Production & raw material loss.
- > Factor; Oxide Scale created by the heat treatment



- ☆ Solution: Apply Surface Treatment. (LH, EP, SF, SF-EP, FC)



With Oxide Scale



Without Oxide Scale(SF)

### Production efficiency ②

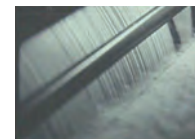
- =>Productivity improvement
- > Problem; Fiber Loading, Nep creation
- > Influence; Bad quality web & Production loss
- > Factor; Higher friction by Fine Denier / Multi Function fiber.

Inappropriate wire specification

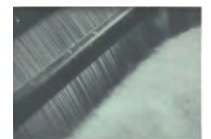


- ☆ Solution: Apply surface treatment (LH, EP, SF, SF-EP, SF FC)

Selection of suitable Metallic wire specification.



Fiber Loading



Normal Condition

### Easy Maintenance

- =>Saving production loss & consistent quality
- > Problem; Oil accumulation on the Metallic wire.

- > Influence; Deterioration in quality, productivity & maintenance time.
- Factor; Fiber with special oil and low melting point fiber.



- ☆ Solution: Apply surface treatment. Smoother surface wire (FC=F-Coat)



Transporter



Cylinder

## Technical Trends

### Advancements in medical nonwovens

Aging populations, infection prevention and prevalence of chronic disease are driving innovation and growth in the market

New applications and increased usage of medical nonwovens continues to drive the market forward.

Surgical drapes and gowns, including other surgical pack components, account for almost 67% of all medical nonwovens, by value and tonnage, according to a new Smithers Pira market study, *The Future of Global Nonwovens to 2024*. In North America, these disposable nonwoven-based products account for 90% of all surgical drapes and 95% of all surgical gowns, the U.K.-based research firm reports.

"If we compare single-use nonwovens with traditional reusable materials in gowns and drapes, we will see that the benefits of nonwovens are clear," says Johanna Siren, category manager of Finnish nonwovens producer Suominen. "Even though the reusable materials have evolved, studies still favor disposable gowns and drapes as having a more solid, reliable and reproducible bacterial impermeability. With reusable gowns, these properties seem to fade with wetting or repeated wash. Moreover, the single-use materials are easy-to-use, safe to dispose and also an economical solution."

According to the Smithers Pira study, nonwoven-based face masks are also expected to witness growth with rising fear of infectious diseases such as SARS or H1N1 swine flu. Worldwide value for nonwovens in medical applications will be \$1.28 billion in 2019, and further growth will continue at a rate of 4.6% year-on-year to yield a market worth \$1.61 billion in 2024.

Another growth area for nonwovens in the medical market is wipes.

Medline, a global manufacturer of medical supplies, recently entered the CHG (chlorhexidine gluconate) cloth market with its new FDA-approved ReadyPrep CHG cloths. Used for patient pre-operative skin prep, the cloths are pre-saturated with 2% chlorhexidine gluconate, an antiseptic known for its ability to remove infection-causing

bacteria from the skin, which can help reduce the risk of surgical site infections (SSIs).

"Approximately 160,000-300,000 SSIs occur in the U.S. each year with an associated cost of \$34,407 per treatment," says Alana Cecola, director of Product Management, ReadyCare, Medline Industries. "Healthcare is looking for options to deliver an antiseptic agent consistently, safely and effectively to reduce the risks associated with SSIs. As one of the leaders in healthcare manufacturing and distribution, Medline wanted to provide them with an option."

Medline also manufactures a variety of spunlace, needlepunch and dispersible based pre-moistened personal cleansing cloths, which are a more sanitary, standardized approach that can offer better skin care and patient experience over traditional cleansing methods, Cecola says. "The wide adoption of pre-moistened personal cleansing cloths has made the solutions very cost effective for healthcare facilities."

According to Cecola, the U.S. has been steadily growing in personal cleansing cloths. "Other regions have been slower and more resistant to change but with supporting evidence showing the impact on outcomes, other markets should grow in next five to 10 years," she adds.

#### Safety First

Studies have shown the benefits of nonwovens compared to reusable materials, as nonwoven-based products are more likely to reduce instances of infection and lessen the opportunity for cross-contamination.

For decades, Ahlstrom-Munksjö has been developing nonwoven medical fabrics that are used for surgical gowns, protective apparel, sterilization wraps, drapes, face masks and coveralls.

Based on the levels of fluid protection needed, the company has a range of products such as SMS (spunbond meltblown spunbond) for basic performance, or with added properties like anti-static for medium performance and alcohol repellent for high performance and comfort. "SMS is a multi-layer nonwoven fabric made up of a top and bottom layer of spunbond polypropylene for

## Technical Trends

strength and a middle layer of meltblown polypropylene for filtration,” explains Melanie Burakouski, global market development manager, Ahlstrom-Munksjö.

For protection against viruses, bacteria and fluids, Ahlstrom-Munksjö offers a breathable viral barrier (BVB) fabric, which is a trilaminate consisting of a spunmelt outer and inner layer with a breathable monolithic film layer.

Last fall the company launched its next generation BVB surgical fabric, ViroSel, which is constructed for the most critical areas of a surgical gown designed to keep medical professionals protected and comfortable. “We leveraged our decades of experience to create a fabric that can be reliably used to make the most protective and comfortable surgical gowns on the market,” Burakouski says.

The fabric is constructed to be impervious, breathable and comfortable. The outer layer is fluid repellent and durable. The barrier layer has a reformulated monolithic film membrane making it impervious to liquids, viruses and bacteria, while the chemical composition of the film itself allows moisture vapor to pass through it, keeping the surgical staff cool and dry. The darker inner layer is designed to reduce shadowing and is soft to the touch, which makes it comfortable to wear for long periods of time, according to Burakouski.

“Surgeries like cesarean sections, gastric and cardiac often have a substantial amount of fluids involved and are lengthy to complete,” she explains. “This means protection and comfort are essential for the medical professionals wearing the surgical gown. Infection control is imperative as there is risk to the patient and staff to potentially come into contact with these fluids. International industry standards are used to test and measure the barrier performance for liquids and blood-borne pathogens for materials used in protective clothing like surgical gowns. ViroSel passes these stringent standards providing the impervious protection needed in the surgical environment.”

Suominen also offers a range of technologies for the medical market. A specialty 100% cotton entangled nonwoven called Webril is designed for medical applications requiring high absorbency and easy tear. “These

attributes provide superior performance for the cast padding and wound care markets. This technology supports clinician’s desire for sustainable options in the medical market,” says Suominen’s Siren.

The company also manufactures proprietary thermal bond nonwovens called Novonette consisting of a high amount of natural fibers offering high absorbency, quick fluid release characteristics, softness and drapeability. It can incorporate super absorbent fibers within the thermal bond for applications requiring extra absorbent capacity.

And, as one of the global leaders in spunlace, Suominen can offer color capabilities and patterns for visual cues as well as ability to include pulp and other nonwovens in medical structures. Its newest wetlaid line in Bethune, SC, also employs a wide range of raw materials to deliver unique solutions for the medical market.

The functionality and features of medical nonwovens vary remarkably from one technology to another, Siren points out. In drapes, Suominen’s Fibrella Zorb+ material is used in drape fenestration areas thanks to its excellent properties: its absorption capacity is twice as fast as competitors’ products made of spunbond, she claims. “This way it reduces post-operative cleanup time. It is also easily drapable and conformable, which is a great benefit for example when compared to airlaid.”

Meanwhile, Suominen’s Fibrella Perf product family, which is offered globally, was developed for wound care products where its softness, skin-friendliness and absorbency are valued. This range was recently introduced to South American markets. “We are seeing strong growth in Latin America where we invested at our plant in Brazil,” Siren says. “The investment has enabled us to supply medical products from the plant as well. There, we are seeing replacement of traditional textiles but also totally new application areas.”

Jacob Holm Group is a leading innovator of spunlace nonwoven fabrics and finished goods. Their nonwovens can be found in markets ranging from hygiene and consumer wipes to health care and skin care and industrial cleaning under the Sontara, Sontara

## Technical Trends

Beauty, SoftFlush and SoftLite brands. The Sontara brand was acquired from DuPont in 2014, and with it, a unique manufacturing process that is free from binders, chemicals and adhesives. This results in a high-purity fabric that minimizes the possibility of product contamination and allergic reactions by users, according to the company. Within this manufacturing process, Sontara can use a broad variety of fiber technologies, which allows for a wide range of high-performing, customized fabrics for diverse healthcare applications.

“Our unique manufacturing process and trusted supply chain ensure that Sontara nonwoven fabrics perform to the highest specifications required for medical nonwoven products,” says Jacob Holm CEO Martin Mikkelsen. “Sontara fabrics are clean at each use, minimizing the risk of infection, providing superior dimensional strength, and offering softness and comfort to the wearer.”

For medical apparel, Sontara fabrics are soft to the touch and, through advanced material technology, provide a breathable, fluid-repellent barrier. “The excellent air permeability of Sontara provides the O.R. staff with optimal ventilation and better drapeability than any SMS product on the market, ensuring maximum comfort needed to perform critical procedures right,” explains Mikkelsen.

In wound care, Jacob Holm’s high-purity Sontara fabric minimizes the possibility of product contamination and allergic reactions by users. It is also low linting, limiting the risk of introducing particulates. “The dimensional stability of Sontara fabric ensures that it stays in place without over-stretching or becoming misshapen,” Mikkelsen adds.

More recently, Jacob Holm has focused its research on developing fabrics that fill unmet needs. As a result, its product range has expanded to include additional sustainable solutions for medical apparel and wound care. Its current products include up to 50% sustainably-sourced raw materials, and the company is catering to the need for plastic-free products through innovating with novel raw materials and processes.

“As the commitment to sustainability grows worldwide, it has become increasingly

important to offer cost-effective nonwoven materials with both eco-friendly raw materials and a clean manufacturing process,” Mikkelsen says. “This global shift in perspective offers opportunities across applications for spunlace technology. Unlike other technologies, spunlace utilizes high pressure jets of water to bond the web. This completely removes binders, chemicals and other adhesives from the production process and therefore the final product. This creates an environment where it is possible to produce fabrics with 100% sustainably-sourced raw materials that stay pure from start to finish.”

### Healing Wounds

Freudenberg Performance Materials’ has developed nonwovens and polyurethane foams to the medical and wound care industry for more than three decades. It creates components for traditional and advanced wound care, bioactive wound care, ostomy and transdermal applications. Within medical, the company uses drylaid, spunlaid, wetlaid and foams as base technologies, which are combined with a wide variety of coating and finishing technologies. “This package allows Freudenberg Performance Materials to tailor product offerings and characteristics that exactly meet customer needs,” says Dr. Frank Heislitz, CEO, Freudenberg Performance Materials.

Freudenberg Performance Materials has recently introduced several innovations. Among them are multilayer foam-nonwovens components with superabsorbent nonwovens. By combining hydrophilic PU foams and hydroactive nonwovens for wound dressings, absorption and retention performance significantly increases. “All components are optimally matched to each other,” says Dr. Heislitz. “This is possible because Freudenberg is one of the few suppliers on the market to develop and manufacture the materials used as well as laminate them in-house.”

Customers can choose between MDI- and TDI-based hydrophilic polyurethane foams. Freudenberg manufactures these high-performance multilayer materials in cleanrooms under ISO 13485 conditions.

Freudenberg has also developed more efficient PU foams. Thanks to the newly

## Technical Trends

developed, high-performance formulation based on MDI polyurethane, Freudenberg offers a superior alternative to conventional TDI-based PU foams. As a component of wound dressings for chronic venous leg ulcers, the new MDI-based PU foam absorbs wound fluids in just a few seconds. It also has a fluid retention capacity that is around 50% higher than that of the TDI foam and offers much greater strength in its wet state.

“The healthcare and wound care market is very heterogeneous with many niche products,” Dr. Heislitz explains. “Freudenberg Performance Materials focuses on medical solutions that improve the healthcare outcomes. The company sees opportunities for multilayer solutions that reduce the overall cost of care, e.g. with better healing performance, reduction of product complexity on the customer side and simplify the supply chain.”

### Made in Turkey

Like many other different applications, Turkish nonwovens producer Mogul, based in Gaziantep, also has a customer portfolio for medical nonwovens thanks to various production technologies being operated by the company. Today, it offers polypropylene SMS type of fabrics for medical/surgical gowns and robes, polypropylene spunbond and meltblown for face masks, Aqualace (parallel-laid spunlace) fabrics for surgical swabs, Mopet (100% polyester spunbond) for blood filtration and various qualities of its Madaline fabric (PET/PA6 microfilament) for medical packaging and medical clothing. The Madaline fabric inherently has 94.5% bacterial filtration efficiency and anti allergic properties. Finally, its Durell brand cross-lap spunlace can be used for medical tapes and bandages.

“Nonwovens bring cost efficiency as single use products, they help to prevent cross contamination with their disposable nature and they bring some anti barrier properties which can’t be meet by textiles,” says Serkan Gogus, CEO of Mogul.

The company expects to see growth in the market, especially in developing regions of the world with increased income where more

disposable products will be used to replace conventional textiles, and in developed regions where disposables help prevent hospital infections.

Felix Nonwovens, of Eskisehir, Turkey, manufactures spunbond nonwovens, films and laminated nonwoven products, mainly serving the hygiene and medical industries. Its main product portfolio of polypropylene spunbond nonwovens is used in hydrophobic gown fabrics or hydrophilic drape laminates. Its cast films can be made from polyethylene or polypropylene, and can also be made as a complete barrier to bacteria and viruses, or breathable. At later stages these nonwoven are bonded with barrier or breathable cast film in order to form laminated layers.

Felix recently invested in a new hotmelt lamination system that is able to increase its capacity for SFS Breathable Barrier AAIM Level 3 and 4 gown fabrics and also AAIM level 4 hydrophilic surgical drape fabrics. “In addition to that, we are now able to provide other side products that are used in the industry such as mayo tool table covers, incision films, tool table covers, op tapes and other double sided tapes along with pouches,” says Felix’s Ali Serdar Serteser.

With the possibility of vertical integration with a medical textile converting facility, Felix is also able to provide semi finished or finished gowns, drapes and packs. “This enables our customers and partners to be more flexible with their needs. We are able to provide OBL, private label services and also still continue to supply high quality fabrics to the market as our main business,” he adds.

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

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<<< continue 4

The new multi-beam line will be located to General Nonwovens’ third site which is constructed in Sakarya, Turkey.

The 4.2 meters wide SSMMS line will primarily serve the hygiene industry and adds 25,000 tons of capacity to General Nonwovens’ operation. The line is set to start commercial production in mid-2020.

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

## Product News

### Patcraft unveils nonwoven composite flooring

Dichroic is made of approximately 70% recycled PET

Patcraft, a developer of high-performance commercial flooring, has launched its first nonwoven composite flooring collection, Dichroic. Designed to create an innovative platform for commercial flooring featuring a new option in materiality, the Dichroic collection incorporates the warmth of soft surface and the durability and cleanability of hard surface. With rich colorways that encourage optical depth and aid in the design of warmer, optimistic spaces, the collection's sweeping color gradation creates a compelling ombre effect. Dichroic is available in both facet and 24"x 24" tiles to offer a variety of installation options.

"The soft visual of the Dichroic collection develops from tonal stripes that fade and shift across a space, mimicking the subtle variation of a felted texture to create a beautiful ombre effect," says Shannon Cochran, vice president of creative and design for Patcraft. "The Patcraft design team sought to design a collection that resembles the effect of glass transparency. The two different shapes play with optical perceptions using a series of solid gradients."

Dichroic is an innovative product featuring a multilayer, nonwoven composite produced from plastic waste to create its felt-like construction. By utilizing recycled plastic bottles that have been converted into PET fiber, Dichroic has approximately 70% recycled content (both post-consumer and post-industrial), which is equivalent to 18 (0.5L) bottles in each 24"x 24" tile. Products are Cradle to Cradle Certified Bronze and are backed by Patcraft's Environmental Guarantee specifying that the company will reclaim and recycle the product at the end of its useful life.

The Dichroic collection combines shape and color for multiple design options that support color blocking and zoning spaces within commercial interiors. The rich polyester face fiber contributes to enhancing sound absorption, and the collection is designed and tested to meet Patcraft's high standard for performance flooring. Dichroic is constructed with EcoWorx backing, and products are backed with limited lifetime warranties

against stain, colorfastness to light, static and abrasive wear for maximum performance and appearance retention.

(Source from: "www.technicaltextile.net")

### Wazoodle launches waterproof, superabsorbent material

Composite structure offers protection and absorbency

Wazoodle Fabrics, a 17-year-old company, has introduced a unique multi-dimensional composite fabric that is superabsorbent and leak-proof. The newly released Zorb 4D Organic Cotton Dimple Waterproof PUL soaker fabric is composed of multiple layers. The super-absorbent face is a three dimensional, dimpled, soft 100% organic cotton 3D Zorb fabric that facilitates rapid absorption and superior holding capacity. The 3D Zorb is laminated with a durable, breathable polyurethane waterproof film and backed by an anti-skid polyester fabric. Light, breathable, and thin, the fabric is safe for sensitive skin, absorbing fluids many times faster than other materials (bamboo, cotton, hemp knits) and is manufactured by AKAS Tex.

Soft and organic this fabric caters to those who seek a skin - and earth - friendly alternative to heavy commercial disposables. The Zorb 4D offers multiple advantages in any application that requires absorbency with protective waterproofing such as undergarments for incontinence, sanitary pads, as well as for mattress and furniture covers, diapers, diaper changing stations, reusable wipes, pet bedding and sweat guards.

Like all of Wazoodle products, Zorb 4D Organic Cotton Dimple Waterproof PUL Soaker Fabric is Made in the U.S. from American-sourced raw materials. It is manufactured without harmful chemicals or finishes in highly-controlled settings.

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

### Bouckaert to launch new equipment

Company would expand capabilities and access new markets

Bouckaert Industrial Textiles has announced the addition of three new pieces of equipment coming online in January 2020.

## Product News

One of its white production lines will be enhanced by the addition of a brand new Bematic card and a new, in-line, up-stroke needle-loom from Shouu Shyng to work together with the existing down-stroke loom. Specifically targeting synthetic and glass fiber products, this needlepunch line will efficiently produce goods from 6oz per sq yard to 65oz per sq yard in varying thicknesses.

In addition to the improvements to the white line, a second new Shouu Shyng needle loom has been added offline to augment its production of greys and colored nonwovens.

Overall, these improvements will allow Bouckaert to phase out some older equipment and expand its capabilities when it comes to weight, width, and control for its products.

These new capital investments, totaling \$1.9 million, will position Bouckaert to be able to continue to meet the current market needs as well as opening access to a number of new markets it plans to enter into in the future. (Source from: "www.convertingguide.com")

### Eyelid cleansing wipes launch

**Leave-on, no-rinse formula helps dissolve and remove excess oils and debris from eyelids and lashes**

Bruder Healthcare has launched Bruder Hygienic Eyelid Cleansing Wipes. These lid hygiene therapy wipes feature a leave-on, no-rinse formula that helps dissolve and remove excess oils and debris from eyelids and lashes to improve overall ocular health. The pre-moistened, individually wrapped wipes are hypoallergenic and free of harsh chemicals.

"Bruder Hygienic Eyelid Cleansing Wipes contain no tea tree oil or other ingredients that sting or burn," says Stan Joseph, vice president of Sales and Marketing. "In fact, these wipes are gentle enough for daily use."

Bruder Hygienic Eyelid Cleansing Wipes are available in a box of 30, as well as in the Bruder Hygienic Eyelid Cleansers Combo Pack that includes 30 wipes and 1 fluid ounce of Bruder Hygienic Eyelid Solution (0.02% pure hypochlorous acid). Using the two products together helps maintain overall ocular health while improving eye comfort.

For optimal lid hygiene results, therapy begins by gently wiping a Bruder Hygienic Eyelid Cleansing Wipe across the eyelids and lashes. Clean lids and lashes will be more receptive to the benefits of the antibacterial Bruder Hygienic Eyelid Solution. After cleaning, apply one to two sprays to closed eyes to reduce bacterial growth and other microorganisms. No rinsing is required. Simply spray and let dry.

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

### Viecura Group displays contract manufacturing offerings

**Company creates products for personal care, maternity and medical needs**

Viecura Group, a dedicated contract manufacturer, showcased its offering to the medical market at Hygienix. Within personal care, Viecura can make products for incontinence including reusable fixation pants, absorbent pants, reusable pads and disposable products. Meanwhile, in maternity, the company can make maternity underwear, fetal monitor bands, baby beanies and support products for post-partum and post C-section.

Viecura can also create customized product solutions within urology, surgical and post-operative care, fall prevention and medical fixation items and tubular bandages.

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

### Surfaceskins help improve hand hygiene in hospital theaters, study says

**Results published in Journal of Hospital Infection**

Recent trials have demonstrated that Surfaceskins, self-disinfecting door push-pads and pull-handles designed to kill deposited germs in seconds, promote hand hygiene awareness and significantly improve hand hygiene compliance.

Surfaceskins Ltd, a company part owned by University of Leeds spin off, NIRI (Nonwovens Innovation and Research Institute Ltd) believes the latest trial, conducted in hospital theaters over six months with results published in the Journal of Hospital Infection, is a watershed moment for the company, as it shows that, in addition to the potential to eliminate doors as a source of hand contamination, Surfaceskins



## Product News

can also have an additional infection control benefit by improving hand hygiene awareness and compliance.

"We at Surfaceskins have always been confident of the vital role Surfaceskins will play in infection control by eliminating cross contamination on doors and door handles, but we now know they also provide a positive impact on hand hygiene compliance," states company CEO Brian Waligora. "Now this study has proven our initial thoughts, the combined infection control benefits will make Surfaceskins a consideration for any environment that is serious about infection control."

The study was a collaboration between Surfaceskins Ltd and a leading global gel provider and was conducted in one of the largest private hospitals in Leeds. Surfaceskins were placed on doors leading to two identical operating theaters, while electronically monitored gel dispensers were positioned outside each external operating theater door. During the eight-week period when Surfaceskins were present on the doors, hand gel usage rose by 81%. Mark Wilcox, professor of Medical Microbiology at the University of Leeds and consultant / head of Microbiology Research and Development at Leeds Teaching Hospitals NHS Trust, evaluated the data and published the results in the Journal of Hospital Infection (Volume 103, Issue 1, September 2019).

"I was impressed that Surfaceskins led to a marked improvement in hand hygiene, particularly as we were evaluating this in a clinical setting" states Professor Wilcox. "I have always been confident that Surfaceskins can be a useful adjunct to routine hand hygiene practice in healthcare environments, and potentially in other settings (e.g. washrooms, restaurants) where frequent contact with doors could undermine infection prevention practice."

A previous laboratory-based study performed in 2017 had already demonstrated that Surfaceskins were effective against common nosocomial or healthcare associated pathogens. That study, also published in the Journal of Hospital Infection, demonstrated Surfaceskins effectiveness against Staphylococcus aureus, feline calicivirus (surrogate for human norovirus),

Enterococcus faecalis, Escherichia coli and Salmonella.

"Nobody likes touching a dirty door," claims Waligora. "Whether you are leaving a public rest room, near food preparation or visiting a hospital or doctor's office, you don't want to be touching a frequently touched surface, like a door, when such sites are likely to be contaminated by previous hands. However, this becomes especially important when near vulnerable people such as the elderly, the young or the ill. Healthcare associated infections (HAIs) can be serious and potentially life-threatening, and so practical measures to reduce their risk should be considered."

Six percent of all patients will contract a HAI during their stay in hospital. This leads to an enormous health burden to the NHS, reportedly costing £1 billion per annum, primarily due to prolonged hospital stays, but also contributes to an approximate 4000 deaths per annum. These HAI rates are similar throughout developed countries and increase significantly in underdeveloped countries like Africa and the far east.

"Surfaceskins was designed with hospitals in mind, but since marketing the product, we have realised that the combined benefits can only help in reducing needless infections to patients, staff and visitors in many establishments around the world. In fact, there is a much bigger market with nearly every public door being a potential opportunity to prevent hand contamination."

Surfaceskins continues to generate interest from all over the globe. Currently, they have several countries ranging from the U.K., Far East, Middle East, Africa and South America signed to distribution agreements totaling in excess of three million in future sales (over three years). In order to keep up with demand, Surfaceskins are currently considering another round of funding. (Source from: "www.nonwovens-industry.com")

**TrustShield new medical fabrics**  
Portfolio provides protection against surgical lasers, chemicals and potent chemotherapy drugs  
Ahlstrom-Munksjö has launched TrustShield, a versatile portfolio of medical fabrics that can

## Product News

be used to provide protection against surgical lasers, chemicals and potent chemotherapy drugs.

TrustShield products were specially designed around growing market trends. The evolution of laser technology in a surgical environment has significantly advanced as their usage has become widespread for numerous specialties. Although there are many benefits to using lasers for surgical procedures, there are also risks. Operating room fires can occur if the laser comes in contact with combustible objects. Lasers not only can cause fires but they can cause thermal burns if they have skin contact.

"Most surgical gowns and drapes on the market offer some protection from skin exposure to laser beams but most of them tend to be flammable, that's why we made TrustShield Laser. TrustShield Laser was specifically designed as a laser resistant medical fabric that can be used for the construction of surgical gowns or drapes. Having a surgical drape and gown that has protection against viruses, bacteria and fluids as well as being laser resistant, is a must in order to keep patients and health care workers safe," says Jason Beard, product platform leader, Ahlstrom-Munksjö.

A high level of protection is not only critical in a surgical environment but in other health care settings where harsh chemotherapy

drugs are being administered. Handling and administering chemotherapy drugs pose a health hazard as most of these drugs are considered hazardous if the health care worker is exposed. TrustShield Chemo was developed to prevent any permeation by providing a barrier against the strongest chemotherapy drugs on the market.

For those high risk, fluid intense surgeries, TrustShield Absorbent fabric is the solution for the ultimate protection and fluid management. It is highly absorbent and maintains its strength and uniformity even when wet.

TrustShield offers a comprehensive product portfolio that meets stringent industry standards to ensure the utmost protection against several potential health risks. TrustShield medical fabrics provide impervious (AAMI level 4) viral protection, have low lint, are durable for easier converting and resist punctures and tears.

"Our priority in the medical business unit is to deliver high performance medical fabrics that fully protect health care workers and patients globally. TrustShield is an example of how we continue to strengthen and enhance our medical product portfolio," comments Lionel Bonte, vice president, Medical, Ahlstrom-Munksjö.  
(Source from: "www.nonwovens-industry.com")



## Asia Nonwoven Fabrics Association

**ANFA** is the only organization which represents the nonwovens industry in Asia

**ANFA** aims to take a more important role toward expanding the growth of the nonwovens business for the benefit of all members

### For further information:

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# 行业信息

## Berry在中国增产有助于对冠状病毒的防护

南海和苏州工厂生产的非织造材料用于口罩、N95呼吸器和防护服

1月31日，在回应投资界对其最近季度电话会议的提问时，Berry Global Group, Inc. 报告称，公司正在中国南海和中国苏州的工厂优先生产非织造材料医疗卫生产品，这些非织造产品被用来制造有助于防止像冠状病毒这样的空气微粒的产品。

工厂生产的非织造材料用于口罩、N95呼吸器和防护服，这些材料最近在防止冠状病毒和其他传染病传播的计划中都有很高的需求。

Berry的健康、卫生和专业部门的总裁Curt Begle说：“我们的想法是针对那些受冠状病毒影响的人。我们的专业团队正在昼夜不停地生产尽可能多的这些材料，以帮助防止病毒的传播。”

Berry建议受灾地区的员工要格外小心，包括使用公司发放的口罩、洗手液和洗手皂。  
(资料来源：“<http://ir.berryglobal.com/news-releases>”)

## Asahi Kasei 医疗收购 ViruSure

Asahi Kasei 医疗已收购奥地利生物安全检测服务提供商Virusure Forschung und Entwicklung GmbH (ViruSure)。

此次收购是Asahi Kasei 医疗公司生物处理业务战略扩张和强化的一部分，其核心业务是Planova™病毒去除过滤器，用于血浆衍生物和生物制药等生物治疗药物的制造过程。这表明，Asahi Kasei 医疗公司正在继续进行战略努力，发展有助于生物疗法安全和高效生产的业务。

由于生物衍生物用于生物治疗药物的制造过程中，因此在研究、开发和制造的每一步都需要进行生物安全性测试，以防止病毒或其他传染源的危害。在生物治疗行业强劲增长的推动下，对ViruSure生物安全检测服务和细胞银行服务的需求因此继续逐年增长。这些服务不仅提高了安全性，而且促进了药品的开发，有助于广泛采用高质量的疗法。

通过增强Asahi Kasei 医疗向生物治疗药物制造商提供广泛支持的能力，包括与生物工艺开发和制造相关的更广泛服务，此次收购扩大了Asahi Kasei 医疗的业务范围，并为进一步发展创造了新的机会。Asahi Kasei 医疗将继续通过提供创新和可靠的生物工艺产品、设备和科学服务，为生物治疗药物的安全和高效生产做出贡献。  
(资料来源：“[www.asahi-kasei.co.jp](http://www.asahi-kasei.co.jp)”)

## Edison Nation宣布与全球屡获殊荣的婴儿必需品品牌Mother-K达成独家经销合作伙伴关系

新泽西州菲利普斯堡- (BUSINESS WIRE) - Edison Nation公司是一个促进创新和推动知识产权、媒体和消费产品的多方面生态系统，很高兴宣布与Mother-K达成独家分销合作伙伴关系，并将其引入美国市场。

Mother-K于2010年在韩国成立，其宗旨是为新家庭提供安全、可信赖的婴儿必需品。这家屡获殊荣的全球性公司通过精心设计和生产，致力带来对婴儿和环境安全的环保产品。该系列包括产妇护理用品、婴儿奶瓶、生态存储袋、湿巾、尿片和一系列清洁产品。该产品线定于2019年12月登录Amazon (亚马逊)。

爱迪生 (Edison Nation) 将在美国推出Mother-K，作为他的Cloud b品牌的延伸，该品牌已经在婴儿用品市场享有盛誉。Cloud b品牌 ([www.cloudb.com](http://www.cloudb.com)) 是创新品牌的先驱，可通过抚慰感官来帮助儿童入睡。他们的产品“Plush with a Purpose”可以让孩子舒服，让父母放心。Cloud b是在儿科医生和专家顾问委员会共同协商研发的，现已经获得了多个奖项，并成为全球父母可信赖的品牌。

“我们很高兴向美国消费者介绍Mother-K。现代化的设计和精心采购的材料将吸引最挑剔的父母，” Cloud b联合创始人兼Edison Nation首席业务开发官Linda Suh说，“像Cloud b一样，Mother-K一直致力于研发高质量的创新产品，这些产品可以让客户在抚养孩子时候感受到愉悦，这使它们成为Edison Nation的理想合作伙伴。”

Mother-K的首席执行官MinJung Kim表示：

## 行业信息

“我对此次合作并在美国推广Mother-K感到非常兴奋。”  
(资料来源:“www.investors.edisonnation.com”)

### 帮宝适的Lumi首次亮相

一体化婴儿护理系统提供实时查看婴儿的睡眠、喂食和尿片使用情况

Pampers的Lumi系统是世界上第一个多功能的联网婴儿护理系统，将在2020年消费电子展(CES)上展出。

“弄清宝宝的需求可能很棘手。”创立该产品的团队负责人Omer Sher说，“在开发Lumi时，我们专注于解决父母遇到的实际问题。Lumi可以让您一目了然地了解宝宝的现状，预测他们的需求并建立家庭节奏。”

Lumi独特地将智能高清视频监控器与活动传感器结合在一起，并将这些信息汇集在一个易于使用的APP中，因此父母可以实时全面地查看宝宝的睡眠、喂食和尿片使用情况，所有这些信息都在一个地方显示-24/7。

Lumi超越了视频监控，和自动婴儿跟踪技术相结合，将数据转换为独特、切实的见解和可操作的提示，随着婴儿的发育和成长来指导父母。作为The Wonder Weeks（领先的婴儿发育专家）的独家合作伙伴。Lumi还为父母提供了直接进入宝宝10次智力飞跃发展的途径，以及针对宝宝独特发展历程的更加个性化的见解。

Sher说：“育儿是您从未做过的最重要的工作，很显然父母需要能够更好地预测婴儿的需求。Lumi通过帮助父母在找到家人的节奏时，以一种毫不费力的方式将真实的跟踪数据与自己的直觉融合在一起，从而解决了这一问题。”  
(资料来源:“www.nonwovens-industry.com”)

### 南六企业股份有限公司在印度建厂

该生产线将于今年年末开始运行生产

来自台湾的非织造生产商——南六企业股份有限公司开始在印度建立生产基地。

该公司已经在中国大陆和台湾分别拥有一家 and 三家生产基地。主要生产水刺和热粘

合非织造材料，年总产量在65,000-70,000吨之间。该公司已为手术室生产了湿巾、口罩、手术服和擦巾。

新的印度工厂预计将于2020年第三季度开始运营，最终将生产湿巾和口罩。  
(资料来源:“www.nonwovens-industry.com”)

### General Nonwovens将投资引进最先进的Reicofil 5 plus技术

新生产线将为公司的运营增加25,000吨的产能

Imam Kayali Holding的成员General Nonwovens宣布了对Reicofil 5 plus技术的最新投资，该技术为纺粘和复合非织造材料树立了新标准。

新的生产线将位于General Nonwovens在土耳其的萨卡里亚的第三个生产基地。

这条宽4.2米的SSMMS生产线将主要服务于卫生行业，并将为General Nonwovens的运营增加25,000吨的产能。该生产线计划于2020年中期开始商业生产。  
(资料来源:“www.nonwovens-industry.com”)

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相比之下，nextLevel湿巾仅由木浆和Lyocell纤维制成。该材料完全可生物降解，使用后没有微塑料和化学粘合剂残留。这些纤维来自可再生资源，均来自快速生长的可再生树木。

在其他方面，例如湿强度和柔软度，新的湿巾匹配商用产品。如果没有一种纸质的或轻薄的感觉，消费者可能不会购买。木浆/Lyocell纤维混合物可以达到最终产品的要求。作为标准品质产品的非织造材料，大量的高品质擦拭巾可能由其他纤维混合物制成并具有不同克重。

另外其还有一个很大的优势：“木浆”比人造纤维便宜得多。因此，从成本上看，Nextlevel湿巾可以与现在市场上的湿巾竞争。把湿巾产品提高到一个新水平的时机已经成熟！

(资料来源:“www.nonwovens-industry.com”)

# 市场动态

## Superior Felt在墨西哥开设办事处 该基地将有助于该地区业务的扩张

Superior Felt & Filtration 在墨西哥 Aguascalientes (阿瓜斯卡连特斯) 建设了新基地, 这是过去两年内的第二次扩张。该基地将扩大 Superior Felt & Filtration 制造、分销、加工毡制品和过滤产品行业领先的全球影响力。

新办公室将成为区域销售经理 Daniel Villalobos 的主要办公地点。Villalobos 将为拉丁美洲和加拿大的客户提供服务。Daniel 将来自工业和过滤市场的丰富知识和经验引进该地区。该公司表示, Daniel 加入 Superior 团队将更好地为现有客户提供支持, 并继续加强与老客户的合作。

(资料来源: "www.nonwovens-industry.com")

## Ahlstrom-Munksjö 增强高性能过滤和储能应用材料的制造平台

2020年1月16日, Ahlstrom-Munksjö 已完成他们正在进行项目的初始分析和设计阶段, 以增强高性能过滤和储能应用的制造平台。为了满足不断增长的客户需求, 该公司现决定继续进行项目的第二阶段, 该阶段包括扩大其微型玻纤的产能, 进一步提高工业过滤能力。

第二阶段的行动包括:

- 在比利时 Malmedy 工厂扩大工业过滤生产能力, 这将在不影响我们将来继续为现有客户群提供服务的情况下实施;
- 在意大利 Fabriano 工厂扩大基于微型玻纤为媒介的生产能力;
- 在意大利 Turin 工厂建设基于微玻纤基为媒介专用的新生产线。这条生产线将专门为需要使用微玻纤基的场合而设计, 以支持我们在工业和汽车过滤以及储能应用中的增长计划, 例如吸附式玻璃纤维棉 (AGM);
- 在中国滨州工厂进行机器改造, 增加产能和生产能力, 使我们为亚洲工业和运输过滤市场提供的产品得到进一步发展。

过滤与性能解决方案业务领域执行副总裁 Daniele Borlatto 说: “这项投资支持了 Ahlstrom -Munksjö 的战略雄心, 即在全球光纤领域的某些细分市场中保持我们的领先地位, 而且这些细分市场具有积极增长的前景, 并受到可持续市场的驱动。过去几年, 公司通过几项新的扩张性投资, 在

全球范围内不断扩大过滤制造能力, 以满足客户增加的需求。”

正如2018年6月宣布的那样, 总投资额约为2800万欧元, 整个项目预计将在2021年下半年完成。

Ahlstrom-Munksjö 的过滤业务包括开发和生产用于汽车或工业用途的机油、燃料和气体以及工业用气的过滤材料, 并且正在进一步开发混合动力和纯电动汽车的过滤解决方案。其中接近20%的销售额来自工业用途, 约80%的销售额来自运输用途, 包括乘用车以及卡车等重型机械。在运输用途中, 销售额主要来自售后市场。

## Ahlstrom-Munksjö 收购在美国和中国的加工业务

Ahlstrom-Munksjö 已从 Shunde Lucas 和 Altior Industries 收购了其在和中国美国的加工业务。通过此次收购, Ahlstrom-Munksjö 将在中国拥有本地过滤器转换能力, 并有机会扩大先进液体技术 (Advanced Liquid Technologies) 业务中其他产品的销售范围。在亚洲的本地业务将缩短交货时间, 并使 Ahlstrom-Munksjö 能够更好地为其客户服务。

被收购业务的净销售额约为700万美元, 而 EBITDA 每年为200万美元, 利润率目标相比于 EBITDA 高出了14%以上。他们提供的热食用油过滤器产品主要用于中国和美国的快餐店和食品加工服务。并购后的业务有望产生巨大的协同效益。无债收购价约为1100万美元。

“我很高兴在中国新的立足点将促进我们先进液体技术 (Advanced Liquid Technologies) 产品系列的生长。此次收购还将使公司油炸过滤器的销售额增加一倍, 并使成为这一利基业务的全球领导者-为我们的利益相关者创造长期价值的基础。未来, 我们的目标是通过有机增长和收购来进一步扩大先进液体技术业务。” 总裁兼首席执行官 Hans Sohlström 说道。

Ahlstrom Munksjö 旨在通过进一步的产品开发和合作, 加强其在生命科学和实验室

# 市场动态

产品领域的市场地位。在水净化方面，该公司将建立其专有的Disruptor技术的市场意识，并在现有目标细分市场中确认技术的采用，同时继续采取举措扩大该技术范围。在食品和饮料加工领域，市场地位将得到进一步加强。

## Ahlstrom-Munksjö出售其玻璃纤维增强业务

12月31日，Ahlstrom-Munksjö将其在芬兰Mikkeli的玻璃纤维增强业务出售给Vitrulan Composites Oy (Vitrulan Group的全资子公司，也是家族工业控股公司Adcuram Group的一部分)。

Ahlstrom-Munksjö的Mikkeli工厂主要生产玻纤基和碳纤基增强材料。主要产品包括特种玻璃纤维增强材料，用于风能以及其他最终用途，包括目前在Mikkeli生产的船舶和运输应用。截至2018年底，该工厂雇用了约100名员工。净销售额约为3,000万欧元，撤资不会对EBITDA产生重大影响。无债务购买价格为650万欧元。

Ahlstrom-Munksjö继续在其位于芬兰卡爾胡拉和俄罗斯特维尔的工厂生产玻纤薄毡。该公司将捍卫并提高其在玻纤薄毡领域的领导地位，该公司在玻纤薄毡领域拥有独特的技术专长和密切的客户关系。在地板应用方面，该公司是全球领导者，并打算进一步扩大其产品系列。

该交易已于2019年11月21日宣布。  
(资料来源:“www.ahlstrom-munksjo.com”)

## 推出可用于女性私密处的湿巾

玫瑰花蕾女士 (Rosebud Woman) 私密处 & 身体清洁湿巾由OEKO-TEX认证的可持续竹纤维制成

玫瑰花蕾女士私密护肤品将推出全新的，以清洁美容为灵感的私密处护理及身体清洁湿巾，现已经可以在网上以及通过Neiman Marcus, Nordstrom, Shen Beauty, The Detox Market, Well, Free People, Thrive, Take Care Apothecary 等零售店进行购买。

独立包装的清新湿巾采用OEKO-TEX认证的可持续竹纤维产品制成，在芦荟、纯净水

和金缕梅、茶树、薰衣草和H2O2的基础上加入温和但持续有效的清洁剂和调色剂。迷人的包装为外出旅行的女士提供了隐私且便携的选择，并且湿巾可用于身体的所有部位。

玫瑰花蕾女士创办人克里斯汀·玛丽·梅森 (Christine Marie Mason) 说：“我们很高兴分享我们的清新湿巾作为另一种方式以支持贯穿女性一生的生殖系统健康和自信，外阴和阴道皮肤是人体上最富吸收性的区域，因此我们开发了经OBGYN认可的，具有最高质量、安全成分的、可保持健康pH平衡的清爽湿巾。

清新湿巾添加了玫瑰花蕾女士奢华的外阴护理和私密护肤配方的成分，其中包括：Honor日常软膏，唤醒刺激性血清，舒缓镇静霜。该系列采用最纯正的植物成分。玫瑰花蕾女士(Rosebud Woman)最近在2019年的Indie美容博览会上入围三个奖项：个人私密处护理最佳产品，最佳生殖系统健康产品和最佳品牌。

(资料来源:“www.nonwovens-industry.com”)

## Fitesa收购科德宝南美卫生业务

自1985年以来，巴西工厂为卫生用品市场开发了非织造材料

全球非织造材料生产商Fitesa将收购全球技术集团科德宝在南美的卫生用非织造材料业务。Fitesa是全球卫生市场非织造材料的主要供应商之一，并打算进一步扩大其产品系列。科德宝认为出售卫生业务是成功发展这一业务的最佳机会。双方同意不透露收购价格。该交易须经反垄断部门批准。

Fitesa首席执行官Silverio Baranzano表示：“对科德宝南美卫生业务的收购为我们提供了最先进的生产设备，以及一支专业且训练有素的团队，这将有助于我们更好地满足客户的需求。”

自1985年以来，科德宝在巴西就成功地地为南美卫生市场生产了非织造材料。但是，近年来，卫生市场已从区域性市场转移到了全球性市场。“Fitesa面向全球卫生市场。在Fitesa这样的格局下，我们当前的地区业务可以在新结构中发展得更好并获得长期发展。”科德宝高性能材料首席执行官

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官Frank Heislitz博士说：“我们非常高兴与Fitesa合作，它们是卫生行业声誉良好、全球领先的参与者，其价值观与科德宝相似。对我们的员工而言，这将是一个很好的新家庭。”

销售仅限于卫生业务，这是由科德宝卫生巴西有限公司经营，公司有100名员工。成交须遵守此类交易的一般条件，包括反垄断部门的批准。

(资料来源：“www.technical-textiles.net”)

## Scavone订购Dilo生产线

针刺毡生产线将开发土工布和汽车用非织造材料

位于巴西Itatiba的Scavone已从Dilo订购了一条新的针刺生产线。

拥有126年经验的Scavone是南美最重要的纺织公司之一。自1993年进入产业用纺织品领域以来，产品组合已扩展到过滤、鞋、土工布、声学、家具和汽车领域。到目前为止，有四条非织造材料生产线。

DiloGroup工厂由纤维准备、多道梳理机和卷取机、交叉铺网机和针刺机组成。它用于将PES、PP和BiCo纤维加工成针刺毡，特别适用于土工布和汽车领域。DIL0生产线的4.0的实施提供了最佳的过程控制和监控。

(资料来源：“www.textilworld.com”)

## Sandler在Perry开工

新生产线目标卫生领域

非织造布制造商桑德勒(Sandler)在美国佐治亚州佩里(Perry)的工厂扩建项目已经破土动工。一条新的生产线计划于2020年秋季投产。

计划包括建造一座13.5万平方英尺的建筑，用于容纳生产和仓储。新大楼最终将容纳一条目标卫生领域的非织造材料生产线。这项投资将在佩里工厂的不同部门创造70个新工作岗位。

扩展其美国工厂将使Sandler能够继续在当地的市场发展。“美国制造的桑德勒非织造材料使我们能够不断发展与北美市场公司的长期业务关系。这项投资是迈向在佩里建立非织造材料生产能力中心的下

一步。”桑德勒非织造布公司总裁Tobias Baumgaertel说。

在新闻发布会上，Sandler AG总裁兼首席执行官Christian Heinrich Sandler博士对乔治亚州、休斯敦县和佩里市的当局和机构表示感谢。不过，最重要的是，他向桑德勒非织造布公司的工作人员致辞。“在过去的三年中，一支伟大的团队聚集在这里。我要感谢“佩里团队”的奉献精神、辛勤工作和对公司的忠诚。我们很荣幸你们能加入桑德勒大家庭。”

这项投资是早些时候公司成立140周年之际宣布的一项更大范围的合作投资的一部分。在接下来的两年中，桑德勒计划在德国和美国的工厂投资9000万欧元。

(资料来源：“www.convertingguide.com”)

## 旭化成医疗株式会社为Planova™过滤器新建工厂

旭化成医疗株式会社已经在日本宫崎县信冈市建设了一座新工厂，生产纤维素中空纤维膜，用于Planova病毒去除过滤器。

病毒去除过滤器用于增强生物治疗产品(例如生物制药和血浆衍生物)生产过程中的安全性。旭化成医疗以其病毒去除过滤器卓越的性能和可靠性赢得了全球客户的广泛认可——1989年推出的Planova纤维素膜过滤器，是世界上第一个专门为去除生物治疗产品中的病毒而开发的过滤器。Planova BioEX亲水PVDF(聚偏二氟乙烯)膜过滤器，可在高蛋白质浓度溶液中提供优异的病毒清除率。

随着世界范围内生物治疗药物病毒安全性标准的提高以及单克隆抗体和其他生物药物开发的推进，全球对Planova过滤器的需求有望继续增长。新工厂将使旭化成医疗能够保持稳定的产品供应并满足不断增长的需求。加上2016年在日本大分市建成的Planova BioEX过滤器工厂，新工厂将使旭化成医疗的中空纤维病毒去除膜的总生产能力提高到每年13万平方米。

旭化成医疗将根据市场需求开发高质量和高性能的产品，同时积极投资生产设施，从而继续为生物治疗产品的安全性做出更

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大的贡献。

新工厂的概况：

地点：日本宫崎县延冈市\*

产能：40,000平方米/年

\*毗邻用于纺制中空纤维和Planova过滤器的现有设施

(资料来源“www.asahi-kasei.co.jp”)

## 科德宝开发用于鞋类市场的非织造卷边材料

**非织造材料使制造商能够降低生产成本，同时增加消费者的舒适度**

科德宝高性能材料将展示一项创新产品，以满足鞋类市场的制造商和消费者不断增长的需求。创新的压接材料由非织造材料制成，将持久的高成型性和形状保持力与柔韧性完美结合。这种独特的压接材料使制造商能够降低生产成本，同时使消费者受益于舒适度的提高。

消费者越来越希望购买到更柔软，更灵活且同时又时髦的鞋子。反过来想，这对鞋类制造商在生产技术方面提出了更高的要求。科德宝创新的非织造卷边材料成功地解决了消费者的需求以及制造商面临的相关技术挑战。

与针织衬里相比，该材料的多向拉伸特性使整个鞋面区域的纵横拉伸均匀。与方向无关的图案可减少多达10%的切割浪费。

与传统的针织物基压接材料相比，更快的热塑性、成型性意味着更短的生产时间，从而大大降低了制造成本。

卷边材料可提供更好的成型性，良好的鞋面以及最佳的形状和稳定性。即使经过72个小时以上的磨损，模压鞋面仍保持其100%真实持久的形状。

而且，这种材料采用极细纤维使鞋子的设计非常柔软，提供最佳的舒适度。同时，极高的尖端稳定性为创意设计提供更大的可能性。

非织造基卷边材料的面密度显着较低，可减轻鞋子的重量，同时确保更好的形状保持力。

## 科德宝首次发布100%可生物降解的填充料

2020年1月28日在德国Weinheim，科德宝高性能材料服装公司推出了首个完全可生物降解的comfortemp®Lyocell填充料，该填充料由可持续的纤维素纤维制成，60天内可在土壤中完全降解。同时，它满足了运动和户外服装高性能隔热的所有要求。comfortemp®Lyocell填充料是科德宝与纤维制造商兰精合作的产物。

60%的服装含有聚酯，平均降解时间为500年。除了减少消耗外，更多的回收利用和提高服装的质量以确保更长的穿着时间，在服装生命周期的末期，迫切需要创新的生态解决方案。科德宝(Freudenberg)是该领域的先驱，正推出的comfortemp®Lyocell填充料，是世界上第一个可100%生物降解的填充料。它在60天内可完全生物降解，而不会污染土壤。

### 环保的生产过程

填充物基于纤维生产商兰精制造的Lyocell。莱赛尔(Lyocell)是一种纤维素纤维，由天然原料制成，采用可持续森林中的桉树木材进行环保生产。用于获得纤维的溶剂在整个生产周期中几乎可以完全重复使用，这明显优于其他纤维素纤维(如粘胶纤维)。欧盟向该生产过程颁发了欧洲环境奖。“这项创新是科德宝和兰精之间深入研究和紧密合作的结果。作为可再生原料木材中特种纤维的生态责任制制造商，兰精集团是科德宝的理想合作伙伴。”科德宝高性能材料服装全球战略营销负责人Benoit Cugnet说道。

### 温暖，柔软，轻便

由天然原料制成的细纤维及其创新的加工工艺使comfortemp®Lyocell填充物像羽毛一样轻巧，与合成填充物一样有效。隔热材料既保暖又柔软、透气。由于其出色水分管理功能，该填充物可吸收高达45%的人体水分，从而最大程度地减少了汗水。隔热材料还具有防水性，可快速干燥，抗静电并符合OEKO-TEX 100标准。因此，comfortemp®Lyocell填充物可以满足对运动和户外服装的高要求。“尽管终端消费者通常很少看到甚至购买时不会考虑填充物，但是它起到了决定性的作用。毕竟它需要在各种气候条件下提供保护作用，并



# 市场动态

需要能够适应各种体育活动。”全球战略营销主管Benoit Cugnet解释说。

## 质量稳定，易于加工

团聚在一起的填充物可以防止纤维钻毛，该数据由实验仪器提供。这意味着该行业的时间和成本都将减少，而终端消费者也不会因此而陷入困境。

(资料来源“www.freudenberg-pm.com”)

## 兰精的中国生产线全面复工

由于新型冠状病毒流行性疾病蔓延，导致交通管制，原材料供应短缺，兰精先前减产

在经历中国南京工厂暂时的减产之后，兰精公司目前再次加大了所有生产线的生产，以达到全部产能。

最近，由于与新型冠状病毒疫情有关的严格的运输管控，导致重要原料的供应短缺。因此，兰精短时间内缩减了两条生产线的产量。在成功恢复对工厂所需的供应之后，兰精所有生产线现在都再次完全投入运行。

(资料来源：“www.lenzing.com”)

## Neenah将增加湿法产能

对Cranemat的投资将支持水过滤市场

Neenah的子公司Neenah技术材料宣布了一项新的投资，以提高Cranemat的生产能力，来支持水过滤市场持续强劲的增长。

“快速工业化和人口发展等因素导致全球对清洁水的需求不断增长，这增加了对有效反渗透和其他过滤解决方案的需求，”全球过滤事业部营销副总裁Christoph Stenzel说，“这项投资表明了我们对全球战略客户坚定的承诺，以支持这一类别的快速增长，以及向新客户和新领域扩展的绝佳机会。”

Cranemat是Neenah的聚酯和聚烯烃湿法非织造膜基材生产线的注册商标，该产品专门用于液体过滤和膜分离领域。Cranemat以其在膜铸造过程中的品质可靠性和均匀性而著称，有助于提高膜的性能和效率。Cranemat在平板、螺旋缠绕元件、MBR的板框和圆盘过滤中具有广泛的用途，它具有多种等级，专为微滤、超滤、纳滤和反向渗透而设计。这些过滤器用于盐，微咸水和工业生产用水的脱盐，以及电子、乳

制品、果汁、电子涂层、采矿、医疗和制药等行业的脱盐。

总部位于马萨诸塞州匹兹菲尔德的Craneman业务于2014年被Neenah收购，自那时以来一直稳定增长。质量的不断提高以及客户不断增长的需求导致对Neenah的Cranemat产品的需求不断增加。利用现有的闲置机器，通过适度的资本投资，新增产能将几乎是现有产能的两倍，并在2020年底前可投入使用。

(资料来源：“www.nonwovensnews.com”)

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开幕式上，Ramina欢迎来自世界各地的宾客，并展示了生产线的运行，使其可以与思考，设计和实现这一创新技术的工程师们一起分享。荣幸地，这项活动由Grantorto市市长进行剪彩，并充分显示了Ramina愿意通过提供一种非常有效和竞争力的产品来找到自己在这一市场中的定位。

(资料来源：“www.nonwovens-industry.com”)

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土耳其Eskisehir的Felix Nonwovens公司生产纺粘非织造材料、薄膜和层压非织造产品，主要服务于卫生和医疗行业。其主要产品包括聚丙烯纺粘非织造材料，用于疏水服装面料或亲水悬垂层压板。它的膜可以由聚乙烯或聚丙烯制成，也可以完全阻隔细菌和病毒，并且它透气。在后期，这些非织造材料与阻隔层或透气膜粘合，通过层压方式形成多层结构。

Felix最近投资了一个新的热熔胶层压系统，该系统能够增加SFS透气阻隔AAIM 3级和4级服装面料以及AAIM 4级亲水性外科悬垂产品的生产能力。“除此之外，我们现在还可以提供其他用于该行业的副产品，如mayo工具台盖、切口膜、工具台盖、OP胶带和其他双面胶带以及袋子。”Felix的Ali Serdar Serteser说。

由于有可能与医用纺织品转换设备垂直整合，Felix还可以提供半成品或成品服装、洞巾和包装。“这使我们的客户和合作伙伴能够更灵活地满足他们的需求。我们能够提供更OBL，私人标签服务，作为我们的主要业务也仍然将继续向市场提供高品质的面料”他补充说。

(资料来源：“www.nonwovens-industry.com”)

## 市场趋势

### 巴西将建设一座50万吨溶解木质纤维素的工厂

木质纤维素纤维的全球市场领导者兰精集团 (Lenzing) 与南半球最大的工业化人造板生产商杜拉特克斯 (Duratex) 宣布, 他们将在巴西圣保罗附近的米纳斯吉拉斯州建造一座产能为50万吨溶解木质纤维素的工厂。该工厂计划于2022年上半年启动。在合资企业中, Lenzing持有51%的股份, Duratex持有49%的股份。预期的工业资本支出约为13亿美元 (基于当前汇率和常规退税额)。该项目通过长期债务融资。相应的融资合同预计在2020年第一季度末签订。

溶解木质纤维素新工厂将根据其sCore TEN公司的战略, 加强Lenzing集团的向后整合和成本优势, 以及特种纤维的增长。该单线溶解木质纤维素厂的理论年产能为50万吨, 将是同类工厂中规模最大、最具竞争力的生产设备。溶解木质纤维素是生产Lenzing生物基纤维所需的关键原料。该合资企业将所有溶解木质纤维素供应给Lenzing集团。

木质纤维素纤维为纺织工业的可持续发展做出重要贡献。根据其企业战略sCore TEN, Lenzing集团致力于推动该市场的有机增长。“通过这项投资, 我们将更具竞争力, 行动更加独立, 从而巩固我们的市场地位。Lenzing和Duratex的主要股东之间相互信任和支持对该关键项目至关重要。” Lenzing集团首席执行官Stefan Doboczek说。

在规划新的生产基地时, 新企业特别重视可持续发展。该合资企业获得了FSC认证的种植园, 占地面积超过44,000公顷, 可提供必要的生物质能。这些人工林完全按照Lenzing集团采购木材和纸浆的准则和高标准运作。该工厂将是世界上生产效率和能效最高的工厂之一, 并将该基地产生多余生物质能的40%作为“绿色能源”馈入公共电网。通过这个项目, Lenzing集团为碳中和战略树立了一个里程碑。

(资料来源: "www.just-style.com")

### 海尔曼超声波宣布扩建

超声波专家将在美国总部扩建10,000平方英尺 Herrmann Ultrasonics将在伊利诺伊州巴

特利特的美国总部扩建10,000平方英尺。在进入美国市场将近30年后, 这家超声波粘合的设备制造商公司的占地面积增加到30,000平方英尺。此次扩张将支持Herrmann在未来六年的计划增长, 从而拥有更大的场地以吸纳更多的员工。

执行副总裁兼总经理Uwe Peregi说: “我们期待着更大的场地, 不仅是为了加强按时交付高质量超声波粘合设备零件的能力, 而且将能够扩大队伍, 包括吸纳更熟练、更有经验的成员。”

此次扩建还包括一个新的培训/采购中心, 用于客户研讨会和技术培训; 一个全新的包装和金属实验室, 用于材料试验和测试; 以及全新设计的办公空间。

由总承包商Reiche Construction, Inc. 负责施工, 预计在6月中旬竣工, 扩建完成后, Herrmann Ultrasonics将为客户和合作伙伴举办技术日。全天将举办超声波研讨会, 涵盖超声波粘合的各个方面。还将提供理论知识和精彩的现场演示。无论您过去是否使用过超声波粘合技术, 都将为您提供一个扩充超声波方面知识的研讨会。

Herrmann Ultrasonics通过研发最先进的技术, 提供超声波工程专业知识和整体解决方案的产品, 已成为超声粘合技术的领导者。他们专注于为各种市场提供超声焊接技术, 例如医疗、汽车、家电、电子、电池、食品和卫生行业。

凭借塑料、包装、非织造材料和新开发的金属部门的持续增长, 该公司在北美和墨西哥建立了技术中心。美国总部的扩建将使公司能够支持不断增长的市场和需求。

(资料来源: "www.herrmannultrasonics.com")

### Canopus完成扩张

印度湿巾生产商的年产能从1500万片增加到4500万片

Canopus Wet Wipes是印度卡纳塔克邦的湿巾生产商, 其产品可以用于卫材、美容、面部护理、沐浴和家庭护理等产品, 最近完成了扩张。

该工厂于2018年5月投入运营六个月后,

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公司宣布将产能从每年1500万件增加到4500万件。日前Canopus Wet Wipes拥有三台全自动机器。为了满足世界各地的各种需求，该公司推出了可连续抽取和不可连续抽取的Z形折叠机，这是一台专为Z形折叠或C形折叠而设计的机器，具有交叉折叠功能，可提供5至30片美容护理产品，以及经折叠5次的单片或双片独立包装小袋，便于携带。独立包装可供航空公司、旅行社、五星级酒店、会议室等使用。目前，该公司拥有自营品牌Canopus，其在印度广受欢迎。

该工厂位于Ramanagara区KIADB工业区Harohalli，拥有12,000平方英尺的生产基地。

Canopus脱颖而出的策略之一就是在印度推出从未在印度销售过的创新产品。这些产品包括运动湿巾、家具/玻璃清洁剂/多用途湿巾以及眼镜清洁剂，该公司称没有其他公司将其引入印度湿巾市场。

Ashok说：“我们可以快速制造并生产具有GD4认证的可冲散湿巾。” Kulkarni，产业用纺织品顾问表示：“我们可以制造可生物降解的湿巾。目前，我们有22种型号向全球市场供应，并且水和化学成分将在较长时间内保持不变而使湿巾不干燥。产品和包装质量将是我们的突出特点。印度很少有公司遵守REACH、INCA、ECHA、EUP、INDA和EDANA标准。我们的湿巾价格实惠、质量好，并且在就近的商店便于购买。”

(资料来源：“www.canopuswetwipes.com”)

### Ramina推出新生产线

**纺粘、熔喷复合生产线的新技术Leonardo 1.0于上个月在开放日首次亮相**

在2019年12月6日至9日，意大利公司Ramina在Open House上展示了纺粘、熔喷复合生产线的新技术Leonardo 1.0。Ramina的研发部门采用了这项新技术，致力于开发最先进和创新的工艺，以获得最佳且数的产品，优化能耗，减少生产线运行所需的人力，并通过性价比极高的生产线减少日常设备维护的时间。

这个概念是根据工厂安装的中试生产线提出的，该生产线由两个纺丝头和一个熔喷

头(SMS)组成，宽1.6米，不仅可以加工PP，还可以加工PET和PLA。最高速度可达1000m/min，每个纺粘头最大产能为200kg/h/m，每个熔喷头为50kg/h/m。该生产线可以提供不同的配置，最多可提供八个喷头，根据市场需求，宽度范围从1.6米到5.2米。

(下转第35页)

### 兰精投资4000万欧元进一步改善兰精工厂的生态足迹

- 建造新的空气净化和硫磺回收厂
- 进一步改善兰精工厂的废气排放值
- 实现兰精集团二氧化碳排放目标的重要步骤

兰精——兰精集团是全球气候友好型和可持续生产木质纺织纤维的领导者。兰精在去年8月宣布了其气候目标。到2030年，公司的目标是将每吨纸浆和纤维的二氧化碳排放量减少50%。到2050年，兰精集团将不再产生任何二氧化碳净排放。

兰精的管理委员会现在决定投资4000万欧元来扩大兰精的硫酸原料的生产。这是迈向气候平衡道路上的一个重要里程碑。在未来，一个新的空气净化和硫磺回收工厂将不仅优化公司对这种原材料的自给自足，提高工艺的可靠性，而且在明确的前瞻性战略的背景下，提高环境保护。

### 改善废气排放性能

新工厂代表了兰精集团对实施可持续发展战略的重要贡献，也有助于确保兰精工厂所有生产作业的环境兼容性达到更高水平。先进技术的应用将进一步提高废气排放值。此外，新设施将有助于进一步减少化石燃料的使用，因为它产生的蒸汽将被转化为电力。通过这种方式，它也将支持兰精公司在能源上的自给自足。

### 提高二氧化碳的计分卡

因此，位于兰精的生产工厂每年将减少1.5万吨的二氧化碳排放。这是公司在未来几年进一步推进其宏伟计划的重要一步，也加强了公司作为生态可持续产业驱动力的领导地位。兰精的首席执行官Stefan Doboczky说：“在这些投资的基础上，兰精正在采取下一步行动以实现其气候目

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标。与此同时，它还将以一种重要原材料方面获得显著更高的自主权。”  
(资料来源:“www.lenzing.com”)

### Veocel™引入生态护理技术，加强对可持续粘胶纤维的承诺

兰精集团宣布引进生态护理技术，以提高非织造工业用环保粘胶纤维的产量。生态护理技术的特点是以欧盟EcoLabel1的基本准则为指导的对生态负责的生产过程，这是一个环境优良的标签，并被授予在其整个生命周期中符合高环境标准的产品和服务。与普通粘胶纤维相比，采用生态护理技术制造的Veocel™特种粘胶纤维的排放和水冲击降低了50%。根据Higg MSI工具，CO<sub>2</sub>排放量和化石资源使用量约为行业平均水平的一半。

Veocel特种粘胶纤维采用生态护理技术，源于可持续管理的木材原料，非常适合婴儿、身体和家庭领域的许多非织造材料应用，特别是各种类型的干湿巾、成人和女性使用的卫生垫以及尿片。Veocel特种粘胶纤维为非织造行业的创新和可持续解决方案奠定了共同基础，并代表了莱赛尔(Lyocell)等其他纤维素纤维的多用途混合搭配。

“我们最近公布了VEOCEL的新认证标准，帮助将该品牌打造成整个价值链上的信任标签。VEOCEL的品牌标识现在可以用纯纤维素和可生物降解的混合原料制成。生态护理技术的引入是VEOCEL品牌的另一个关键突破，因为它现在使VEOCEL品牌的纤维用于更广泛的非织造产品，在行业中产生更大的可持续性影响。展望未来，采用生态护理技术的VEOCEL特种粘胶纤维将通过提供更可持续的粘胶纤维，为非织造材料应用提供一种价格合理的可持续替代品。”兰精AG全球非织造材料业务管理副总裁Jürgen Eizinger说。

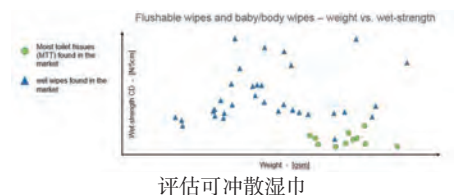
2019年对VEOCEL来说是激动人心的一年。我们将继续推动非织造材料领域的创新和透明努力，并与行业伙伴密切合作，共同创造一个更加环保的未来。”

VEOCEL特种粘胶纤维自然吸水，使液体在非织造材料产品中均匀分布。这一性能对于干湿巾和吸收性卫生用品都是必不可少

的，因为它提供了一种方便的清洁方式，同时给皮肤带来极大的舒适感。采用生态护理技术生产的纤维经过认证是清洁和安全的，并且不含任何动物源材料。根据加拿大非营利组织Canopy的Hot Button报告，兰精因其可持续的木材和纸浆采购实践而被评为全球表现最好的粘胶生产商之一。  
(资料来源:“www.textileworld.com”)

### Nextlevel湿巾——湿法成网/水刺非织造材料

Truetzschler与Voith的合作以可冲散性为目标



湿法成网/水刺非织造材料，或者如Truetzschler与Voith所说的WLS，到2013年都只是一个很小的产品。当将这项技术与应用于一个新场景时，情况发生了变化——真正的可冲散湿巾进入了大众视野。同时，这些湿厕纸占据了各个科室和药店几米长的货架。

但湿厕纸的市场有限，一次性婴儿、个人护理用品和家用湿巾的巨大需求形成鲜明对比。制作可冲散湿巾的诀窍是降低非织造材料的湿强度，使其可以分散在搅动的水中。图显示了非织造材料基可冲散湿巾和普通湿巾的不同特性。

Truetzschler的水刺装置AquaJet，可以很容易地调整纤维网加固工艺，以生产出更高强度且柔软的非织造材料。因此，大约两年前，Voith-Truetzschler开始尝试生产更强度的湿法成网/水刺非织造材料，这种非织造材料可与市场上常规的婴儿和个人护理湿巾相媲美。生产的结果就是我们熟知的“nextLevel湿巾”，其在湿强和重量方面都与现有产品相似。

但除了是一种湿巾，它也是解决当今湿巾困境的一种方法：一次性湿巾卫生、方便、价格实惠——谁真的不想使用它们呢？但它不符合可持续性发展的大趋势。更重要的是，今天的大多数产品都含有聚

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酯或聚丙烯纤维。当湿巾处理不当时，会分解成微小颗粒，即所谓的微型塑料。

(下转第30页)

### Mondi生产线制造出能完全生物降解的非织造材料湿巾

**新的梳理/干法造纸/梳理(CAC)生产线将制造出100%纤维素的非织造材料**

Mondi公司作为全球包装和纸业的领导者，开发了一种新的梳理/干法造纸/梳理(CAC)生产线，用来制造一种更可持续的三层非织造材料湿巾。这些湿巾可以满足个人卫生和清洁的需要。这条新生产线将使用100%纤维素的原料，包括来自认证来源的粘胶和纸浆，生产出完全可生物降解的非织造材料。

位于德国Ascania Mondi工厂的CAC生产线计划采用的新技术将能够使三层材料结合成为一种功能强大且稳定的复合材料。这将为高质量的生物降解湿巾提供最佳吸收和乳液承载能力，而且比可比的梳理单一结构使用的资源更少。该技术将能在生产线上生产完全可持续的非织造材料，同时使用液压压花增加柔软度和提高清洁力。

“这项创新技术意味着我们可以生产100%可生物降解的高性能非织造材料，用于生产使用更方便的湿巾，我们期待着将这项技术引入市场。” Kelly Wright解释道，她是Mondi的个人护理和部件产品专家。

这条新生产线将于2021年全面投入使用。  
(资料来源:“www.nonwovens-industry.com”)

### 工业对新型冠状病毒突然发生的响应

**非织造材料制造商、加工商和机器供应商正对中国防护服和口罩需求量激增的现象做出响应**

2月6日，迄今为止，已有28000多人感染2019年的新型冠状病毒(2019-nCoV)，并确认了由该流行病造成的死亡人数超过560例。周一，中国外交部发言人华春莹发出紧急呼吁，要求提供更多医疗用品以帮助预防冠状病毒的传播。该病毒是在中国湖北省武汉市首次发现的。

截至2月2日，华春莹报告韩国，日本，英国，法国，土耳其，巴基斯坦，哈萨克

斯坦，匈牙利，伊朗，白俄罗斯和印度尼西亚已捐赠了防疫用品。她说：“我们目前急需的是用于防控的医疗用品，包括口罩、防护服和护目镜等”。

最近几天，非织造材料和非织造产品(如口罩和个人防护服)的订单激增，在农历新年假期中暂停生产后，产量有所增加。

中国环球电视网(CGTN)采访了佛山一家生产口罩和防护服用非织造材料的工厂，该工厂正处于最大产能。该报告称，该工厂每天生产80吨非织造材料，可用于制造100万个外科口罩或40万套防护服。

该厂总经理崔延昭告诉CGTN，短短几天内收到的订单甚至超过正常情况下一个月收到的订单总数。

同时，CCTV新闻报道说，湖北省仙桃市的主要非织造材料公司已召回员工恢复假期后的生产。“我们紧急联系了所有请假的员工，让他们在2月2日下午三点返岗。2月3日早晨8点左右，我们紧急组织120名员工重返工作岗位，”一名工厂员工说。

非织造布机械专家A.Celli的技术在中国具有广泛的影响力，已在Berry Global网站的CCTV新闻播报中展出。A.Celli的营销和传播经理Simone Morgantini表示，该公司已经与多家私营公司，中国的公共城市和外交事务办公室联系并一同紧急研究防护材料，例如一次性口罩和防护服。

作为机械制造商，A.Celli能够提供提供在中国、东南亚、欧洲和美国的主要的纺粘生产商清单。这样他们就能够直接和生产一次性口罩和防护服的生产商联系。如果他们计划增加非织造材料的产量，A.Celli将提供全面的支持和技术建议。他说：“但是，我们有信心以最佳方式和尽可能短的时间解决这种紧急情况。”

### 加速生产

上周，Berry Global宣布将在中国南海和中国苏州的工厂优先生产非织造卫生保健产品和设施，这些设备是用于生产有助于预防诸如冠状病毒等空气传播颗粒的产品。

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该设备生产的非织造材料可用于口罩，N95口罩和防护服。最近在预防新型冠状病毒和其他传染病传播的计划都对这些产品提出了很高的要求。

“我们的想法是面向那些冠状病毒感染者。我们的敬业团队全天候工作以争取尽可能多地生产这些材料用以帮助防止病毒的传播。”贝利健康、卫生和专科部门总裁Curt Begle说。

Berry在南海和苏州的工厂生产纺粘、SMS、熔喷和热粘合材料。

“我们现在的重点是生产用于口罩，呼吸器，外科产品和防护服的卫生健康材料，”Berry Global全球营销传播经理艾米·沃特曼（Amy Waterman）说。“在危机期间，我们通过调整和转移卫生用品生产线来增加了这些产品的产量。”

3M在中国和其他地区应对冠状病毒突然发生时的需求增加。作为回应，该公司正在增加全球个人防护设备产品的生产，包括呼吸器（口罩）。

3M正在与客户，分销商，政府和卫生官员合作，以帮助他们获得所需的物资。该公司已在中国受影响地区捐赠了医疗用品，如呼吸器（口罩），外科口罩和洗手液，并将继续与其人道主义援助伙伴（如武汉红十字会，直接救济和MAP International）合作，提供所需的设备。

3M公司（3M的社会投资部门）给人道主义援助伙伴提供和预库存物资，这些捐赠品（包括N95或同等的呼吸器）立即被供应和部署到受影响的地区。迄今为止，除了当地3M中国捐赠的产品，呼吸器，外科口罩和洗手液外，总计超过100万美元。

根据KNH的Bobo Chang的说法，台湾台北的KNH企业正在增加其医用口罩的产量，同时减少其他类型的口罩（例如PM2.5口罩，防尘口罩和工业口罩）的产量。Chang补充说，由于原材料短缺，KNH继续专注于获取新的原材料。

同时，专门从事超声波粘合和热熔胶凹

版辊粘合技术的纺织品层压机生产商Beckmann Converting已实施了快速响应计划来支持在新型冠状病毒突然发生期间需要扩大产能的医疗产品和防护服供应商。

“我们生产某些医疗产品，防护服和特种医疗擦拭巾的客户告诉我们，近期对这些与健康相关的产品的需求可能会超过他们目前的产能，”Beckmann Converting公司销售和总监Ray Piascik说。“随着冠状病毒突然发生的持续发展，我们能够利用我们数十年的经验来提供快速响应服务，以提高产量并帮助客户保持关键产品的充足性。”

他解释说，由于最近期的需求是现有的纺织复合材料生产线，因此加快滚动试验对于通过定义制造参数并达到产品质量要求来验证可生产性至关重要。“我们可以非常快地转向补充直接生产。此外，如果病毒突然发生需要修改或开发新产品，Beckmann Converting公司可以利用快速运行的小型试用版和其他服务的功能来支持新产品开发。”

在擦拭巾方面，Diamond Wipes International宣布其HandyClean Steridol擦拭巾已证明在坚硬，无孔的表面上对类似于2019年新型冠状病毒（2019-nCoV）的病毒有效，并且可以按照“用于坚硬无孔表面的阻挡诺如病毒”的说明用于阻挡新型冠状病毒。

Diamond Wipes总裁杰西卡·卢姆（Jessica Lum）说：“我们了解这次疫情的严重性，并为拥有一款能够防止冠状病毒传播的产品感到自豪。”

HandyClean Steridol湿巾经EPA注册，并被证明可以杀死99.9%的测试微生物，包括细菌，病毒，霉菌和真菌。该湿巾在美国生产，用于疾病容易传播的地区，如医院和医疗中心，日托中心和疗养院，学校，自助餐厅，体育馆，杂货店，饭店和酒吧，公共交通枢纽以及任何其他人口稠密的地区。该湿巾不含氨、漂白剂和磷酸盐，并使用可回收的包装。

（资料来源：“www.nonwovens-industry.com”）

# 2019年中国 大陆非织造材 料产量

全国非织造科技信息中心

### 2019年非织造材料按加工工艺分类的产量比较 (2017~2019)

| 加工工艺            | 2017年         |              | 2017/2016     | 2018年         |              | 2018/2017    | 2019年         |              | 2019/2018    |
|-----------------|---------------|--------------|---------------|---------------|--------------|--------------|---------------|--------------|--------------|
|                 | 产量<br>(万吨)    | 百分率<br>(%)   | 增长率<br>(%)    | 产量<br>(万吨)    | 百分率<br>(%)   | 增长率<br>(%)   | 产量<br>(万吨)    | 百分率<br>(%)   | 增长率<br>(%)   |
| 纺熔              | <b>169.53</b> | <b>45.76</b> | <b>+13.02</b> | <b>177.93</b> | <b>44.93</b> | <b>+4.96</b> | <b>186.35</b> | <b>44.26</b> | <b>+4.73</b> |
| 其中：纺粘(含纺粘与熔喷复合) | 163.8         | 44.21        | +13.00        | 171.9         | 43.41        | +4.95        | 180.02        | 42.76        | +4.72        |
| 熔喷              | 5.73          | 1.54         | +14.6         | 6.03          | 1.52         | +5.24        | 6.33          | 1.50         | +4.98        |
| 干法成网            | <b>188.17</b> | <b>50.78</b> | <b>+14.84</b> | <b>204.97</b> | <b>51.76</b> | <b>+8.93</b> | <b>221.15</b> | <b>52.53</b> | <b>+7.89</b> |
| 针刺              | 80            | 21.59        | +7.09         | 84.79         | 21.41        | +5.98        | 88.96         | 21.13        | +4.92        |
| 化学粘合            | 13            | 3.51         | +4            | 13.50         | 3.41         | +3.85        | 14            | 3.33         | +3.71        |
| 热粘合             | 18.5          | 4.99         | +22.51        | 20            | 5.05         | +8.11        | 21            | 4.99         | +5.00        |
| 水刺              | 75            | 20.24        | +25.21        | 85            | 21.46        | +13.33       | 95.5          | 22.68        | +12.35       |
| 缝编              | 1.67          | 0.45         | +1.21         | 1.68          | 0.42         | +0.6         | 1.69          | 0.40         | +0.60        |
| 干法造纸            | <b>8.8</b>    | <b>2.38</b>  | <b>+2.33</b>  | <b>9</b>      | <b>2.27</b>  | <b>+2.27</b> | <b>9.2</b>    | <b>2.19</b>  | <b>+2.22</b> |
| 湿法成网            | <b>4</b>      | <b>1.08</b>  | <b>+12.68</b> | <b>4.1</b>    | <b>1.04</b>  | <b>+2.5</b>  | <b>4.3</b>    | <b>1.02</b>  | <b>+4.80</b> |
| 合计              | <b>370.5</b>  |              | <b>+13.65</b> | <b>396</b>    |              | <b>+6.88</b> | <b>421</b>    |              | <b>+6.31</b> |

### 2019年中国大陆非织造材料主要用途

|           | 2017年       |            | 2017/2016     | 2018年       |            | 2018/2017    | 2019年       |            | 2019/2018    |
|-----------|-------------|------------|---------------|-------------|------------|--------------|-------------|------------|--------------|
|           | 产量<br>(千吨)  | 百分率<br>(%) | 增长率<br>(%)    | 产量<br>(千吨)  | 百分率<br>(%) | 增长率<br>(%)   | 产量<br>(千吨)  | 百分率<br>(%) | 增长率<br>(%)   |
| 医疗卫生用品    | 1635        | 44.13      | +18.65        | 1769        | 44.67      | +8.20        | 1874        | 44.51      | +5.94        |
| 絮片        | 250         | 6.75       | +7.76         | 260         | 6.57       | +4           | 270         | 6.41       | +3.85        |
| 包装材料      | 325         | 8.78       | +9.06         | 350         | 8.84       | +7.69        | 378         | 8.98       | +8.00        |
| 擦拭清洁材料    | 411         | 11.09      | +14.17        | 451         | 11.39      | +9.73        | 531         | 12.62      | +17.74       |
| 土工合成材料    | 171         | 4.62       | +9.62         | 181         | 4.57       | +5.85        | 190         | 4.51       | +4.97        |
| 涂层复合基布    | 90          | 2.43       | +3.45         | 92          | 2.32       | +2.22        | 94          | 2.23       | +2.17        |
| 防水材料、油毡基布 | 108         | 2.91       | +9.09         | 113         | 2.85       | +4.63        | 118         | 2.81       | +4.42        |
| 家具内饰      | 79          | 2.13       | +3.95         | 81          | 2.05       | +2.53        | 84          | 1.99       | +3.70        |
| 衬布        | 50          | 1.35       | +2.04         | 51          | 1.29       | +2           | 52          | 1.24       | +1.96        |
| 鞋材        | 48          | 1.29       | +2.13         | 49          | 1.24       | +2.08        | 50          | 1.19       | +2.04        |
| 汽车内饰      | 163         | 4.40       | +10.88        | 171         | 4.32       | +4.91        | 164         | 3.90       | -4.12        |
| 过滤材料      | 276         | 7.45       | +16.46        | 290         | 7.32       | +5.07        | 300         | 7.13       | +3.45        |
| 农业        | 18          | 0.49       | +2.27         | 18.5        | 0.47       | +2.78        | 19          | 0.45       | +2.70        |
| 造纸毛毯      | 10.1        | 0.27       | +1.0          | 10.2        | 0.26       | +0.99        | 10.3        | 0.24       | +0.98        |
| 其他        | 70.9        | 1.91       | +6.78         | 73.3        | 1.85       | +3.39        | 75.7        | 1.80       | +3.27        |
| 总计        | <b>3705</b> |            | <b>+13.65</b> | <b>3960</b> |            | <b>+6.88</b> | <b>4210</b> |            | <b>+6.31</b> |

## 地区报告

总体来看，2019年中国大陆的非织造布生产情况顺利平稳，稳中有进。总产量年增长率还是达到了+6.31%。由于各种成本上升以及某些中低端产品产能过剩和过渡竞争，企业利润较之前有所下降。

### 按工艺来分：

2019年非织造材料全部工艺技术产量增加，值得一提的是干法成网。

※ 由于产能增长较快，水刺产品数量增加仍很快，达12.35%（如卫生材料、医用材料产量增大）；热粘合（特别是热风粘合），与2018年比热粘合增长5.00%。

### 按产品用途分：

- ※ 擦拭清洁材料产量增长较高，达17.74%
- ※ 包装材料产量增加达8.00%
- ※ 医疗卫生用产品产量增长达5.94%
- ※ 汽车内饰材料产量下降4.12%

### 中国大陆非织造材料进出口情况

根据中华人民共和国海关总署发布的数据：

※ 2019年出口非织造材料1050689吨高于2018年的881537吨，出口额达到31亿美元

超过2018年的27亿美元。

※ 2019年进口非织造材料126638吨高于2018年126489吨，进口额8.42亿美元高于2018年的8.27亿美元。

### 最大的5个非织造材料进出口国家或地区

※ 出口非织造材料最大的5个国家与地区的排位是日本第一，韩国第二、越南第三、美国第四、印度尼西亚第五。

※ 进口非织造材料最大的5个国家与地区的排位是台湾第一，日本第二、美国第三、马来西亚第四、沙特阿拉伯第五。

### 挑战和机遇

\*\*\* 中国大陆的非织造材料工业将面临贸易保护和单边主义严重挑战，而不确定、不稳定。

1) 非织造产业结构、产品结构和技术结构将继续调整

2) 继续强化创新（包括技术、市场和销售模式的创新）

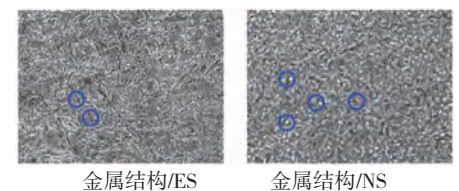
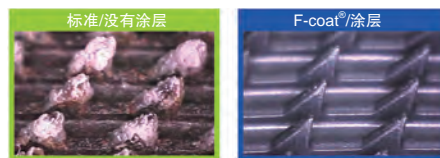
3) 提高高附加值产品所占比例

\*\*\* 鉴于中国的工业化、大规模的城镇化和可持续和谐发展战略的引导，中国非织造材料工业仍具有巨大发展潜力。

(<<< 上接44页)

罗拉：剥离辊

针布型号：ZK080RD



### 使用寿命长

=>长期质量稳定

延长更换周期

- > 问题：针布磨损导致使用寿命短
- > 影响：质量不一致，生产率下降，维修费用高。
- > 因素：高产量，细旦纤维/染色纤维。

↓  
☆ 解决方法：更好的热处理（ES）  
特级原料（NS）



针布磨损示例（大约8,200小时）

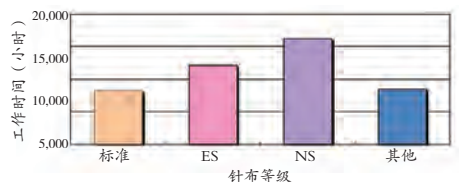
### Ex>使用寿命比较

纤维：聚酯1.7dtex~3.3dtex × 51mm（染色纤维混和）

罗拉：锡林

针布等级：标准，ES，NS

产量：50kg/hr/m



（资料来源：“ANFA会议论文集，本编已节选”）



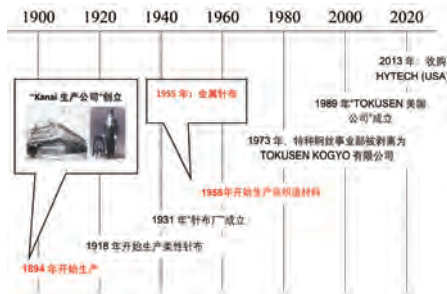
## 用于梳理机的易维护且寿命长的金属针布

Wataru Oha  
Kanai Juyo Kogyo有限公司

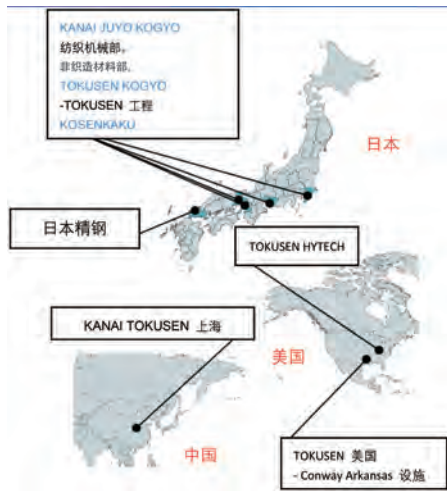
### 目录

- 1) Kanai集团简介
- 2) 金属针布
  - \* 针布制造工艺
  - \* 梳理机的类型和功能
- 3) 顾客需求
  - \* 生产效率
  - \* 易于维护
  - \* 长寿命的金属针布

### 历史



### Kanai集团



#### KANAI JUYO KOGYO

纺织机械部  
非织造材料部

#### TOKUSEN KOGYO

TOKUSEN美国  
TOKUSEN工程  
日本精钢

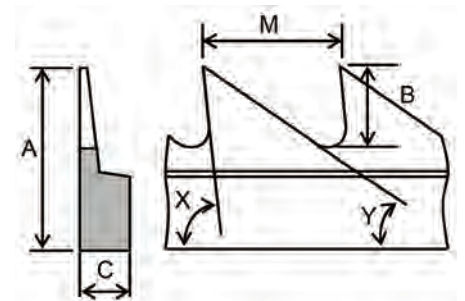
#### TOKUSEN HYTECH

KANAI TOKUSEN 上海

#### KOSENKAKU



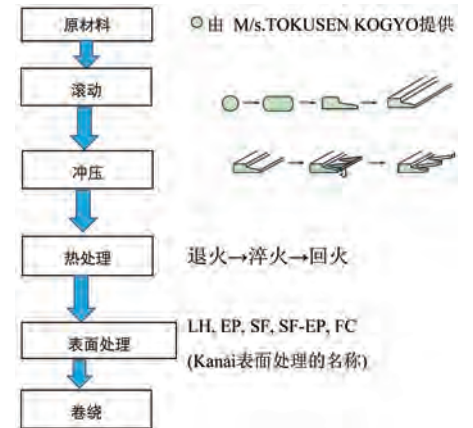
### 什么是金属针布



A: 高度, B: 齿深, C: 厚度, X: 工作角  
Y: 背角, M: 齿距 (/25.4mm)



### 制造工艺 (金属针布)

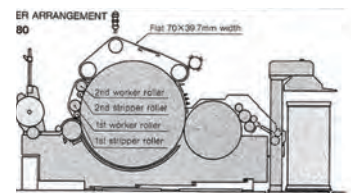


### 梳理机类型

- \* 盖板式梳理机  
=棉、合成纤维  
纤维长度25~38mm

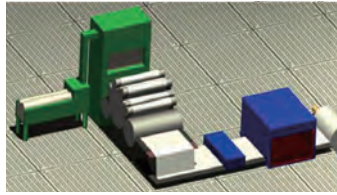


- \* 混合式梳理机  
=合成纤维  
纤维长度>50mm

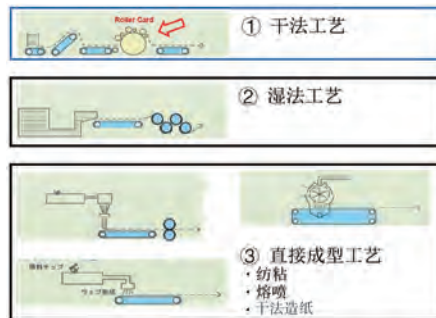


## 技术信息

- \* 罗拉式梳理机
- =非织造产品
- 纤维长度15~100mm

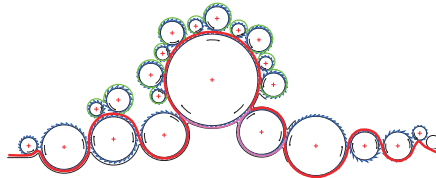


### 纤网成型过程



### 罗拉梳理机的功能

- \* 将纤维从一个罗拉传输到另一个罗拉
- \* 开松纤维块
- \* 使纤维定向或随机排列



### 客户的需求

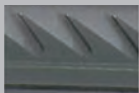
- \* 生产效率
  - 表面处理
- \* 易于维护
  - 表面处理
- \* 长寿命的金属针布
  - 原料 & 热处理

#### 表面处理

- LH 处理
- 游离氧化皮 (标准处理)



- EP处理
- 电镀



- SF处理
- 游离氧化皮+表面光滑处理



- SF-EP处理
- “SF”和“EP”的结合



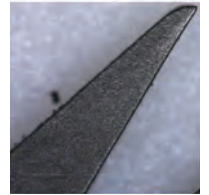
### 生产效率①

- =>装针布后快速操作
- >问题: 新针布会弄脏纤维网
- >影响: 生产和原材料损失
- >因素: 热处理产生的氧化皮

↓  
☆解决方法: 进行表面处理 (LH、EP、SF、SF-EP、FC)



有氧化皮



没有氧化皮 (SF)

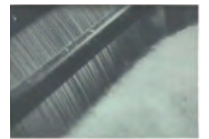
### 生产效率②

- =>提高产率
- >问题: 纤维负荷, 产生棉结
- >影响: 不良纤网和生产损失
- >因素: 细旦纤维/多功能纤维摩擦更大。金属针布规格不合适

↓  
☆解决方法: 进行表面处理 (LH、EP、SF、SF-EP、SF FC), 选择合适的金属针布规格。



纤维负荷



正常情况

### 易于维护

- =>降低生产损失, 保证质量
- >问题: 金属针布上的油积聚
- >影响: 质量、产率和维护效率降低
- >因素: 特殊油性纤维和低熔点纤维

↓  
☆解决方法: 进行表面处理。选择表面更光滑的金属针布 (FC=F-Coat)。



传输辊



锡林

### F-coat® (涂层金属针布)

- 效应实例>化学积累的比较
- 使用期限: 3个月
- 纤维: 聚丙烯、聚酯、黏胶 / 低熔点纤维

(下转第42页)

## 技术发展趋势

### 医用非织造材料的发展

人口老龄化、预防感染和慢性病的流行正在推动市场的创新和增长

医疗非织造材料的新应用和使用量的增加继续推动市场向前发展。

根据 **Smithers Pira** 最新的市场研究报告《到2024年的全球非织造材料的未来》，以价值和吨位计算，外科手术帷幕和手术服（包括其他外科手术包组件）占有所有医用非织造材料的近67%。美国研究公司报告：在北美，这些以非织造材料为基础的一次性产品占有所有手术用巾的90%，占有手术服的95%。

芬兰非织造材料生产商 **Suominen** 的品类经理 **Johanna Siren** 表示：“如果我们将一次性使用的非织造材料与传统的可重复使用的手术服和洞巾材料进行比较，我们会发现非织造材料的好处是显而易见的。”“尽管这种可重复使用的材料已经得到了发展，但研究仍然倾向于一次性手术服和洞巾，因为它们具有更坚固、可靠和可再生的抗细菌能力。”对于可重复使用的手术服，这些性能似乎会随着被润湿或反复洗涤而下降。此外，一次性材料方便使用、处理安全，也是一个经济的解决方案。”

根据 **Smithers Pira** 的研究，随着人们对非典或H1N1猪流感等传染病的恐惧日益加剧，以非织造材料为基础的口罩预计也将出现增长。到2019年，医用非织造材料的全球价值将达到12.8亿美元，并将继续以4.6%的同比增速增长，到2024年，市场价值将达到16.1亿美元。

医疗市场非织造材料的另一个增长领域是湿巾。

全球医疗用品制造商 **Medline** 最近带着FDA批准的现成的CHG材料进入了CHG(葡萄糖酸洗必泰)材料市场。用于患者术前皮肤准备，这些材料预饱和和浸渍了2%的葡萄糖酸洗必泰，它是一种以能清除皮肤上引起感染的细菌而闻名的抗菌剂，可以帮助降低手术部位感染的风险。

“在美国，每年大约发生16万到30万例手术部位感染，每次治疗的相关成

本为34407美元，” **Medline Industries ReadyCare** 产品管理总监 **Alana Cecola** 说。

“医疗保健正在寻找一种可以持续、安全和有效地提供抗菌剂的选择，以减少与手术部位感染的相关风险。作为医疗保健生产和分销的领导者之一，**Medline** 希望为他们提供一个选择。”

**Medline** 还生产各种水刺、针刺和分散型预湿个人清洁巾，这是一种更卫生、更标准化的方法，比传统的清洁方法能提供更好的皮肤护理和患者体验，**Cecola** 说。“对医疗机构来说，广泛采用预先润湿的个人清洁巾这种解决方案非常经济有效。”

据 **Cecola** 说，美国的个人清洁巾一直在稳步增长。她补充说：“其它地区的增长速度较慢，对变化的抵制更强，但有证据显示，这些变化对结果产生了影响，其它市场应在未来5至10年内实现增长。”

### 安全第一

研究表明，与可重复使用的材料相比，非织造材料的好处更多，因为以非织造材料为基础的产品更有可能减少感染实例和减少交叉污染的机会。

几十年来，**Ahlstrom-Munksjö** 一直在开发用于外科手术服、防护服、消毒包装、洞巾、口罩和工作服的非织造医用产品。

根据所需的液体防护等级，公司有一系列的产品，如SMS(纺粘/熔喷/纺粘)的基本性能，或附加的性能，如中度防静电和高度及舒适的防酒精性能。**Ahlstrom-Munksjö** 全球市场开发经理 **Melanie Burakouski** 解释说：“SMS是一种多层非织造材料，其表层和顶层是用于增加强度的纺粘聚丙烯，中间层是用于过滤的熔喷聚丙烯。”

为了防止病毒、细菌和液体的侵害，**Ahlstrom-Munksjö** 提供了一种可呼吸的病毒屏障 (BVB) 产品，它是一个三层结构，由一个水刺外层和一个透气的整体薄膜的内层组成。

去年秋天，该公司推出了下一代BVB手术用品 **ViroSel**，它是为外科手术服的最关键部位而设计的，旨在保护医疗专业人员

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并使他们感到舒适。“我们利用我们几十年的经验，创造出一种材料，可以可靠地用于生产市场上最安全、最舒适的手术服，” Burakouski说。

据Burakouski介绍，产品结构是不透水、透气和舒适的。外层具有拒水性，经久耐用。屏障层有一个重新配方的单片膜，使其不受液体、病毒和细菌的影响，而膜本身的化学成分允许湿气通过，使手术人员保持凉爽和干燥。深色内层的设计是为了减少阴影，它摸起来很柔软，长时间穿着也很舒服。

“像剖腹产、胃和心脏手术通常涉及大量的液体，而且需要很长时间才能完成。”她解释说。“这意味着防护性和舒适性对于穿着手术服的医护人员来说是必不可少的。因为病人和工作人员有可能接触到这些液体，所以控制感染是必不可少的。国际行业标准是用于测试和测量防护服(如手术服)材料对液体和血源性病原体的阻隔性能。ViroSel通过了这些严格的标准，为手术环境提供了所需的防渗保护。”

Suominen还为医疗市场提供一系列技术。一种特殊的由100%棉纤维加固而成的非织造材料，称为Webril，专为需要高吸水性和易撕裂的医疗应用而设计。“这些特性为石膏填充和伤口护理市场提供了卓越的性能。这项技术支持了临床医生在医疗市场上寻求可持续选择的愿望。” Suominen's Siren说。

该公司还生产专有的热粘合非织造材料Novonette，由大量具有高吸水性、快速释放液体特性、柔软性和悬垂性的天然纤维组成。它可以将高吸水性纤维通过热粘合，用于需要额外吸水性的应用中。

而且，作为水刺领域的全球领先者之一，Suominen可以在视觉上提供色彩能力和图案，以及将纸浆和其他非织造材料纳入医疗结构的能力。它在南卡罗来纳州白求恩市的最新湿法生产线也采用了多种原材料，为医疗市场提供独特的解决方案。

Siren指出，医用非织造材料的功能和特性因技术的不同而有显著差异。在洞巾方

面，Suominen的Fibrella Zorb+材料因其优异的性能被用于洞巾开窗区域：其吸液性能是竞争对手纺粘产品的两倍。她说：“这样可以减少术后清理时间。它也具有优异的悬垂性和舒适性，这是一个巨大的优势，例如，与干法造纸相比。”

同时，Suominen在全球范围内提供的Fibrella Perf系列产品被开发用于创伤护理产品，其柔软性、皮肤友好性和吸水性受到重视。这个系列最近被引入南美市场。Siren表示：“我们看到拉丁美洲业务增长势头强劲，因为那里有我们在巴西投资的工厂。这项投资使我们能够从工厂供应医疗产品。在那里，我们看到了传统纺织品的替代，但也看到了全新的应用领域。”

Jacob Holm集团是水刺非织造材料和成品的领先创新者。他们的非织造材料在Sontara、Sontara Beauty、SoftFlush和SoftLite等品牌的产品市场上随处可见，从卫生和消费者湿巾到医疗保健和皮肤护理，再到工业清洁。2014年，Sontara品牌被杜邦收购，这是一种独特的生产工艺，不含粘着剂、化学药品和粘合剂。根据该公司的说法，这将产生一种高纯度的材料，最大限度地减少产品污染和用户过敏反应的可能性。在这一生产过程中，Sontara可以使用多种纤维技术，从而为各种医疗保健应用提供广泛的高性能定制产品。

Jacob Holm公司首席执行官Martin Mikkelsen说：“我们独特的生产工艺和可靠的供应链确保了Sontara非织造材料能够满足医用非织造产品的最高规格要求。Sontara材料在每次使用时都是干净的，最大限度地降低了感染的风险，提供优异的尺寸强度，并为穿着者提供柔软和舒适性。”

在医疗服装方面，Sontara材料手感柔软，通过先进的材料技术，提供了透气、液体阻隔性。“Sontara良好的透气性为手术室工作人员提供了最佳的通风性能，它比市场上任何SMS产品具有更好的悬垂性，确保执行关键步骤所需的最大舒适度。” Mikkelsen解释说。

在伤口护理方面，Jacob Holm的高纯度

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Sontara材料将产品污染和过敏反应的可能性降到最低。它也是低绒的，限制了引入微粒的风险。“Sontara材料的尺寸稳定性保证了它不会过度拉伸或变形，” Mikkelsen补充道。

最近，Jacob Holm将研究重点放在开发未被满足需求的材料上。因此，其产品范围已扩大，包括医疗服装和伤口护理的其他可持续解决方案。公司目前的产品包括高达50%的可持续原材料，公司通过创新原材料和工艺来满足无塑料产品的需求。

Mikkelsen说：“随着世界范围内对可持续发展的承诺不断增强，提供具有成本效益的非织造材料，同时采用环保原材料和清洁的生产工艺，变得越来越重要。”这种全球视角的转变水刺技术的应用提供了机会。与其他技术不同的是，水刺利用高压水射流来加固纤网。这将完全从生产过程中去除粘合剂、化学药品和其他粘合剂，因此最终产品也不包含这些粘合剂和化学品。这就创造了一种可以用100%可持续的原材料，从生产开始到结束都保持洁净的环境。”

### 愈合伤口

三十多年来，科德宝高性能材料公司已将非织造材料和聚氨酯泡沫应用于医疗和伤口护理行业。它为传统和先进的伤口护理、生物活性伤口护理、造口术和敷料应用创造组件。在医疗领域，公司采用干法成网、水刺、湿法成网和泡沫法作为基础技术，这些技术与多种涂层和后整理技术相结合。科德宝高性能材料公司首席执行官Frank Heislitz博士说：“这套方案使科德宝高性能材料公司能够根据客户的需求的性能量身定制产品。”

科德宝高性能材料公司最近推出了一些创新产品。其中包括多层泡沫结构非织造材料成分与高吸水性非织造材料。亲水性聚氨酯泡沫与亲水性非织造材料复合用于创面敷料，可显著提高创面的吸收和持液性能。Heislitz博士说：“所有部件都是最佳匹配的。这是有可能的，因为科德宝高性能材料公司是市场上为数不多的几个开发和制造所用材料以及内部层压材料的供应商之一。”

客户可以选择MDI和TDI基亲水性聚氨酯泡沫。科德宝在ISO 13485条件下在洁净室制造这些高性能多层材料。

科德宝高性能材料公司还开发了更高效的聚氨酯泡沫。由于新开发的高性能配方是基于MDI聚氨酯的，科德宝高性能材料公司提供了一个优于传统TDI基聚氨酯泡沫的替代品。作为慢性静脉性腿部溃疡创面敷料的组成部分，新型MDI基聚氨酯泡沫只需几秒钟就能吸收伤口液体。它还具有比TDI泡沫高50%左右的持液能力，并在其湿态下提供更大的强度。

Heislitz博士解释说：“医疗保健和伤口护理市场非常多样化，有许多优异的产品。

“科德宝高性能材料公司专注于改善医疗结果的医疗解决方案。该公司看到了多层解决方案的机会，降低了整体护理成本，例如具有更好的愈合性能，减少了客户端的产品复杂性，简化了供应链。”

### 土耳其制造

与许多其他不同的应用一样，总部位于Gaziantep的土耳其非织造材料生产商Mogul也拥有医疗非织造材料的客户，这得益于该公司运营的各种生产技术。如今，它提供用于医疗/手术服和长袍的聚丙烯SMS纺粘产品、用于口罩的聚丙烯纺粘和熔喷产品、用于医用棉签的Aqualace（平行铺设的纺粘）产品，用于血液过滤的Mopet（100%聚酯纺粘）及其医用包装和医用服装用各种克重的Madaline产品（使用PET/PA6超细纤维）。Madaline产品本身具有94.5%的细菌过滤效率和抗过敏性能。最后，它的Durell品牌十字搭接水刺产品可用于医用胶带和绷带。

Mogul首席执行官Serkan Gogus说：“非织造材料作为一次性产品带来了成本效益，因为它一次性使用的特性有助于防止交叉污染，也带来了一些纺织品无法满足的阻隔性能。”

该公司预计市场将会增长，特别是在世界上收入增加的发展中国家，更多的一次性产品将被用于替代传统纺织品，而在发达地区，一次性产品有助于预防医院的感染。

（下转第35页）

## 产品集锦

### Patcraft开发系列非织造复合地板

双色系列是由大约70%的回收PET制成

高性能商用地板开发商Patcraft推出了其首个非织造复合地板——Dichroic。Dichroic系列旨在为商业地板创造一个创新的平台，其在选材上进行革新，融合了柔软表面的温暖性和坚硬表面的耐用性和清洁性。丰富的色彩增强视觉深度，并有助于温暖性和乐观空间的设计，该系列的全面色彩渐变创造了令人信服的深浅条纹的效果。双色系列有双面和“24x24”小方毯规格，可提供多种安装选择。

Patcraft创意和设计副总裁Shannon Cochran说：“Dichroic柔和的视觉效果是从色调条纹发展而来的，色调条纹会在空间中褪色和移动，通过模仿毛毡纹理的微妙变化来创造出美丽的深浅条纹的效果。”“Patcraft设计团队试图设计一个类似于玻璃透明效果的系列。这两种不同的形状利用一系列固体梯度来发挥光学感知。”

Dichroic是一种创新的产品，其特点是由废弃塑料制成的多层非织造复合材料，以创造其毡状结构。通过利用已转化为PET纤维的回收塑料瓶，Dichroic成分中约70%为再生的（在消费后和工业生产后），相当于每个“24 X 24”小方毯是由18个0.5升的瓶做成的。产品通过了从摇篮到摇篮的铜牌认证，并有Patcraft的环境保证作为后盾，公司将在产品使用寿命结束时回收和再利用该产品。

Dichroic系列将形状和颜色结合起来，提供多种设计选择，支持商业室内的色块和分区空间。大量的聚酯纤维有助于增强吸音效果，该系列的设计和测试符合Patcraft的高性能地板标准。Dichroic是用EcoWorx背衬制作的，产品的寿命在耐污染性、耐光色牢度、静态磨损的最大性能和外观保持上都是有限的。

(资料来源:“www.nonwovens-industry.com”)

### Wazoodle推出防水、高吸水材料

复合结构提供防护和吸收性能

拥有17年历史的Wazoodle Fabrics公司推出了一种独特的多维复合面料，具有高吸水性和防漏性。新推出的Zorb 4D有机棉防水PUL泡棉面料由多层组成。超吸水面是一种三维，窝状，柔软的100%有机棉三维

Zorb面料，有利于快速吸收并具有优越的保水性。3维 Zorb将耐用、透气的聚氨酯防水膜与背面的防滑聚酯纤维面料进行层压。由AKAS Tex制造的产品轻巧、透气、薄，产品对敏感皮肤是安全的，其吸收液体的速度比其他材料（竹、棉、编织麻）快很多倍。

柔软而有机的这种材料迎合了那些寻求皮肤和环境友好替代大量商用一次性用品的人。Zorb 4D在任何需要吸液的防护性防水材料的应用中都具有多种优势，如失禁内裤、卫生巾、床垫和家具套、尿片、尿片更换台、可重复使用的湿巾、宠物床上用品和防汗制品。

像所有的Wazoodle产品一样，Zorb 4D有机棉防水PUL泡棉面料是从美国采购并用美国产原材料制造的。在严格把关的环境中生产出的该产品不含有害化学物质或后整理试剂。

(资料来源:“www.nonwovens-industry.com”)

### Bouckaert将推出新设备

公司将扩大能力并进入新市场

Bouckaert Industrial Textiles宣布，在2020年1月增加三台新设备。

它的白色生产线之一将通过增加一个全新的Bematic梳理机和一个新的Shoou Shyng公司的在线上冲程针刺机，让其与现有的下冲程针刺机一起工作。尤其是针对合成纤维和玻璃纤维产品，这条针刺生产线将有效地生产从每平方米6盎司到每平方米65盎司的不同厚度的产品。

除了白色生产线的改进外，第二台新的Shoou Shyng针刺机下线了，以增加灰色和有色非织造材料的生产。

总的来说，这些改进将使Bouckaert逐步淘汰一些旧设备，并在重量、宽度和产品控制方面扩大其能力。

这些新的资本投资总额为190万美元，将使Bouckaert能够继续满足当前的市场需求，并为其未来计划进入的一些新市场打开大门。

(资料来源:“www.convertingguide.com”)

# 产品集锦

## 眼睑清洁湿巾推出

免洗配方，有助于溶解和清除眼睑和睫毛上多余的油脂和碎屑

Bruder Healthcare推出了Bruder卫生眼睑清洁湿巾。这些眼睑清洁治疗湿巾采用免洗配方，有助于溶解和清除眼睑和睫毛上多余的油脂和碎屑，改善眼部健康。经预先湿润，独立包装的湿巾具有低敏性且不含刺激性化学物质。

“Bruder卫生眼睑清洁湿巾不含茶树油或其他会产生刺痛或灼伤的成分，”销售和营销副总裁斯坦·约瑟夫(Stan Joseph)说。

“事实上，这些湿巾足够温和，适合日常使用。”

Bruder清洁眼睑湿巾一盒30片，Bruder还有清洁眼睑湿巾组合包，包括30张湿巾和1液盎司的Bruder清洁眼睑液(0.02%纯次氯酸)。同时使用这两种产品有助于保持整体眼部健康，同时改善眼部舒适度。

为了达到最佳的眼睑卫生效果，首先要用清洁的眼睑清洁湿巾轻轻擦拭眼睑和睫毛。干净的眼睑和睫毛更容易吸收抗菌的Bruder Hygienic眼睑液。清洗后，闭上眼睛喷涂一到两次眼睑液，以减少细菌和其他微生物的生长。无需冲洗。只需简单喷涂并使其干燥。

(资料来源：“www.nonwovens-industry.com”)

## Viecura集团展示制造产品

公司生产用于个人护理、孕妇和医疗需求的产品

专门的制造商Viecura集团在Hygienix上展示了其医疗用产品。在个人护理方面，Viecura可以生产失禁产品，包括可重复使用的固定裤，吸收裤，护垫和一次性用品。同时，在孕产方面，该公司可以生产用于产妇在顺产和剖腹产后的孕妇装，胎儿监护带，婴儿帽和其他辅助产品。

Viecura还可以为泌尿科，外科和术后护理，预防跌倒和医疗固定用品以及管状绷带提供定制化的产品解决方案。

(资料来源：“www.nonwovens-industry.com”)

## 研究表明Surfaceskins有助于改善医院场所的手部卫生

最近有试验表明，Surfaceskins（自消毒门推拉垫和拉手），可在几秒钟内杀死沉积的细菌，提高手部卫生意识并显著改善手部卫生。

利兹大学附属公司NIRI（非织造材料创新研究院有限公司）旗下的Surfaceskins公司，在医院进行了为期超过六个月的最新试验结果发表在《医院感染杂志》上，该公司表明，除了消除门把手污染这一潜在的手污染源外，Surfaceskins还可以通过提高手部卫生意识和依从性来控制感染。

“Surfaceskins公司一直以来都使用Surfaceskins的产品消除门和门把手上的细菌，从而防止交叉感染，在感染控制中所扮演的重要角色充满信心，但现在我们明白这也对手部卫生合规性产生了积极影响，”该公司首席执行官Brian Waligora说道，“现在这项研究已经证明了我们的最初想法，由于Surfaceskins特别重视对感染的控制，当遇到任何需要防感染的环境时，Surfaceskins已经成为被用户考虑的对象。”

这项研究是Surfaceskins与全球领先的凝胶供应商的合作，在利兹的一所大型私立医院进行实验。将Surfaceskins放在通向两个相同手术室的门上，而将电子监控的凝胶分配器放置在每个手术室门的外部。在门上配有Surfaceskins的八周内，用手凝胶分配器的使用量增加了81%。利兹大学医学微生物学教授、利兹教学医院NHS信托基金会微生物学研究与发展顾问/负责人Mark Wilcox对数据进行了评估，并将结果发表在《医院感染杂志》（第103卷，第1期，2019年9月）上。

Wilcox教授说：“我对Surfaceskins显著改善手部卫生感到印象深刻，特别是在临床环境中评估时。我一直坚信，Surfaceskins可以在医疗环境中，以及其他可能频繁接触到门把手的环境（例如洗手间，餐厅）中打破常规的手部卫生习惯，有助于预防交叉感染。”

2017年的一项基于实验室的研究已经表明，Surfaceskins可以有效抵抗常见的医院或医疗相关的病原体。该研究还发表在《医院感染杂志》上，证明了Surfaceskins

## 产品集锦

对金黄色葡萄球菌，猫杯状病毒（人类诺如病毒的替代品），粪肠球菌，大肠杆菌和沙门氏菌的功效。

“没有人喜欢触摸肮脏的门。” Waligora说，“不管你是离开公共休息室，在食物准备区附近，还是去医院或医生的办公室，你都不想触摸被频繁接触的表面（如门把手），因为这些地方很可能已经被大量人手污染。然而，这对于老年人，青少年或病人等弱势群体而言尤为重要。与医疗相关的感染（HAIs）可能是严重的，甚至可能危及生命，因此应考虑采取切实措施降低其风险。”

所有病人中有6%在住院期间会感染HAI。这给国家医疗服务体系（NHS）带来了巨大的健康负担，据报道每年在这上面花费10亿英镑，主要原因是延长了住院时间，同时每年还造成约4000人死亡。在发达国家感染率是相似的，在非洲和远东等不发达国家显著增加。

“Surfaceskins的设计主要考虑的是医院，但自该产品上市以来，我们已经意识到，综合效益只能有助于减少对全世界许多机构的患者、工作人员和访客的不必要感染。事实上，还存在着更大的市场，几乎每扇公共大门都需要防止手部的污染。”

Surfaceskins继续引起全球性关注。目前，他们在多个国家或地区（英国，远东，中东，非洲和南美洲）都签署了经销协议，（未来三年内）总销售额超过300万。为了跟上需求，Surfaceskins目前正在考虑另一轮融资。（资料来源：“www.nonwovens-industry.com”）

### TrustShield新型医用材料

该产品组合针对手术激光、化学药品和强效化疗药物提供防护

Ahlstrom-Munksjö推出了TrustShield，这是一款多功能的医用材料产品组合，可用于针对手术激光、化学药品和强效化疗药物的保护。

TrustShield产品是专门针对不断增长的市场需求而设计的。随着激光技术在许多专业领域的广泛应用，其在外科手术环境中

的发展已取得显著进步。尽管将激光用于外科手术有很多好处，但也存在风险。如果激光与可燃物接触，可能会引起手术室火灾；与皮肤接触，不仅会引起火灾，还会引起热灼伤。

“市场上大多数外科手术服和帷幕都可以保护皮肤免受激光束的照射，但是其中大多数均易燃，这就是我们制造TrustShield Laser的原因。TrustShield Laser专门设计为可抗激光的医用产品，可用于制造手术服或帷幕。为了确保患者和医护人员的安全，必须要有一件能够防止病毒，细菌和液体侵入并具有激光防护能力的手术服。” Ahlstrom-Munksjö产品平台负责人Jason Beard说。

高水平对医护人员的保护不仅在外科环境中至关重要，而且在其他使用苛刻化疗药物的医疗环境中也是如此。处理和使用化疗药物会对健康造成危害，如果医护人员接触到这些药物，大多数都被认为是有害的。TrustShield Chemo的开发旨在通过为市场上最强的化疗药物提供屏障，防止渗透。

对于那些高风险，需要大量液体的手术，TrustShield吸收性产品是终端保护和液体管理的解决方案。它具有高吸收性，即使在湿态下也能保持强度和均匀性。

TrustShield提供符合行业严格的标准、全面的产品组合，以确保最大程度地保护自己免受多种潜在的健康风险。TrustShield医用产品提供不透水级（AAMI 4级）的病毒防护，低掉屑率，经久耐用，易于转换，可防止刺破和撕裂。

“我们医疗业务部门的首要任务是提供高性能的医用产品，以全面保护全球的医护人员和患者。TrustShield是继续增强我们医疗产品组合的一个例子。” Ahlstrom-Munksjö医疗部副总裁Lionel Bonte说道。（资料来源：“www.nonwovens-industry.com”）

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