

Asia's Only Regional Bilingual Magazine for the Nonwovens Industry

Nonwovens Asia

亚洲非织造材料工业

ノンウオーブンス・アジア

부직포 아시아

不断进取 追求卓越



热风生产线
HOT AIR PRODUCTION LINE

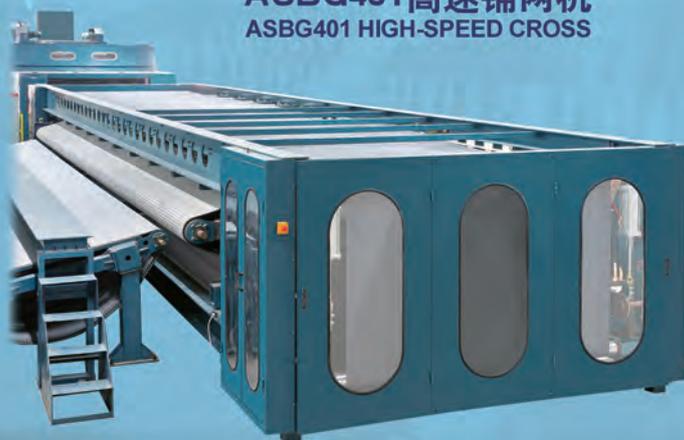
超宽幅造纸毛毯生产线——最大宽度可达14米
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ASBG003气压自动棉箱
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高速梳理机
High-speed carding machine

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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

热风定型机
Hot air setting machine

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

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

FEILONG
WUFANG



高效水刺机组
High-efficient spunlace units

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

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



高速针刺机
High-speed needle loom

机器宽幅：2.5-9M
Machine width: 2.5-9M
针刺结构：单针区、双针区、四针区
Needle structure: single board, double
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Asia Superabsorbent Polymers
Industry Association

亚洲吸水性树脂工业协会

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

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

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

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

For more information

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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m²的广东三辉无纺机械有限公司新厂区，为国家高新技术企业、广东省民营科技企业、广东省守合同重信用企业、汕头市战略性新兴产业重点培育骨干企业、汕头市装备制造业重点企业，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。

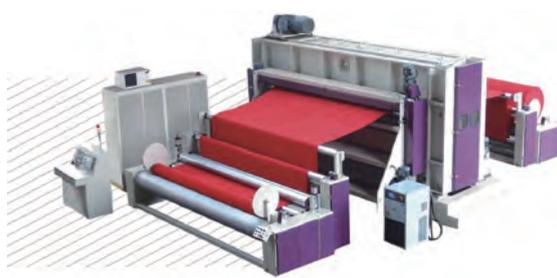
公司坚持“工艺主导、联通产研，科技创新、引领行业”的研发方针，承担多项国家、省、市科研项目，获得国家、省、市科技进步一、二、三等奖，拥有如“宽幅高频起绒针刺机”等一批具有自主知识产权的高新技术产品，多项技术填补国内行业空白，处于国内领先国际先进水平。自主研发的针刺法非织造机械有八大类50多个品种，主销国内高端市场，并已出口欧亚等地，可提供产品定位、工艺制定、设备选型、安装调试、人员培训、设备保养等交钥匙工程。

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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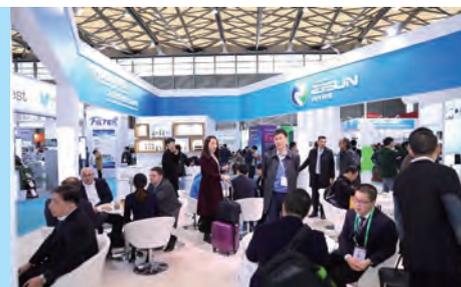


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CONTENTS

Industry News	Minutes of 2018 ANFA General/Board Meeting; Recreate History FSA 2018 ended successfully, wonderful review; ANDRITZ to supply a complete needlepunch line to Grupo SARI (Rubi Industrial), Spain; Bondex introduces Nomex® and Kevlar® spunlace fabrics for industrial applications ect.	3
行业新闻	ANFA（亚洲非织造材料协会）2018年理事会召开；再创历史 FSA 2018圆满落幕，精彩回顾；安德里茨为西班牙Grupo SARI（鲁比工业）提供完整针刺生产线；Bondex推出Nomex®和Kevlar®水刺非织造布等	29
Market News	Amazon launches natural diaper; Glatfelter completes acquisition of Georgia-Pacific's European nonwovens business etc.	11
市场动态	亚马逊推出天然尿片；Glatfelter完成对Georgia-Pacific欧洲非织造布业务的收购等	36
Market Trends	Asahi develops filter media; Fibertex to expand in Brazil etc.	16
市场趋势	Asahi 开发了过滤材料；Fibertex在巴西扩张等	40
Area Report	2017 Korea nonwovens production; 2017 Taiwan nonwovens production	18
地区报告	2017韩国非织造材料产量；2017台湾非织造材料产量	42
Technology News	Innovation in nonwovens for personal care market	20
技术信息	无纺布创新和个人卫生用品市场的发展	44
Technical Trends	Spunlace market report	23
技术趋势	水刺市场报告	47
Product News	Lydall introduces gas phase filter media; Technical absorbents unveils 100% SAF needlefelt nonwoven etc.	27
产品集锦	Lydall推出气相过滤材料；Technical Absorbents推出100%安全针刺非织造布等	50



Reader Enquiry Form/Advertisers' List	51
---------------------------------------	----

读者查询表及广告商索引	52
-------------	----

Subscription Form

订阅表

Nonwovens Asia Magazine-Asia's Only Regional Bilingual Magazine for the Nonwovens Industry
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Business News

Minutes of 2018 ANFA General/ Board Meeting

Reelecting New ANFA's officers and Board Directors for the term of January 1, 2019-December 31,2021

The 2018 ANFA General/Board Meeting was held in The Howard Plaza Hotel of Kaohsiung, Taiwan on November 1.

The total attendees were more than 30 including Dr. Kanai Hiroaki (Honorary chairman), Mr. Huang Chin-San (Chairman), Mr. Ku Pyung Kil (Vice Chairman), Mr. Chen Zhe (for Guo Kai Zhu Vice Chairman), Mr. Tsuchiya Hideo(Deputy Secretary General), Mr. Xiang Yang (Executive Officer of Working Committee), Liaison Offices and Directors.

The Agenda was as follows:

- Agenda.1 Welcome & opening speech
- Agenda.2 Briefing by Each Region
- Agenda.3 Financial report for the year 2017 and 2018 (Jan.- Sep. plus Oct.- Dec. prospect)

Agenda.4 Reelection of ANFA's officers and board directors for the term of January 1, 2019 - December 31, 2021

Agenda.5 Report of ANEX2018

Agenda.6 Plan and Schedule of ANFA Conference 2019 (India)

Agenda.7 Plan and Schedule of ANEX2021

Agenda.8 Activity Plan and Budget Plan for the Year 2019

Agenda. 9 Others.

The Board Meeting approved the reelection of ANFA's officers and Board Directors for the term of January 1.2019-December 31, 2021.

Supreme Adviser:	Tai Jun Chi
Honorary Chairman:	Wang Yanxi Huang Chin-San
Chairman:	Dr. Kanai Hiroaki (Japan)
Vice Chairman:	Ku Pyung Kil (Korea) Guo Kai Zhu (China) Lin Gow Ming (Taiwan)
Auditor:	Yabutani Norihiro
Executive Officer of Working Committee:	Xiang Yang
Secretary General:	Tsuchiya Hideo (Deputy)

Directors:

Japan:	Dr. Kanai Hiroaki	(Former ANFA Honorary chairman, ANNA, ex-Chairman) Kanai Juyo Kogyo Co., President
	Inoue Kazuhisa	(Former ANFA Vice-chairman, ANNA, ex-Chairman) Shinwa Co., President
	Yabutani Norihiro	(ANNA Chairman) TEIJIN FRONTIER CO., Director., Executive Vice President
	Miki Masato	Miki Tokushu Paper Mfg. Co., President
	Kawamura Satoshi	Japan Vilene Co., Representative Director President and CEO
China	Guo Kai-Zhu	(ANFA Vice-Chairman) Xinlong Nonwovens Co., President
	Zhao Min-zhong	Guangdong Jofo Enterprise Co., President
	Yang Changhui	Shantou Sanfai Nonwoven Machinery Factory Co., President
	Deng Weixiong	Beautiful Nonwoven Co., Ltd. President
	Ms. Ding Yike	Zhejiang Goldensea Environment Technology Co., General Manager
Taiwan	Lin Gow Ming	Freudenberg Performance Materials Freudenberg Far Eastern Spunweb Co., President
	Chen Shih Chung	(TNFIA Chairman) General manager , Unique Pretty Ind. Co., General Manager
	Ms.Tai Hsiu Ling (Vicky)	KNH Enterprise Co., General Manager
	Liang Tsun Te	Freudenberg & Vilene Nonwovens, (Taiwan) Co., General Manager
		☆A director will be appointed later by TNFIA
Korea	Ku Pyung Kil	(ANFA Vice-Chairman) Star Susemi Co., Chairman
	Park Chan Hyuk	(KNIC Chairman) Shunshn Enterprise Co., President
	Kim Young Ok	Soung Kwang Industrial Co., President
	Cho Kwan Young	Daehan I.M Co., President
	Kim Jung Yeol	Sungkwang Ind. Co., President
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India	Gupta Samiar	Business Coordination House Managing Director
Indonesia	Billy Hidjaja	(INWA Chairman) PT Hasil Damai Textile, CEO

Business News

The Financial report and Plan and schedule of ANFA Conference 2019 were approved. ANEX2021 will be held in Shanghai in April, May or June

The following meeting schedules in 2019 were confirmed

- ISO T38/WG9 Meeting (during IDEA2019)	Mar. 2019
- ANFA-INDA-EDANA Meeting (during IDEA2019)	Mar. 2019
- Global Nonwoven Summit (GNS) (during IDEA2019)	Mar. 2019
- 2019 ANFA General Board Meeting (in India)	Nov. 5 or 6 2019
- ANFA Nonwovens Conference 2019 (in India)	Nov.6-7 or 7-8 2019

- Closing and final greeting was stated by Mr. Huang Chin-San, as ANFA Chairman.
- All attendees sincerely appreciated for the strong contribution of Mr. Huang Chin-San, as ANFA Chairman for three years until the end of this year.

Recreate History|FSA 2018 ended successfully, wonderful review 5-7, December 2018|Shanghai New International Expo Centre

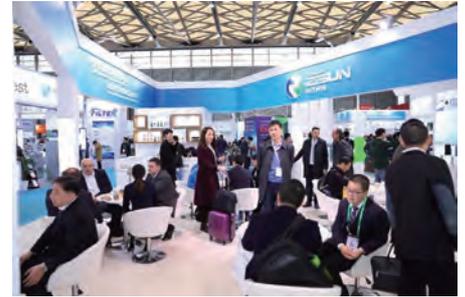
The 7th Filtration & Separation Asia and the 10th China International Filtration & Separation Exhibition ended successfully on 7th Dec, 2018. During the three days of the exhibition, the number of visitors was 8,674, an increase of 16.2% over the previous session.



Highlight 1

The exhibitors of this exhibition increased by 30%, and more products were exhibited. The booths of major enterprises were popular. The pictures below show the situation of these companies:

Chongqing Zaisheng Technology Co., Ltd.



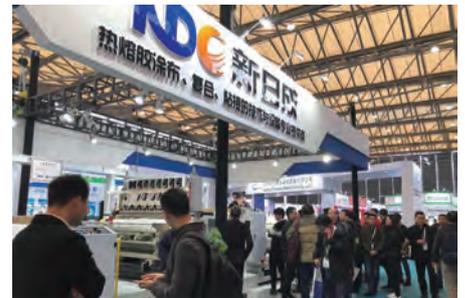
Berry Global



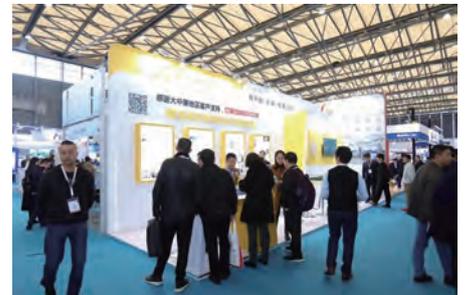
TOYOBO



NDC Spray coating System Fabricating Co., Ltd.



Graham C (Hong Kong) Ltd.



AHLSTROM-MUNKSJÖ



Wenzhou Dejia Filter Machine Co., Ltd.



Hollingsworth & Vose (Suzhou) Co., Ltd.



NEENAH FILTRATION



Highlight 2

The Concurrent event 10th China International Filtration & Separation Exhibition

FILTREX™ ASIA Co-sponsored by EDANA, China Filtration & Separation (CFS), CNTA Science & Technology Co., LTD (CNTA), and UBM China. Prior to this, FILTREX™ ASIA successfully held 11 sessions, including 6 in

Europe, 1 in Hong Kong, 1 in South Korea and 3 in India. The conference was held on December 4-5th at the Crowne Plaza Century Park Shanghai. A total of 222 audiences attended the conference in two days, including 172 domestic audiences and 49 overseas. Twenty-nine industry experts and scholars gathered here to give a speech at this session.

The Pictures of FILTREX™ ASIA



The 7th Filtration & Separation Asia was held in the W5-M8 conference room of Shanghai New International Expo Center on December 5-6th. A total of 10 professionals from Shijiazhuang Chentai Filter Paper Co., Ltd, Shanghai HOZEN Biotech Co., Ltd, Norafin Industries (Germany) GmbH, Math2Market GmbH, Low and bonar, EUROPLASMA NV, Shanghai Hongli Purification Technology co., Ltd, Palas® GmbH, ACA Systems Oy gave some wonderful speeches.

The Pictures of Filtration & Separation Asia



Business News



Next Exhibition

The 8th Filtration & Separation Asia and The 11th China International Filtration & Separation Exhibition Will be held in 2020. Please stay tuned!

Taiwan Nonwoven Fabrics Industry Association (TNFIA) The 40th Anniversary Celebration and Nonwoven Technology Forum

The Taiwan Nonwoven Fabrics Industry Association (TNFIA) held a grand series of celebrations at the Kaida Hotel in Taipei with the theme of "Together with 40 and Mastering New Opportunities". At the same time, there are nearly 400 people from Japan, India, Indonesia, Hong Kong, China mainland and other regions participated in this celebration.

The opening ceremony was delivered by the directors of Chen Shenglong, Dai Rongji and Huang Qingshan. Many former directors and the members of TNFIA attended the ceremony. The representatives of the Asia Nonwoven Fabrics Association (ANFA) also attended the event as VIPs and invited representatives of experts, scholars from industry, government, study and researchers to participate in the medical and health materials, filtration and environmental protection, which are currently the most concerned about the nonwoven industry, and enable nonwovens to have a severe international situation and competitive pressure. Sufficient resilience and innovation make Taiwan become one of the most important R&D centers for global nonwoven, allowing participants to communicate and learn from each other.

The forum invited Lin Xizhong, Vice general

manager of Creative Finishing Technology Textile Co., Ltd., to talk about creating added value for nonwoven fabrics. Peng Zhaoqun, the Chief of Technical Textile Section of Taiwan Textile Research Institute, spoke about the research and development of novel nonwovens. Dr. Gao Xinjing from the Industrial Research Institute spoke about the development and application of high performance polyphenylene sulfide (PPS) fiber filter materials. Wu Changmou, the professor of Taiwan University of Science and Technology, spoke about the development of Functional micro-nanofiber and membranes. Chen Jianhong, a professor at Kunshan University, gave a lecture on development of the high-fire proof aerogels/nonwoven composites, and Zhu Zhengkun, an assistant professor at Chinese Culture University, presented the current hot topics such as the reuse development in the nonwoven wastes. The celebrations combined with professional forums and ended under a sumptuous dinner.

The chairman of the board of directors Chen pointed out that the history of nonwoven materials in Taiwan has been more than 50 years. The types of processes have evolved from early needle-punching, melt-blown, spunbonding, to hot-rolling, thermal bonding, cast film, coating, and various technologies. Taiwan's nonwoven industry plays an important role in the development of the nonwoven industry. Under the leadership of the wise directors, the supervision and urging of the various supervisors, and the joint support of all members, the member industry led Taiwan nonwoven industry and made numerous outstanding achievements in the global nonwoven industry.

The long-term plan group in the TNFIA will expand the domestic and overseas markets, assist practitioners to expand trade, enhance the world status of nonwoven fabrics and promote foreign trade opportunities; and continue to hold international seminars, technical seminars and talent training to help upgrade Taiwan nonwoven industry knowledge level. Collaborate with members to develop standards and make the products of the industry follow. With the assistance and support of the production, government, academic, research and friendship associations, the leaders of the various committees will lead the overall nonwoven industry to rapidly improve the corporate image and industry competitiveness.



Figure 1. Chen Shenglong, the chairman of The Taiwan Nonwoven Fabrics Industry Association, invited the industry to share the 40th anniversary of the founding of the Association



Figure 2. Dai Rongji, Chairman of KNH Enterprise Co., Ltd.



Figure 3. Huang Qingshan, Chairman of Nan Liu Enterprise Co., Ltd.

Business News

The celebration was jointly delivered by Honorary Chairman Dai Rongji, Honorary Chairman Huang Qingshan and Acting Chairman Chen Shenglong. They kicked off the whole event. The forum topics include medical materials, clean filtration, and environmentally sustainable development.

Dai Rongji, founder of the Asia Nonwoven Fabrics Association (ANFA) and honorary director of the Nonwovens Association, pointed out that he was assisted by the Textile Development Association and the Foreign Trade Association. In 1992, the Association first set up a Taiwan Pavilion in the United States to exhibit high-quality nonwoven products. The nonwovens is sold to countries all over the world. Mr. Dai hopes that members of the TNFIA who want to do business in Southeast Asia and India or to manufacture in the local area must organize and take care of each other.

Huang Qingshan, the current president of the Asia Nonwoven Fabrics Association (ANFA) and honorary chairman of the Association, pointed out that 1980-1990 was the most splendid time for Taiwan economic development. Due to their resilience and willpower, Taiwan nonwoven manufacturers could occupy a place in Asia. After the financial turmoil, the downstream industry, the low price and the counterfeit goods, Nan Liu Enterprise Co., Ltd survived like the "immortal rose", and then it was necessary to diversify, increase the value, transform and upgrade, and keep up with the times. The Taiwan nonwoven manufacturers are full of vitality. In recent years, China's mainland has risen rapidly. We should adopt diversified production, develop distinctive products, increase product profit, and move toward the goal of transformation and upgrading.

Taiwan exported 400 million US dollars last year, an increase of 9.33%. It is expected to maintain growth this year as the total number of middle class in Asia increases and demand for sanitary consumables rises. Most of the increase in kinetic energy comes from the non-woven material stocks - Nanliu (6504). This company's 3 billion yuan (Yanchao new plant) is about to be put into production. After the line is added, the Nanliu will soon surpass Japan's Toray and rise to Asia's

number one nonwovens company.

The 14th presidential election was held, and Chen Shizhong, general manager of Unique Pretty IND. Co., Ltd. was elected. Mr. Chen said that in the future, it would promote of the exchange platform of the guild website, train talents, and expand overseas markets.



Figure 4. The Taiwan Nonwoven Fabrics Industry Association held its 40th anniversary. Members of the association and VIPs Japan gathered together



Figure 5. The 11th and 12th Presidents Qiu Zhengzhong (fourth from the front row), the acting director Chen Shenglong, the president of the Asia Nonwoven Fabrics Association Huang Qingshan, the foreign VIPs and the representatives of the supervisors and supervisors celebrated the 40th anniversary of the guild



Figure 6. The 11th and 12th Presidents Qiu Zhengzhong (fourth from the front row), the acting director Chen Shenglong, the president of the Asia Nonwoven Fabrics Association Huang Qingshan, VIPs and the representatives of the supervisors and supervisors celebrated the 40th anniversary of the guild.

Business News

Berry Global Group, Inc. announces specialty meltblown capacity investment

EVANSVILLE, Ind. – November 16, 2018 – Berry Global Group, Inc. (NYSE: BERY) to invest in a specialty meltblown asset to produce high efficiency filtration media serving the Asia markets, as previously announced. Current projections are for commercial production to start in 2019.

This investment, which will be a part of the Company's Health, Hygiene, and Specialties Division, is targeted to meet forecasted market and customer growth, and will be focused on premium applications in the Room Air Purification, Industrial Face Mask and Cabin Air Filtration markets.

"The filtration market is growing rapidly and we are excited to expand our capacity to accommodate the growing markets and increased demand. Our commitment is strong to this market and the entire nonwovens space. Our investment in meltblown capacity is the next step in advancing our market leading position in filtration solutions," said Scott Tracey, President of Berry's Health, Hygiene, and Specialties Division.

Berry Global Unveils Plans for Filtration & Separation Asia 2018

Meltblown technology investment in the Asia Region, technical presentation in FILTREX™ conference, and product briefings on Berry specialty materials

EVANSVILLE, Ind. – November 16, 2018 – Berry Global Group, Inc. (NYSE: BERY) a leading producer of value-engineered nonwovens and films with its Health, Hygiene, and Specialties division, has unveiled its plans for the FSA 2018 exhibition in Shanghai, China.

FSA 2018 is the leading filtration & separation topic event in Asia, and is expected to attract more than 200 exhibitors from 15 countries and regions and 10,000 visitors to the Shanghai New International Expo Centre, December 5-7.

As an established global supplier, with significant manufacturing capabilities and customers in the Asia region, Berry will

host events and briefings that link to the Company's mission of Always Advancing to Protect What's Important, including:

- Information regarding Berry's investment in a specialty meltblown asset to produce high efficiency filtration media for the Asia region, as previously announced
- Product briefings on Berry patented Meltex technology for air filtration as well as Typar and Reemay for liquid filtration applications
- A technical talk, Submicron Fibers for Liquid Filtration delivered by Berry VP Global Specialties Wendy Warner, PhD.

David Parks, Berry Executive Vice President for Global Marketing, Strategy & Innovation said, "We are eagerly anticipating the forthcoming FSA event. Asia is a growing market for our specialty materials and a key focus for the Berry team worldwide. With added capacity of a new meltblown line in China in sight for 2019, we are committed to continued rapid growth in this exciting market place. This show gives us a great opportunity to brief attendees on our advances in quality and innovation as the strategic partner for filtration media.

ANDRITZ to supply a complete needlepunch line to Grupo SARI (Rubi Industrial), Spain

International technology Group ANDRITZ has received an order from Grupo SARI (Rubi Industrial), to supply a neXline needlepunch line for the production of needlepunched felts.

The line will process several types of raw material such as polyester, polypropylene, bi-component fibers, and viscose, and will produce needlepunched felts for technical markets (automotive, construction, filtration, etc). The line is scheduled for start-up towards the end of 2018.

The scope of supply includes all of the machines and equipment – from opening and blending to the end of line. The line incorporates cutting-edge ANDRITZ technologies and equipment, such as:

- a TCF-X high-capacity chute feed
- an eXcelle Dynamic card
- a Dynamic Crosslapper
- the state-of-the-art ProDyn and Isolayer systems for weight evenness
- a drafter



ANDRITZ high-capacity needlepunch eXcelle line

- high-speed needlelooms A50.

Grupo SARI (Rubi Industrial), headquartered in Rubi, Spain, is specialized in the manufacture of nonwoven fabrics. The company has several plants in Spain and France and distributes its products mainly in Europe. It has gradually expanded its presence in various technical sectors (such as automotive, filtration, or construction) through key investments as well as increasing its R&D capabilities and continues to focus on developing its competencies in these markets to gain further relevance as a key producer of nonwovens.

In pursuit of this objective, Grupo SARI will launch this needlepunching line, with state-of-the-art ANDRITZ technology and versatile capabilities to offer a wide range of products, in order to provide the most appropriate solutions for each of the technical markets mentioned above.



Robust needlelooms for consistent quality



Grupo SARI (Rubi Industrial) nonwoven products

FOR FURTHER INFORMATION, PLEASE CONTACT
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Unicharm acquires Thai diaper maker

Deal to buy DSGCL Group adds lower-priced brands in Southeast Asia

Asia's largest hygiene products company, Unicharm Corporation has signed an agreement for it to acquire entire shares of DSG (Cayman) Limited ("DSGCL"), the holding company of DSG International, a manufacturer of diapers and other absorbent products in South East Asia. The deal, which is said to be worth \$530 million, represents one of Unicharm's largest overseas acquisitions ever, and will significantly bolster Unicharm's lineup of low- and mid-priced diapers in Southeast Asia, while also adding production capacity in new countries for the Tokyo, Japan-based company.

DSGCL Group manufactures disposable diapers for babies and adults, with locations in Thailand, Malaysia, Indonesia and Singapore. DSGCL's baby diaper brands include BabyLove, Fitti and PetPet, while its adult diaper brands include Certainty. The company is reportedly the leading adult diaper manufacturer and second largest maker of baby diapers in Thailand and has been working hard to close the gap between itself and its future owners. In 2016, the company launched Baby Love nanopower, diapers featuring a patented mega thin sheet and followed this launch with a pant style diaper.

Last year, the company reportedly achieved sales of \$253 million.

Unicharm developed its 10th Medium-Term Management Plan in 2016 with the aim to accelerate the globalization and growth of its business. Under the plan, Unicharm aims to increase its consolidated net sales of to ¥800 billion or \$7 billion, representing a compounded annual growth rate of 7%, a core operating margin of 15% and an ROE of 15%, while addressing a number of social issues. As Unicharm works towards these goals, Unicharm has proactively expanded its business especially in high growth markets in Asia, as an important part of its strategy to

Business News

concentrate on priority countries and regions.

The integration of the DSGCL Group into Unicharm will help expand and improve its product lineup, enhance its market position and realize the economies of scale in the Southeast Asia region, particularly in Thailand and Malaysia. Unicharm also expects the acquisition to generate cost and other synergies through integration of logistics and other functions and ultimately drive growth in the Southeast Asian region.

Unicharm has been steadily growing its Asian business outside of Japan. The company acquired Vietnamese hygiene products producer Diana in 2011 and Myanmar Care Products in 2014 and has invested steadily in greenfield operations in fast-growing markets like China and India in recent years. Last year, its sales outside of Japan represented just under 43% of its total business.

Earlier this year Unicharm CEO Takahisha Takahara told Nonwovens Industry that the importance of the Southeast Asian market is high due to a growing young population as well as increasing consumption of disposable products per capita. "The use of disposable diapers and sanitary products is still premature and high growth is expected," he said. "In this sense the important of Southeast Asian countries is high." (Source from: "www.nonwovens-industry.com")

Mitsui adds to capacity in Thailand

company adds 6000 tons of high performance nonwovens output

Mitsui Chemicals has added 6000 tons of capacity to its Thai subsidiary, MHM. The new line is capable of making high performance, premium nonwovens including the company's Airyfa spunbond nonwovens. Launched last year Airyfa uses proprietary spinning technology to make a high performance nonwoven that is gentle on skin, allowing it to be strong and soft at the same time.

In other news, Mitsui has expanded breathable film production in Thailand, increasing capacity of Espoir films to 10,900 tons per year. Mitsui's breathable film has been widely recognized by eastern and southeastern manufacturers for its excellent performance and good printability, both

important requirements for premium diapers, and as a result has shown healthy sales growth.

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

Andritz wetlace line up and running at Dalian Ruiguang

Flushable wipes line sets new benchmark in Asia

The Andritz neXline wetlace producing wipes at Dalian Ruiguang Nonwoven Group in China has successfully achieved full capacity of 15,000 tons per year.

Andritz has delivered a complete neXline wetlace line to Dalian Ruiguang that integrates stock preparation, wet forming, hydroentanglement, and drying. Thanks to the flexibility of the line, the customer is able to produce the full range of wipes applications, including industrial composite wipes.

>>> next 28

Bondex introduces Nomex® and Kevlar® spunlace fabrics for industrial applications

Bondex is proud to announce an expansion in our technical spunlace product line to include Nomex® and Kevlar® spunlace materials for a number of industrial applications. Dupont™ recently announced a refined value chain for Nomex® E88, Nomex® E88C and Kevlar® Z11 fabrics, whereby Dupont™ will sell Nomex® and Kevlar® fiber to Bondex to produce products to these specifications for a wide range of applications.

Bondex has developed unique expertise associated with commercial product lines which utilize Nomex® and Kevlar® fibers in other specialty applications. As part of the technology expansion plan, Bondex invested in specialty high temperature calendering which is required to produce the E88C products.

Bondex is positioned to bring value to this previous Dupont™ customer base by offering superior service levels through a streamlined supply chain. We have developed a line of products which meet the specifications of E88, E88C and Z11, which customers have been purchasing direct from Dupont™, and are in position to serve your commercial needs.

>>> next 28

Market News



ANDRITZ neXjet injector for hydroentanglement unit



Sheng Hung facilities in Taoyuan, Taiwan

ANDRITZ to supply spunlace plant to Sheng Hung, Taiwan

GRAZ, NOVEMBER 19, 2018. International technology Group ANDRITZ has received an order from Sheng Hung Industrial Co., Ltd., based in Taiwan, to supply a complete spunlace plant to be installed at their site in Taoyuan. This latest investment is now Sheng Hung's fourth ANDRITZ spunlace line and it will enable the company to further innovate its product offerings for specialty nonwovens and heavyweight fabrics. The line will start production in the second quarter of 2019.

The flexible, crosslapped web-forming plant delivered by ANDRITZ will produce multiple grades from 30 to 400 gsm and will be equipped with an engineered, high-quality aperturing/patterning solution delivered together with a Jetlace Avantage C hydroentanglement unit. The line will be completed by an efficient neXdry Avantage through-air dryer and an ANDRITZ filtration system, and thus will be able to meet the stringent local environmental requirements.

Over the past 60 years, Sheng Hung has become a market leader in the Far East for value-added, engineered nonwovens in the fields of medicine, synthetic leather, stretchable webs, and recently developed, unique fabrics for fine-art printing with a proprietary technology and used in interior decoration. "We are expanding our business opportunities while maintaining our core competences in order to create added value for our products. Our advanced quality control management and environmentally friendly products are also certified according to ISO-14001 and ISO-50001," says Keynese S. C. Chen, President of Sheng Hung.

Amazon launches natural diaper

Earth+Eden diapers are made by First Quality

Ten months after re-entering the disposable diapers market with the Mama Bear brand, Amazon has added an exclusive, premium diaper brand Earth + Eden to its site in partnership with First Quality Baby Products. Described as cruelty free, not tested on animals, made with certified sustainably sourced fluff and printed with non-toxic, water-based inks, the diapers appear to be similar to products sold by Jessica Alba's Honest Company. The diapers also feature

a printed band at the top of the product as well as a cotton blend dryness layer. They are free of natural latex rubber, chlorina and adhesives.

Diapers range in prices from 21 cents for the size one variety to 51 cents for size seven, positioning them price-wise against mainstream diaper brands like Luvs, Huggies and Pampers, significantly lower than diapers touting similar benefits like Honest, Parasol and Pampers Pure.

According to the consumer website, Just In the Earth + Eden trademark is owned by First Quality Baby Products and First Quality is responding to customer questions on the Amazon product page. The products are made at First Quality sites in Pennsylvania and Georgia.

Amazon's entry into disposable diapers has not been without hiccups. The company first entered the market with the Elements brand in 2015. The initial launch, which was met with great fanfare, promised greater transparency in ingredient sourcing and manufacturing, but the company pulled the Irving Personal Care-made products off its site just a few weeks later following consumer dissatisfaction. The e-tailer reentered the category in November through its Mama Bear private label brand. Initial customer reviews for Earth + Edan are favorable. The brand currently has a 4.4 star rating (out of five stars) based on 131 customer reviews. (Source from: "www.thefreelibrary.com")

Drylock, P&G sign global cross-license agreement

Agreement relates to companies' channel technologies

The Procter & Gamble Company (P&G) and Drylock Technologies NV (Drylock) have entered into a global cross-license agreement to expand their intellectual property rights into the so called "Channel" and "Channel" with associated wetness indicator strips technology. The "Channel" technology is used to enhance performance of absorbent hygiene products such as baby care taped diapers and pants as well as adult incontinence diapers and pants. Drylock and P&G each offer their own kind of channel technology: Drylock is offering and selling this patent protected innovation under

Market News

the brand name "Magical Tubes" while P&G commercializes its patent protected innovation under the brand name "Air Channels". The terms and conditions of this cross-license agreement in between P&G and Drylock are confidential.

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

Glatfelter completes acquisition of Georgia-Pacific's European nonwovens business

YORK, Pa., Oct. 01, 2018 (GLOBE NEWSWIRE) -- Glatfelter (NYSE: GLT) today announced it has completed the previously announced acquisition of Georgia-Pacific's European nonwovens business for \$185 million, subject to customary purchase price adjustments.

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

"This expansion of our nonwovens business represents another milestone in our transformation to become a leading global engineered materials company," said Dante C. Parrini, Chairman and Chief Executive Officer of Glatfelter. "This acquisition is an excellent complement to Glatfelter's existing business and provides immediate financial benefit. Moving forward, we will continue to focus on accelerating the growth of our engineered materials businesses."

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

Credit Suisse acted as the financial advisor in connection with the transaction, and Shearman & Sterling LLP as legal advisor. (Source from: "www.glatfelter.com")

3M offers new medical tape

3M 4076 Extended Wear Medical Tape is an acrylic-based, nonwoven tape that offers

long-term wear on skin

3M has added 3M 4076 Extended Wear Medical Tape to its portfolio. 3M's Medical Materials and Technologies business has given medical device manufacturers and engineers a nonwoven, long-term wear and acrylic-based adhesive solution designed to increase patient comfort and provide a strong and reliable bond in challenging applications.

The non-sensitizing, conformable adhesive was developed for long-term wear, providing a bond that is firm yet comfortable so patients may not even realize they are wearing a device. This allows engineers and manufacturers to focus solely on their device's design and application, spurring innovation while ensuring their timeline and budget requirements are met.

"Sticking to skin presents a major challenge to the medical device industry," says Diana Eitzman, Ph.D., director of agile commercialization, 3M Critical and Chronic Care Solutions Division. "By equipping our customers with the latest adhesive technology, we're giving them the power to solve their toughest design challenges and positively impact patients' lives globally."

Compliant with ISO:10993 and ISO:10993-10, medical industry regulations assessing a product's potential to produce irritation and skin sensitization, 4076 Extended Wear Medical Tape is approved for use on intact skin.

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

DiloGroup put into operation the latest carding technology at Kisbu Group

DiloGroup has put into operation a newly developed high capacity carding installation of 3,800 millimeters working width including MultiFeed card feeding and DON dosing opener at Kisbu A.S. in Muratli/Tekirdag, Turkey.

The fiber preparation stage includes Baltromix fibre opening, carding willow and a Mixmaster fiber blending installation of DiloTemafa. The carding installation is followed by a water entanglement line, various dryers, automatic production control system as well as cutting and winding equipment.

Market News

The complete line has been designed to produce technical products using different raw materials. The products of the new line may be used in the following applications: medicine, hygiene, industrial and automotive.

KisbuGroup was founded in 1978. Since then they have extended successfully into the textile, synthetic materials and construction industries and in 1997 Kisbu started producing nonwovens.

In the nonwovens sector the following products are available: PP Spunbond (SS, SMMS), thermal/chemical bonding, PE cast film extrusion, coating, hotmelt lamination and printing.
(Source from: "Dilo Group")

New ASTM international geosynthetics standard supports erosion control

A new ASTM International standard supports geosynthetic cementitious composite mats (GCCM), a new family of materials that can help control erosion, protect slopes and berms, and line ditches and culverts.

The new standard (D8173) identifies proper layout, installation and hydration procedures for GCCM. It also describes equipment for designers, inspectors, and installers as well as provides a checklist for contractors to use before installations.

"This standard provides details on fastening, overlapping, attachments, anchoring and other topics critical to good GCCM installation," says ASTM International member John Paulson of Dison Contracting and Supply LLC. "The new standard will help minimize or eliminate common mistakes that may be made by a first-time installer."

Paulson notes that because GCCM is unique to geosynthetics and erosion control applications, the committee hopes to develop more standards related to testing, installation, and classification.
(Source from: "www.textileworld.com")

Domtar provides sustainability update

Company has already surpassed some of its 2020 goals
Domtar Corporation released its 2018

Sustainability Update, highlighting the company's ongoing efforts to take a longer-term view of creating and preserving value for shareholders, customers, employees and communities. In an update to its 2017 report, Domtar announced that the company has met or exceeded three of the company's six 2020 sustainability goals this year.

"At Domtar, everyone has a role in sustainability because it is how we do business every day," explains John D. Williams, Domtar's president and CEO. "Sustainability is an integral part of our long-term growth strategy, which is exactly why we have been able to meet or surpass half of our 2020 sustainability goals already in 2018 - and why we are well on track to achieve the remaining."

Highlighted in the 2018 update, Domtar's commitment to integrating sustainability into its long-term growth strategy resulted in key accomplishments across the company's 2020 goals, including:

- An 18% reduction of greenhouse gas (GHG) emissions since 2010, surpassing Domtar's 2020 goal of 15%. Domtar's 2020 goal has been to reduce total direct and indirect greenhouse gas (GHG) emissions from purchased energy at pulp and paper mills 15% by 2020 from 2010 levels. Fuel switching of six power boilers from coal to natural gas over the past few years provided the majority of reductions.
- Completion of a water-cost model for Domtar's pulp and paper mills ahead of 2020 schedule. The 2020 goal to develop a model for the company's pulp and paper mills to measure and more strategically manage the full cost of using water was achieved this year. The model was informed by conducting pilot studies at five mills over the past two years to incorporate unique, site-specific water conditions. Domtar plans to begin operationalizing the full cost of water into its business decisions and conducting additional water-cost assessments at other mills in 2018.
- An increase in the level of Forest Stewardship Council (FSC) certified fiber procured for Domtar pulp and paper mills to 22% of total fiber use, exceeding the company's 2020 goal of 20%. Domtar remains committed to lowering the technical and financial hurdles to increasing forest certification in its wood procurement regions.

The 2018 Sustainability Update also

Market News

demonstrated how the company is on track to achieve its remaining 2020 goals, making notable progress in key areas, including:

- Reduction of Domtar's recordable safety incident rate to 0.78, the company's best year on record - and a 55% reduction since 2008. The company is working toward achieving its 2020 goal to reduce its recordable safety incident rate to 0.50 by increasing focus and efforts on prevention of serious injuries and eliminating non-core, high-hazard tasks where possible.
- Expansion of Domtar's EarthChoice Ambassador (ECA) program to 76% of company facilities. As of 2018, Domtar has established ECA teams in 26 locations across four countries, bringing the company closer to its goal of engaging employees in sustainability through our ECA program in every facility by 2020.
- Reduction of total waste sent to landfills from pulp and paper mills by 36% since 2013, approaching the 2020 goal of 40% reduction from 2013 levels. Progress on reducing the amount of materials our mills send to landfills is the result of source reduction initiatives and new and expanded beneficial use programs.

"At Domtar, our investment in sustainability is rooted in responsibility, efficiency and engagement," says Paige Goff, Domtar vice president of Sustainability. "Our commitment to sustainability enables us to inspire our employees, reduce risks, enhance brand reputation, drive business success and grow shareholder value."

As an accompaniment to its 2018 Sustainability Update, Domtar also created a brief video that illustrates the company's commitment to sustainability. While corporate sustainability reports are traditionally complex, Domtar's latest video brings the company's 2020 sustainability journey to life, helping make a technical subject more accessible - and inspiring - to all audiences. (Source from: "www.4-traders.com")

Mogul to exhibit at ANEX

Innovative and high-performance products target range of markets

Mogul Nonwovens is a Turkish-based international nonwoven roll good manufacturer, with four facilities in Turkey and the U.S., and ranked in global top 40 nonwovens companies by Nonwovens

Industry Magazine. Mogul is exporting majority of its capacity to more than 53 countries in 4 continents on a global basis, with consistent quality, cost-effective solution, and satisfactory service. Major markets we serve include air/liquid filtration, wet/dry wipes, automotive, bedding, artificial leather, facial mask, hygiene, dryer sheet, outdoor/sport wear, and spill control.

At ANEX, Mogul will showcase its new innovative and high-performance products in the ANEX 2018, particularly the brand-new Madaline. These products are suitable to meet the current environmental concern, automotive material selection challenge, growing population, and rising living standard in the Asian countries. Aggressive business growth in Asian region is one of the focuses in the Mogul business strategy.

Products include:

- **Madaline**® Bi-component Microfilament Hydro-entangled. Suitable for anti-mite home textile, outdoor/sport wear, artificial leather, facial mask, dry wipe, precision packaging, automotive headliner/acoustics, graphic design, and other applications.
- **Buffalo**® Bi-component (PET/CoPET) Spunbond (Core-and-sheath Round and Tipped-trilobal Shaped Filament). Suitable for air/liquid filtration, automotive, PTFE lamination, dryer sheet applications, and other applications.
- **Mopet**® 100% PET Spunbond (Round and Trilobal Shaped Filament). Suitable for air/liquid filtration, automotive, dryer sheet, and other applications.
- **Durell**® Cross-lapped Spunlace, with optional value-added chemical treatment. Suitable for artificial leather, facial mask, automotive headliner/interior, dry wipe, medical bandage, and other applications.
- **Aqualace**® Parallel-laid Spunlace. It is a globally recognized premium product in the wet wipe industry, and favored by customers in American, Europe, Middle East and Asia.
- **Ultrasorb**® PP Meltblown and Composite. A cost-effective solution for oil/chemical spill control such as in ocean/river port, oil field, petroleum industrial, machine maintenance/cleaning, automotive assembly line, and other applications. (Source from: "www.nonwovens-industry.com")

BST Group at ANEX Exhibition
Highlights for Quality Assurance in the

Market News

Nonwoven Market

The BST Group, especially BST eltromat International, BST eltromat Japan, BST eltromat Shanghai and BXD, an agent of BST eltromat Shanghai, will be presenting several highlights for quality assurance systems for the nonwoven industry at this year's ANEX2018 at booth 124 in Tokyo. The company will show reliable solutions and products for web guiding and 100% inspection. Of course, visitors can also learn more about the other product segments: register control, web monitoring, color measurement, surface inspection, color management, workflow, automation, thickness measurement and basis weight measurement.

The product sector web guiding will be in the focus at the BST eltromat. The company's customers can select among different web guiding systems based on their technical and economic requirements for cutting or converting nonwoven materials. They can choose among eco, basic and high-end solutions that can be easily adjusted to specific tasks upon request. BST eltromat's portfolio for web guiding in the nonwoven industry e.g. includes various web edge sensors, actuators, guiding devices, controllers and coatings for the guide rollers. This enables BST eltromat to cover the enormous range of materials processed in this market. In Tokyo, visitors can see a demo machine with a running web equipped with different web guiding systems and components: the CompactGuide with WideArray sensor, and the Chinese BasicGuide with infrared sensor IR 2011.

By its controller, the CompactGuide is very easy to use, which is the crucial factor for all operators. The intuitive operation is constructed in a logical way, and the operators can see at a glance whether the materials are being controlled accurately. The use of WideArray sensors from BST eltromat's subsidiary AccuWeb is very common in the nonwoven industry. Due to their large measurement area, these tried-and-tested, wear-free and thus maintenance-free web edge sensors do not need to be mechanically adjusted or aligned when used with varying web widths. During operation, they automatically compensate for environmental influences such as dust pollution or temperature fluctuation. The BasicGuide is also in use in the nonwoven industry. It is a particularly powerful, cost-

efficient and compact guiding device that can be quickly and easily put into operation via the plug-and-play function, just like the CompactGuide guiding device. Further components, such as the controller ekr 500 digital and other WideArray sensors. (Source from: "www.bst.group")

Texas funds cotton research

Government supports programs at Texas Tech
The State of Texas has funded \$5 million to boost research and education in cotton at Texas Tech University (TTU) in Lubbock, TX.

This state funding, which came through the Governor's University Research Initiative, has been matched by the University to create an institute that will focus on environmental stresses on cotton. The program will be led by Luis Rafael Herrera-Estrella, an internationally-recognized researcher in plant science and a foreign associate member of the National Academy of Sciences.

Herrera-Estrella becomes TTU's first National Academy of Sciences faculty member, joining five National Academy of Engineering members on the university faculty.

The High Plains of Texas is the world's largest contiguous cotton producing area, but is impacted by lack of rain, which affects cotton production and quality. Research on drought and other environmental stresses has high relevance to the High Plains cotton industry, as well as international significance.

The new cotton institute will focus on areas such as cell biology, stress physiology and biochemistry, bioinformatics and more, stated Eric Hequet, chair of the TTU Department of Plant and Soil Science.

Agriculture is one of the core research areas for Texas Tech, and Dr. Herrera-Estrella's research in cotton genomics will help improve the economic development of West Texas and the state, stated Dr. Lawrence Schovanec, president of Texas Tech University. Dr. Schovanec's vision is to raise the profile of TTU as an internationally-renowned research intensive university, attracting highly recognized researchers to help strengthen TTU's studies in strategic areas such as cotton, wind energy and water.

>>> next 28

Market Trends

Avgol to showcase microbial solution at Hygienix

benefIT control offers benefits to hygiene products

Avgol, a global leader in the manufacture of high performance nonwoven fabric solutions, will showcase its range of beneFIT technologies at Hygienix 2018.

The beneFIT range has been developed through Avgol's Forward Innovative Thinking (FIT) strategy, which harnesses the company's expertise in creating high-performance technologies for the baby diaper, adult incontinence and feminine hygiene markets with the needs of the consumer at the forefront.

The strategy forms the basis of Avgol's continuing research and development into revolutionary solutions that meet the ever-growing needs of the global hygiene market.

Director of Market Business Intelligence and Intellectual Property at Avgol, Nick Carter, will speak at the event on Avgol's FIT strategy and technologies. Carter's presentation will feature beneFIT Control, a new range of chemistries and processes developed by Avgol to deliver superior performance and comfort to consumers.

benefIT Control can be used in tandem with Avgol's other FIT technologies to enhance the functionality of hygiene products.

Mr Carter says, "Hygienix is an industry leading expo and a great platform for Avgol to inform and educate delegates on our latest market-leading technology developments. We look forward to meeting visitors to demonstrate how our FIT technologies can offer a customisable solution for enhanced performance and end-user comfort."

Avgol's advanced antimicrobial solution, beneFIT Control, has also been nominated for a Hygienix 2018 Innovation Award at the event. (Source from: "www.avgol.com")

Daiwabo develops polyolefin alternative

Eco Repellas offers biodegradable option for diapers and sanitary products

Daiwabo Rayon has developed a water repellent rayon material marketed under the Eco Repellas brand name. The material is coated with the fiber face of a non-flourine based material and the nonwoven fabric is able to repel weak acid in the pH that provides function other than water repellency or deodorizing.

Eco Repellas can be used in applications like diapers and other sanitary materials where it can offer biodegradability and other benefits and can be a viable alternative to polyolefin-based nonwoven fabrics.

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

Asahi develops filter media

product is a spunbond/spunlace laminate

Asahi Kasei has boosted its automotives business with the development of a filter media that combined a spunbond nonwovens laminated to a microfiber spunlaced nonwovens. The media is used in place of a textile in the suction filter. A nonwoven material is preferred in this application because when the fuel pump is exposed to high pressure and the pump modules dispensed fuel, the performance increases.

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

Fibertex to expand in Brazil

Eight months after purchase, company expanded Duci capacity 20%

Fibertex Nonwovens will increase its Brazilian production capacity by 20% to accommodate growing demand for special-purpose products for the automotive and other industries. The Denmark-based nonwovens producer purchased the site in February 2018 from Duci and has already significantly increased its sales to a number of South American customers.

"The process of taking over the factory in Brazil has far exceeded our expectations. Our South American customers have given us a really warm welcome, and we're already facing an urgent lack of capacity," says Fibertex Nonwovens CEO Jørgen Bech Madsen. "We've been planning to expand capacity since acquiring Duci, but the need has arisen faster than we anticipated, and we will begin to upgrade the existing production line immediately. We know from previous experience in expanding our other factory sites that an upgrade can increase

Market Trends

our output capacity by 20%. In addition, we will accelerate planning for other expansion projects.”

Estimated at close to DKK 15 million, the investment is expected to be fully implemented by the summer of 2019. Bech Madsen explains that Fibertex Nonwovens has already sold the extra capacity to the growing Brazilian market, which is the world’s sixth-largest and accounts for more than half of the entire South American market. The spunlacing technology made by Fibertex Nonwovens in Brazil is manufactured by just one other company in South America. Fibertex already makes this type of nonwovens at sites in France and Turkey, and its experience in this segment was a key factor in its success.

“We’ve accumulated our nonwovens experience over quite a number of years, but there is a big difference between simple high-volume products, such as geotextiles, and the special-purpose products used for filtration, acoustic solutions, interior and exterior applications in cars and other purposes, special wipes or products for the shoe-making industry. We are a global leader in special-purpose products, and obviously, work is well under way to apply our knowledge and production methods at our new facility in Brazil. They give us some unique market advantages,” Bech Madsen continues.

In fact, demand for special-purpose products is growing faster than any other part of the industry, and not just in the Brazilian market. Several other South American markets, including Argentina, are reporting strong growth in industrial production.

“Historically, the nonwovens market has grown at three times the rate of our GDP, and there is still a huge potential. The average Brazilian consumer spends only about one-third of what an American or European consumer does, and this is where nonwovens play an important role,” explains Carlos Benatto, the CEO of Fibertex Nonwovens’ Brazilian subsidiary.

That growth rate applies not least to Brazil’s large automotive industry in which virtually all American, European and Japanese carmakers play an active part. Fibertex Nonwovens is a

market leader when it comes to supplying nonwovens to the auto industry. The average European car contains about 30 m² of special-purpose nonwovens, including everything from headliners, seats and parcel trays to exterior applications used in wheel housings, motor insulation or underbody parts, and the investment in Brazil gives Fibertex Nonwovens a unique platform from which to serve existing and new automotive customers.

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

Innovation management at Battery Exhibition

Innovation Management of BST eltromat at the battery exhibition in Munich

Dr. Michael Dattner, Innovation Manager of BST eltromat International, spoke at the ees (electrical energy storage) Europe. The ees Europe is the largest and most visited international exhibition for batteries and energy storage systems in Europe. Under the title "Concepts for a Holistic Quality Assurance - Illusion or Reality?", Dr. Michael Dattner presented the company's core competences in quality assurance systems for the printing and tire industry. He showed the clear chances for a technology and know-how transfer into the battery industry with the focus on combining different solutions in a cross industry approach. The audience appreciated this approach. Further highlights were the discussion about the BST eltromat concept for inline capacity estimation. This can be done at the very beginning of the electrode production process by an isotope transmission measurement from the BST ProControl for a stochastically control and allows the estimation of the final cell capacity. For a 100% inspection concept, sensors are currently in a feasibility study driven by the innovation management.

(Source from: www.bst.group)

<<< continue 26

Hydrolox represents a new paradigm in filtration by delivering a product with dramatically improved filtration efficiency, an inherent ability to promote surface dust collection, lower pressure drop over time, and reduction in pulse cycle times. Additionally, Hydrolox HCE is available as a family of filtration media using fine fibers that deliver even higher collection efficiency performance, comparable to membrane laminated needlefelt.

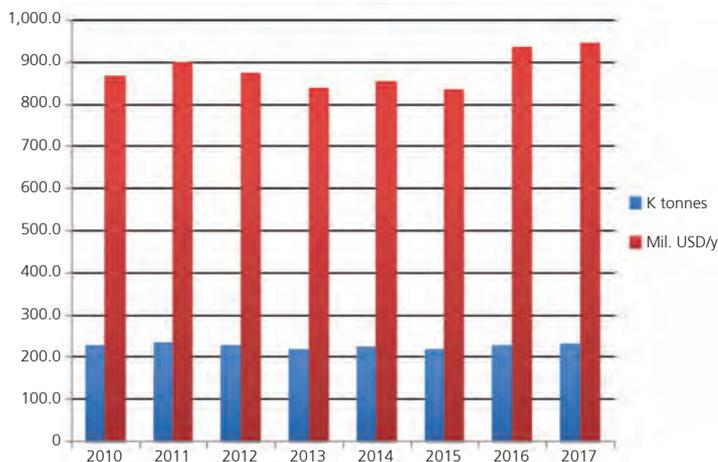
(Source from: "www.nonwovens-industry.com")

2017 Korea nonwovens production

Korea nonwovens production (2010~2017)

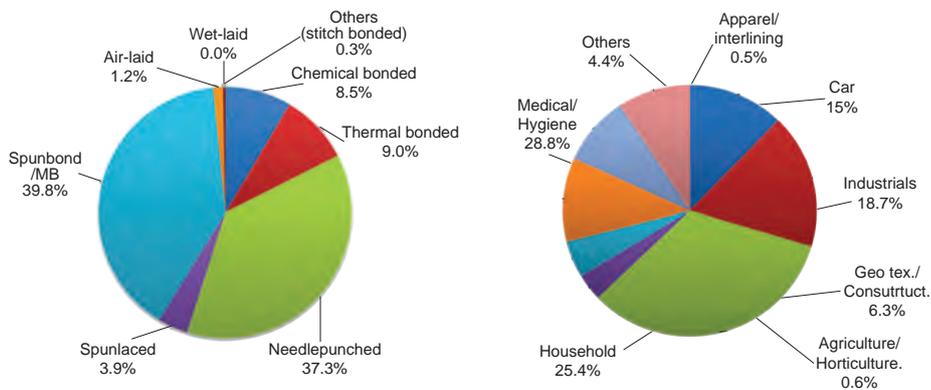
Source : KNIC

	2010	2011	2012	2013	2014	2015	2016	2017
K tonnes	224.9	233.2	226.2	217.1	221.3	216.2	225.5	227.8
Mil. USD/y	865.0	897.8	872.0	837.1	853.1	833.2	932.3	941.9
USD/Kg	3.85	3.85	3.85	3.86	3.85	3.85	4.13	4.13



Korea nonwovens production by technology & application (2017) (227.8 K tonnes)

Source : KNIC



Korea trend in export & import (2010-2017)

Source : KNIC

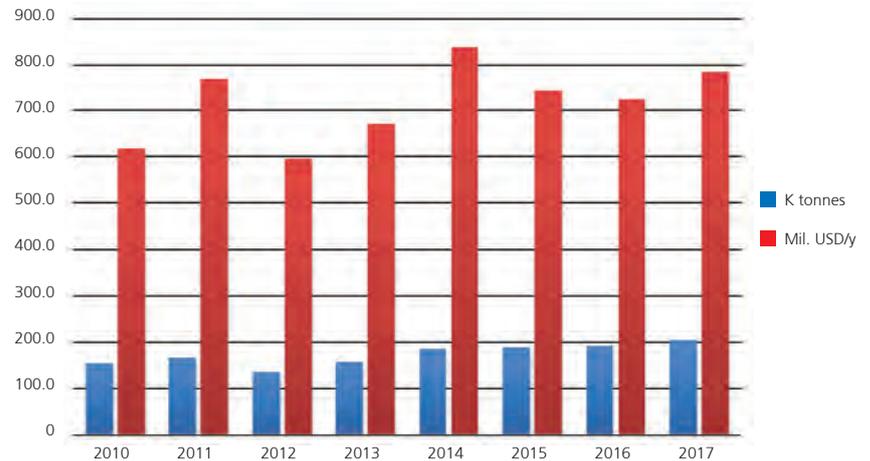
		2010	2011	2012	2013	2014	2015	2016	2017
K tonnes	Export	83.3	78.9	77.5	79.8	77.8	70.4	62.0	65.5
	Import	48.9	48.1	50.7	63.8	80.5	91.5	106.9	117.4
Mil. USD	Export	348.4	397.9	387.8	397.5	404.4	400.4	400.0	400.0
	Import	212.7	248.7	250.7	281.6	334.0	344.0	415.7	453.5
USD/Kg	Export	4.18	5.04	5.00	4.98	5.20	5.69	6.45	6.11
	Import	4.35	5.17	4.94	4.41	4.15	3.76	3.89	3.86

2017 Taiwan nonwovens production

Taiwan nonwovens production (2010~2017)

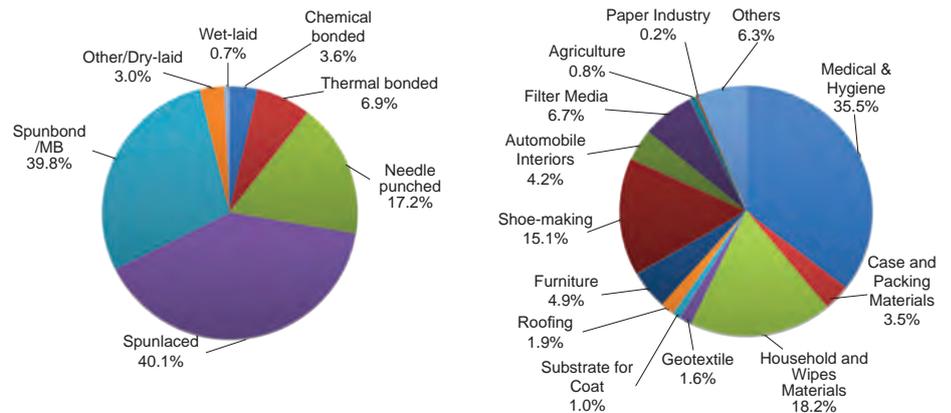
Source : TNFIA

	2010	2011	2012	2013	2014	2015	2016	2017
K tonnes	150.0	164.8	130.5	153.1	181.5	183.7	188.0	200.4
Mil. USD/y	614.1	765.1	591.8	667.2	833.4	739.3	721.8	781.7
US D/kg	4.1	4.6	4.5	4.4	4.6	4.0	3.8	3.9



Taiwan nonwovens production by & application (2017) (200.4 K tonnes)

Source : TNFIA



Taiwan trend in export & import (2011-2017)

Source : TNFIA

		2011	2012	2013	2014	2015	2016	2017
K tonnes	Export	71.6	74.0	82.3	93.4	94.0	98.2	106.0
	Import	31.4	27.8	26.6	26.7	24.7	26.6	26.1
Mil. USD	Export	322.2	324.2	338.5	369.5	378.1	372.5	407.3
	Import	150.0	130.3	122.2	122.6	110.4	103.2	103.3
USD/Kg	Export	4.50	4.38	4.11	3.96	4.02	3.79	3.84
	Import	4.78	4.69	4.59	4.59	4.47	3.88	3.96

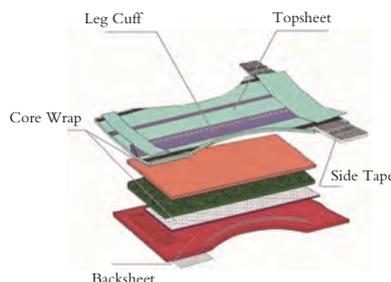
Innovation in nonwovens for personal care market

Xin Ning, PhD
Professor, Qingdao University

Nonwovens & personal care products

- Material technologies are the innovation engine for PC products, driving product differentiation and consumer preference
- Technology for marketing strength
 - ◇ Softness
 - ◇ Thinness
- Personal Care market & technology development in Asia are unique

What components go into the products?



Nonwoven applications in hygiene products

- Topsheet for baby diaper & adult incontinence
- Leg-cuff for baby diaper & adult incontinence
- Backsheet for baby diaper & adult incontinence
- Hook-base for baby diaper & adult incontinence
- Side panel & side tab for baby diapers
- Core wrap for baby diaper & adult incontinence
- Topsheet for feminine napkin and panty-liner Pouch material for napkins/liners
- Absorbent core?



elastics, etc)

Asian leadership in hygiene nonwovens

- Volume Growth
 - ◇ Biggest growth market globally
 - ◇ China, ASEAN, India.....
 - ◇ Regular as well as Premium designs
- Technology Innovation & Diversity
 - ◇ Diapers using napkin features (TABCW, Embossed and Apertured structures)
 - ◇ Differentiation & Premium features
 - ◇ Fluff less absorbent cores

Paradigm shift in product design Asia vs. NA/Europe

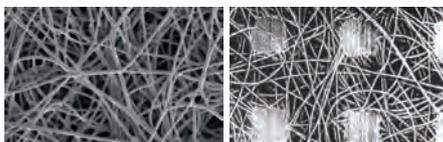
- Diversity in Nonwoven Technology:
 - ◇ Emergence of PP/PE Bico TABCW as the preferred liner material for skin contact
 - ◇ Modified PP spunbond softest in the world!
- Growth in Asian Nonwoven Supply
 - ◇ Price reduction in petroleum products
 - ◇ Abundant supply of ES fibers and spunbond modifiers
 - ◇ Product shelf prices sufficiently high...

Pursuit of product softness

- Universal consumer wants
- Asian markets drove softness improvement globally
- Structural softness derives from components & construction
- Contact with users
 - ◇ Top sheet
 - ◇ Barrier leg cuff
 - ◇ Waist elastics
- Perception by caretakers
 - ◇ Hand feel
 - ◇ Product construction integrity
 - ◇ conformable

Nonwoven categories for hygiene products

- Bonded carded web (BCW, short fibers):
 - ◇ Staple fibers from PP, PET, PP/PE bico, PET/PET bico, Rayon etc.
 - ◇ Thermal calendar bonded (TBCW)
 - ◇ Through air bonded (TABCW)
 - ◇ Hydro-entangled (Spunlace)
- Meltspun (Spunmelt, continuous fibers):
 - ◇ Spunbond (SB), Bicospunbond (PP/PE, PET/co-PET, PLA)
 - ◇ Meltblown (MB)
 - ◇ SMS
 - ◇ Other lamination combinations (with film,



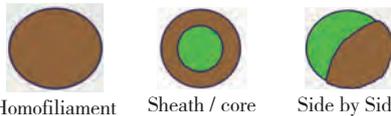
Ways to define softness

- Lab test
 - ◇ Physical property tests that relate to softness are handle-o-meter, cup crush, modulus, various bending tests, coefficient of friction
- Sensory perceptions
 - ◇ Perception of softness based on three primary attributes:
 - ◇ Surface feel
 - ◇ Flexibility
 - ◇ Visual Impression

Technology News

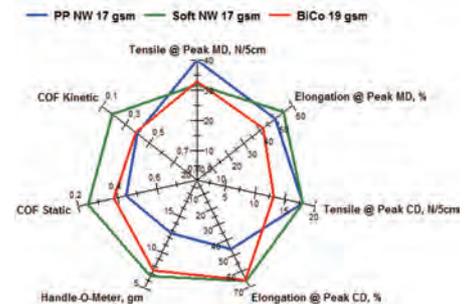
Fiber basics

- Homo-filament
 - ◇ PP, PE
 - ◇ PET, Cotton, Rayon
- Bi-component
 - ◇ PE/PP
 - ◇ PE/PET, PET/co-PET
 - ◇ PLA/PP
 - ◇ PP/PP
- Fiber properties
 - ◇ Modulus
 - ◇ Hand touch
 - ◇ Bonding Characteristics



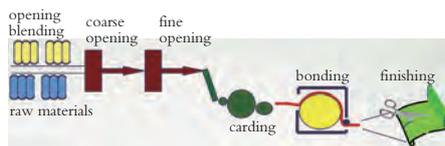
- Blends include copolymers, elastomers, and additives (Exxon, Dow, Idemitsu...)

Balanced materials performance



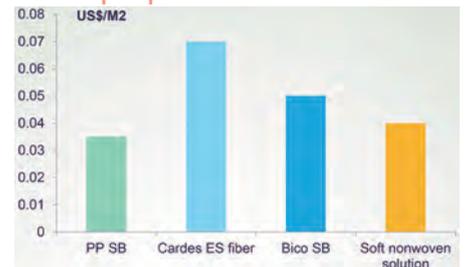
Looking for balanced properties in drape, touch, mechanical properties and cost

Solution - Bico TABCW

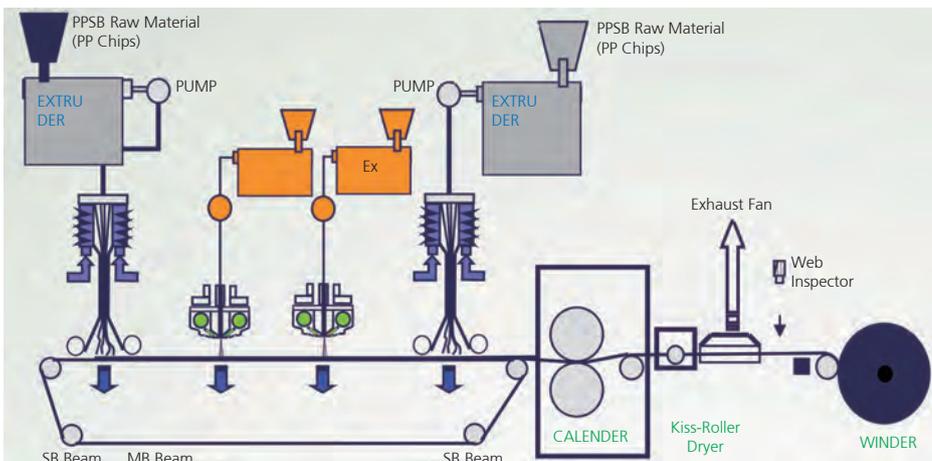


- PP/PE Bico fibers of different deniers and finishes
- PET/PE, PET/co PET Bico Fiber
- PLA and PLA bio fibers
- Blends with Cotton, Rayon, Alginate, etc...

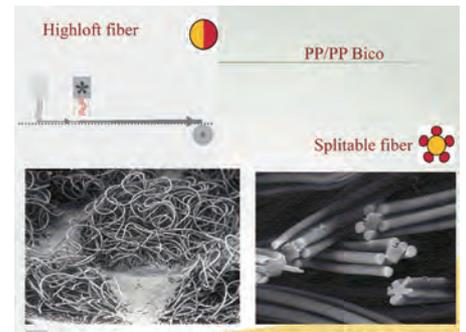
Value proposition



Solution - spunbond process



- PP resin blend formulations key to soft nonwoven properties
- Additive package to help improve hand, process and end use applicability



Pursuit of product thinness

- * Thinness = Conformity = Comfort
- * Thinness = Reduced Packaging = More Shelf Space

- Fluff/SAP Composites
 - ◇ A major invention in PC industry
 - ◇ Balance of fluid absorption & distribution
- Fluffless
 - ◇ SAP distribution & containment
 - ◇ Fluid management
 - ◇ Nonwoven absorbent on a roll

Absorbency vs thinness

Ultrathin design of 2mm special for breathable baby diapers

- Design capacity of 420 ml
 - 15/10 fluff/SAP or
 - 0/14 fluff/SAP
- Mass reduction !
- Fluid distribution in product
 - Channeled flow (ADL)
 - Wicking by fibers
- SAP containment
 - Fiber matrix
 - Lamination
 - Pockets
- Absorbent on a roll

Capacity, Wicking, Contain, Confort

Ultrasonically bonded sap/ nonwoven



US 9, 295, 593 B2 (2016)
ENVIRONMENTALLY FRIENDLY ABSORBENT STRUCTURE

SAP sheets Macroeconomic trends

Packing in roll, rolls in roll

Laminated structures
SAP between paper
SAP between TABCW
Glue vs. thermal

World First
SAP Sheet Diaper

- Performance
 - ◇ Softness
 - ◇ Thinness
- Cost-effectiveness
- Product design evolution



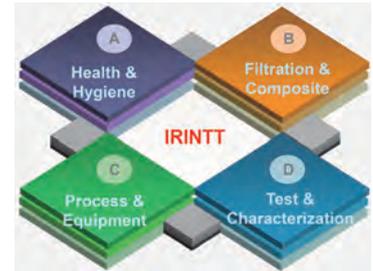
Technology innovation

- ◇ Product performance from nonwoven innovations
- ◇ Unique Asian consumer likes and market trends
- ◇ Leadership in Hygiene, and Health Care
- ◇ Leadership in Sustainability

Qingdao University

Industrial Research Institute of Nonwovens & Technical Textiles (IRINTT)

Application driven platforms/ labs



Health & hygiene platform

Programs	Materials
High Performance, Low Cost Medical Isolation Fabrics	Improved SMS
Environmentally Sustainable Nonwovens	Specialty Papers and Wipes
Multi-fiber Composite	

Filtration and composite platform

Programs	Materials
Air/Liquid Filtration Media	Surface Modified
Needle Punched Specialty Nonwovens	Engineering and Apparel Appl.
Nonwoven Composites	Automobile and Aeronautical

Process and equipment platform

Programs	Materials
Nanofiber Melt blown	Process Enhancement
High Flux E-Spinning	Productivity Enhancement
Wetlaid Nonwovens	
Nonwoven Process for Specialty Polymers	

Platforms for innovation commercialization and global reach

- Multi-discipline programs and talents
 - Open to academic and industrial partners everywhere
- (Source from: "ANFA conference paper", this article extract)

Technical Trends

Spunlace market report

Investments, product development and Asia are shaping the global marketplace

The spunlace market is growing. Despite oversupply in some regions, experts say that the industry is optimistic about future capacity utilization.

Much of this optimism is stemming from the flushable wipes sector. Rising awareness of moist toilet tissue among consumers continues to grow, thus driving nonwovens producers to expand their technologies in this part of the business.

“The flushable wipes requested by the global market have experienced a boom, and many converters are looking for wipes with such characteristics,” says Andre Michalon, sales director of Andritz Perfojet.

Andritz extended its portfolio 20 years ago with a new configuration for its hydroentanglement unit, fully adapted to the production of flushable wipes, known as Wetlace. “Our Wetlace technology based on wood pulp is known to produce proper flushable products for sustainable wipes, which is very important for the market,” he adds.

While there is a lot of interest in flushable substrates, since a flurry of new capacity is being added to serve this market area, there’s significantly more capacity in place than there is market demand for flushable wipes, according to David Price, partner, Price Hanna Consultants. “Just like in spunbond polypropylene, line capacities of new spunlace technology are typically large and not likely to be fully consumed right away as a result of these large line capacity installations,” he adds.

Some investments, particularly on the flushable side, might be ahead of the market, he points out, but there is a great deal of optimism in the wipes substrate arena both for standard wipes substrates, since those markets are growing, assisted by boarder and deeper market penetration. “I think this is fostered by improving economic conditions around the world, both in developed and developing markets, the interest in flushable wipes, market penetration in hygiene, etc., but that has led to some oversupply in some selected regions, but probably more on a temporary basis.”

One company trying to capitalize on growth in the flushable wipes category is private label wipes manufacturer EcoWipes. The Polish company, which also manufactures its own nonwovens, recently ordered its third nonwovens production line.

Because of the rising consumer interest in biodegradable materials, EcoWipes opted for a Trützschler Nonwovens and Voith wetlaid spunlacing (WLS) line. The sustainable concept developed by the two companies for manufacturing wetlaid hydroentangled nonwovens is an ideal fit for the company’s product range. It can produce both flushable wipes and recyclable and biodegradable products.

The new production line is a flexible wet-dry nonwoven facility. Voith is supplying the HydroFormer, one of the main components of the new line. With HydroFormer technology the suspension is highly diluted, so nonwovens can be produced entirely from cellulose, a renewable and cost-effective raw material.

Trützschler Nonwovens is not just responsible for the hydroentangling, drying and reeling up, but will also supply its latest high-speed card. This flexible configuration enables EcoWipes to produce a broad product range of wetlaid/spunlaced or carded/spunlaced nonwovens.

Meanwhile, Finnish spunlace specialist Suominen announced last month that it would invest €6 million in its plant in Green Bay, WI. The investment involves installation of new carding machinery on an existing spunlace production line. It will improve the capabilities of the plant and further support Suominen in the development and supply of new innovative products.

Once upgraded, the production line will improve Suominen’s ability to supply high value-added nonwovens for home care, personal care and workplace wipes as well as for hygiene applications, all categories in which Suominen seeks growth. The investment also offers more efficient supply of nonwovens for baby wipes to Suominen’s customers.

At the time of the announcement, Nina Kopola, president and CEO, said: “The investment again demonstrates that we

Technical Trends

are serious about growth, in line with our changemaker strategy. This is a clear upgrade to Suominen's current production technology base, expanding our product offering globally and increasing our production capacity. In the long run, we can increase the share of nonwovens with high value added coming out of the Green Bay plant."

Suominen operates two spunlace lines at this site.

Also investing in spunlace is Turkish nonwovens producer Mogul, which opened its latest investment, Mogul South Carolina Nonwovens, early last year. Located in Grey Court, SC, the facility operates a 3.2 meter, high-speed parallel laid spunlace line with 15,000 tons of annual capacity. The investment, Mogul's first outside of Turkey, will help meet demand for Mogul's nonwovens technologies in the wipes, hygiene, filtration and automotive markets.

By expanding into the U.S. market, the company says it has positioned itself to better serve existing customers and capitalize on the growing need for high quality nonwovens in North and South America as well as in the Asia-Pacific.

Mogul also recently increased its nonwoven spunlace production by adding a crosslapped spunlace line at its plant in Luleburgaz near Istanbul, Turkey. The crosslapped product, introduced under the brand name Durell, supplements Mogul's existing production of Aqualace parallel-laid spunlace. The new crosslapped line brings high performance products into Mogul's range of spunlace products.

According to Mogul, crosslapped spunlace technology differs from parallel laid spunlace in that the crosslapper forms a web by laying down the carded fiber at a 90-degree angle to the line's direction. In a parallel-laid process the carded fiber is laid down parallel to the line's direction. Through this crosslapping of the web, the resultant spunlace achieves similar tensile strength in both machine direction (MD) and cross direction (CD).

Mogul CEO Serkan Gogus says the new line will serve wipes, automotive, artificial leather, medical, depilation strips and other applications.

Also expanding in the market is Jacob Holm, which announced this year that it would invest more than €2 million in its Asturias, Spain, production facility. The site, which was acquired from DuPont in 2012, manufactures Sontara spunlace nonwovens. The expansion will increase the number of products made at the site using newly installed production technology.

The company reports that the new asset will allow it to pursue increasingly broad technological growth by providing advanced capabilities to tailor the performance of its products with more accuracy within a broader potential specification set. This advancement offers customers access to a significantly expanded range of customization options and new fabric properties for performance critical applications.

Spotlight on Asia

Experts agree that today's spunlace market is centered on Asia. China is, in fact, the largest spunlace market in the world.

"China is the center of the world for spunlace nonwoven production and will likely continue to be," says David Price. "It's the region with the largest amount of spunlace nonwoven capacity. There's expanding and growing use of spunlace substrates in China and in Asia Pacific, as well as exports to other regional markets."

In the last year, spunlace machinery supplier Trützschler Nonwovens has seen quite a few investments in new lines, especially in China and East Asia. One factor at play here is the rising middle classes in China, Japan and South Korea, which is purchasing more and more convenience goods, such as personal care and household wipes, as well as hygiene products. "Softness and natural materials play important roles and we see the trend towards using cotton fibers for a broad range of untypical end products," says Marc Wolpers, managing director sales for Trützschler Nonwovens & Man-Made Fibers. "A success, for instance, are spunlaced 'cotton tissues.' This consumer behavior drives growth to a large extent."

Wolpers observes efficiency as another factor in new spunlace investments. "Older lines lack competitiveness because of their limited speeds," he says. "Since, especially, carding

Technical Trends

technology made huge progress in the last 10 years, it pays for producers to shut down older lines and invest in new ones.”

Andritz’s Michalon agrees that 2017 was an extraordinary year for spunlace investment in Asia, with China establishing itself as the clear leader. “The increase in living standards in the region, growing urbanization, and the end of the single-child policy at the end of 2015 have definitively contributed to the rise in spunlace investments,” he adds.

The ending of the single-child policy pushed Chinese spunlace producers to make new investments, anticipating future market demand, Michalon explains. “Top spunlace producers in China only made a few investments in 2014 and 2015,” he says. “[After ending the one-child policy] they invested in a new generation of spunlace lines, not just for the domestic market but also for worldwide demand.”

Finally, Michalon adds, the evolution of the Chinese economy from being export-oriented to being oriented towards domestic consumption is also affecting the spunlace market in the country.

German nonwovens producer Sandler is also seeing a lot of spunlace investment in Asia. Carolin Weber, Sandler’s sales director Hygiene & Wipes, says China will have a big influence on the market. “It goes without saying that we will be monitoring the developments closely,” she adds.

While Chinese spunlace capacity is being consumed internally due to the rising middle class, some is making its way to the west.

“Clearly China is exporting to North America,” Price says. “It’s not to the extent that it’s overwhelming local producers, but certainly China spunlace nonwovens are being exported to North America particularly, and to a much lesser extent into Europe.”

More than wipes

Wipes is certainly the largest market for spunlace, and for most spunlace producers, it’s the biggest market for their output.

“Nowadays, there are wipes for almost every

discernible use in our everyday lives: from baby care to cosmetics, from car care to furniture polish or the cleaning of computer screens,” Sandler’s Weber says. “Being readily available and easy to use, even on the go, demand is likely to continue. Although supply matches demand in the main segments, there is still opportunity for further development through visual differentiation with print or embossed motifs, as well as through enhanced functionality, innovative product structures or combinations or different properties.”

Although wipes continues to consume the lion’s share of spunlace, the material is making its way into other applications.

Price acknowledges that there are extensions of spunlace into other markets outside of wipes, particularly in hygiene. “I think much of this is driven by some excess capacity in some regions, some significant market development by spunlace nonwovens producers and their efforts to both achieve product line extension and expansion and further utilization of equipment,” he says. Although, spunlace used in hygiene ADL and other hygiene diaper components remains relatively small, he adds.

For its part, Mogul has been trying to focus on technical applications and hygiene. “We have observed an interest for spunlace in the hygiene market, and if this becomes a growing trend, this will significantly change this business,” says Gogus.

Another growing market Mogul is observing for spunlace is medical. “Due to the softness, absorbency, and controllable stretch properties, spunlace certainly has a place in medical and healthcare applications against the skin,” says Jonathan Layer, Mogul’s business development manager – Americas. “We’ve leveraged our team’s background in pharma to build a comprehensive micro lab to ensure our products are clean and with extremely low micro burden before going into these critical applications.”

While a small portion of Suominen’s sales are outside of wipes—its Care business area manufactures nonwovens for hygiene products and medical applications—wipes comprise over 90% of its net sales, which fall under its Convenience business area.

Technical Trends

“Wipes is our core market and where we have chosen to play,” says Ernesto S. Levy, Suominen’s senior vice president of Convenience business area.

Suominen’s focus is on baby, personal care, home and workplace wiping markets, and Levy says that, overall, the wipes market continues to show healthy signs of growth as consumers around the globe search for more convenience.

Baby wipes are growing as populations grow; this is especially seen in South America and Asia, according to Levy. Further, home and personal care are continuing to grow as new innovative products deliver home cleaning and beauty solutions with a higher degree of specialization. And, he acknowledges, while consumers continue to drive growth in moist toilet tissue, waste water systems around the world want products that can disperse like toilet paper. “We are innovating in each one of these markets,” he says.

Meanwhile, Welspun is fast emerging as an innovative company claiming success on many fronts, in hygiene, wipes, cleanroom, aerospace, etc. The Indian spunlace manufacturer has recently developed a nonwoven called Comfina (patent pending), which is engineered for feminine care and diaper applications. “Recently we have had good success with Comfina, and we are eyeing to grow our spunlace business in these segments,” says Welspun CEO Milind Hardikar.

In wipes, Welspun offers brands that are specially engineered for specific applications, including Welicate, 3DSwipe and FibroSplit. Welicate is described as super soft and delicate—ideal for baby wipes; 3DSwipe is a robust and efficient wiper developed for high performance cleaning; and FibroSplit is strong and non linting, designed for clean room and aerospace applications.

In aerospace, a 100% cotton-based nonwoven from Welspun has been certified by a reputed U.S.-based lab.

“We have been working on developing natural fiber-based nonwovens for aerospace applications,” says Hardikar. “Our product meets aerospace material standards (AMS) and Boeing material specification (BMS). We are excited with this development and looking forward to serve the aerospace requirements.”

The product is certified for low linting and high absorbency and effectively tackles tough cleaning surfaces. It is free from silicon, having no static properties and has been tested for solvent compatibility. With encouraging results for its initial product, Welspun is set to launch a range of products developed for aerospace cleaning.

Meanwhile, Andritz has responded to the cotton spunlace trend with flexible crosslapper lines containing Andritz Asselin-Thibeau components and systems for best web profiling. “The demand for lighter weight is fueling the cotton and face mask markets here as well,” Andritz’s Michalon says.

Back in the U.S., Bondex Inc., is using spunlace in filtration and other specialty applications. Part of industrial filtration specialist Andrew Industries, Bondex invested \$20 million in an expansion to add hydroentangled spunlace products to its existing portfolio in 2016. Previously, the company’s range included flat and point bonded thermal nonwovens and various laminated and coated products.

The spunlace process technology from Trützschler includes a 400 bar high pressure hydroentangling unit fed by a fiber processing line. These assets provide Bondex with the capability to produce a wide range of spunlace fabrics from various fiber systems including PPS, meta and para aramid, PET, PP and polyimide in weights ranging from 20 to 600g/m² and in widths up to 225cm (88”). The investment also included a wide range of finishing equipment such as singeing, calendaring, laminating, chemical impregnation, heat setting and slitting.

Among the new products from the line is Hydrolox, a technology for the industrial filtration market.

According to Bondex, historically, industrial filtration felt was produced through a traditional needle loom, which has met some market needs with a specific balance of properties. Hydrolox filter media combines the benefits of needle loom fiber entangling with revolutionary hydroentangling technology to deliver industry leading dust collection performance. The phenomena of entangling fibers with high pressure water jets creates a unique balance of lower pore size in a strong media. >>> next 17

Product News

Lydall introduces gas phase filter media

LydAir GP media consists of highly uniform, highly efficient, specialty sorbent particles. Lydall, Inc., through its wholly-owned subsidiary Lydall Performance Materials, announced that it is expanding its portfolio with the introduction of new, innovative, LydAir GP gas phase filter media. Layered in pleatable substrates, LydAir GP media consists of highly uniform, highly efficient, specialty sorbent particles that aid in the adsorption of acid and base contaminants as well as other volatile organic compounds.

Lydall's flexible process creates multiple opportunities for technically advanced composite development with LydAir GP filter media and Lydall's core particulate filtration media. Particulate layers can range from MERV 8/G4 to HEPA and can be laminated with a variety of Lydall adsorption layers to allow for removal of multiple airborne molecular and particulate contaminants in one medium.

Paul A. Marold, president, Lydall Performance Materials, comments, "We are extremely excited about yet another transformational move by our business. Our entry into gas phase filtration supports our strategy of continuing to invest and grow in the filtration space and adjacencies with high-quality, high-performing products that are valued by our customers."

Filter manufacturers worldwide will benefit from Lydall's wide range of gas phase options in both design and functionality, which is unmatched in the industry today, the company says. Plus, Lydall can deliver the engineered composite materials in roll good form or in pleated panels - saving customers time and money.

Chris Sipes, director, Business Development, comments, "Our multi-layer combination medias offer innovative solutions to complex problems. Through Lydall's expert composite engineering and the exceptional performance of new LydAir GP media, we look forward to serving the needs of filtration specialists around the globe in the removal of airborne molecular contaminants."

LydAir GP media is perfectly suited for

applications such as office buildings, airports, restaurants, hospitals, manufacturing facilities, automotive cabin air or any environment where airborne molecular contaminants are a concern.

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

Technical absorbents unveils 100% SAF needlefelt nonwoven

Courtesy: Technical Absorbents

Technical Absorbents (TAL) has announced the launch of a completely unique superabsorbent fabric. The patent-pending 100 per cent SAF needlefelt nonwoven has been in development and testing for some time and is now commercially available. TAL is a leading manufacturer of Super Absorbent Fibre (SAF) and SAF-containing nonwoven fabrics, yarns, and tapes.

Superabsorbent SAF needlefelt fabrics are already used in many applications and, since the installation of its own line in 2015, TAL has created a large portfolio of absorbent fabrics and has supported a number of new product developments. The latest fabric is truly unique and will open up the doors to applications that require a fully maceratable superabsorbent solution.

"The development of a fabric that contains only SAF and no other synthetic, natural or binder fibres is extremely exciting. We are not aware of anyone else that can manufacture such a fabric and this opens up the opportunity for new product forms. There is no other 100 per cent superabsorbent fabric currently available," product development director, Mark Paterson, said in a press release.

The two metre wide needlefelt line can produce absorbent fabrics in basis weights from 130 to 1000 grams. To help protect the fibre during processing, the line is housed in a controlled humidity environment. Other non-absorbent fabrics can also be manufactured on the line, that is, 100 per cent polyester. Short order trial runs can also be facilitated where commercially viable.

"Initially, the line was used for research and development as well as making commercial products. The first couple of years saw us develop our product range - containing up to 80 per cent SAF - which are now used in

Product News

many different applications from medical to filtration. The new 100 per cent SAF fabric is the first of a number of products we have developed as we strive to look for new opportunities for our core SAF technology." Mark added. (GK)
(Source from: "www.technicaltextile.net")

Nannette de Gaspé introduces reusable dry sheet masks

Masks are based on a cotton nonwoven material

Nannette de Gaspé's Youth Revealed collection offers a line of reusable dry masks made with cotton-based nonwovens. Crafted with wearable skincare technology to target the specific needs of the face, eyes, mouth,

neck and hands. Innovative and first-to-market, these masks are completely waterless and contain a unique blend of 87% active ingredients that leave skin feeling rejuvenated in just 15 minutes.

The Face (\$105), Mouth (\$75), Eye (\$80), Neck (\$90) and Hand (\$85) treatments improve skin's texture and tone while powerful restorative properties like collagen and elastin help to reduce fine lines and wrinkles to reveal brighter, more youthful skin. When measured three hours after mask usage, clinical studies have shown up to a 20% reduction in wrinkles and up to a 62% increase in hydration.
(Source from: "www.converternews.com")

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The highly flexible Andritz WetlaceT technology, combining wet forming and hydroentanglement, is especially suited for the production of flushable wipes that are dispersible, 100% biodegradable, and without any chemical binders. This fulfills the highest environmental standards for the end products and enables production of certified nonwovens quality according to the latest EDANA/INDA guidelines for flushable wipes.

Successful performance by the Andritz neXline wetlace sets a new benchmark in Asia and underlines ANDRITZ's position as one of the global market leaders for the supply of

complete nonwovens lines, key components, and services, according to the company.

Dalian Ruiguang Nonwoven Group is one of the leading Chinese producers of nonwovens, supplying its products mainly to international customers.

"The flushable wipes produced on the neXline wetlace line are excellent and fulfill the highest environmental standards. Our customers are more than satisfied," says Gu Yuanming, President of Dalian Ruiguang.
(Source from: "www.nonwovens-industry.com")

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Throughout the markets served by Bondex, innovation has proven to be a Key differentiator for our products. Due to the agility demonstrated commercially and technically, we invite customers of Dupont™ spunlace to challenge the Bondex team to develop custom solutions which better fit

your needs in these applications.

Interested customers can visit our website for more information, and you are also welcome to contact us directly through the team members listed below.
(Source from: "www.bondexine.com")

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To do so, Dr. Schovanec and his team are focusing on efforts such as undergraduate research and international collaborative education like linkages with China, Costa Rica and other countries, to name a few.

Cotton research at TTU not only focuses on

yield and quality, but also on value-added applications. Research activities at the Fiber and Biopolymer Institute and the Nonwovens and Advanced Materials Laboratory have resulted in high performance products such as bio aerogels, cotton-based oil sorbents and toxic chemical decontamination wipes.
(Source from: "www.nonwovens-industry.com")

行业信息

ANFA(亚洲非织造材料协会)2018年理事会召开

选举并批准新一届理事及协会工作人员

2018年11月1日，ANFA2018年理事会于台湾高雄福华大酒店(Howard Plaza Hotel)召开。(原定于印尼巴厘岛召开、因地震更改)

现任会长黄清山、副会长Inoue Kazuhisa (日本)、Ku Pyung Kil、郭开铸(陈喆代表)、名誉会长Dr. Kanai Hiroaki、代理秘书长Tsuchiya Hideo、工作委员会主任向阳、各地区联络处主任以及中国大陆、台湾、韩国、日本、香港、印尼的理事及代表30余人参加了此次理事会。

本次理事会的程序:

- 1) 会长黄清山致欢迎辞、名誉会长Kanai及副会长Inoue、Ku Pyung Kil致开幕辞
- 2) 各地区关于本地区非织造工业发展简报
- 3) 2017年度ANFA财务报告及2018年(1-9月)报告及(10-12月)预算

理事:

日本	Dr. Kanai Hiroaki	前ANFA名誉主席, ANNA执行主席, Kanai Juyo Kogyo Co., 董事长
	Inoue Kazuhisa	前ANFA副主席, ANNA执行主席, Shinwa Co., 董事长
	Yabutani Norihiro	ANNA主席, 帝人 FRONTIER CO., 总经理, 执行副总裁
	Miki Masato	Miki Tokushu Paper Mfg. Co., 董事长
	Kawamura Satoshi	Japan Vilene Co., 执行总经理和总裁
中国	郭开铸	ANFA副主席, 欣龙控股(集团)股份有限公司, 董事长
	赵民忠	广东俊富集团, 董事长
	杨长辉	汕头三辉无纺机械厂有限公司, 董事长
	邓伟雄	穗德福无纺布有限公司, 董事长
	丁伊可	浙江金海环境技术股份有限公司, 总经理
台湾	林国明	科德宝远东股份有限公司, 董事长
	陈世中	台湾区不织布工业同业公会会长/总经理, Unique Pretty Ind. Co., 总经理
	戴秀玲	康那香企业股份有限公司, 总经理
	梁宗德	Freudenberg & Vilene Nonwovens, (台湾) Co., 总经理
		另一名理事将由台湾区不织布工业同业公会指定
韩国	Ku Pyung Kil	ANFA副主席, Star Susemi Co., 主席
	Park Chan Hyuk	韩国非织造材料同业公会主席, Shunshn Enterprise Co., 董事长
	Kim Young Ok	Soung Kwang Industrial Co., 董事长
	Cho Kwan Young	Daehan I.M Co., 董事长
	Kim Jung Yeol	Sungkwang Ind. Co., 董事长
香港	吴瑩旭	香港无纺布协会主席, Fairtech Holding Limited, Managing Director
印度	Gupta Samiar	Business Coordination House Managing Director
印尼	Billy Hidjaja	印尼非织造材料协会主席, PT Hasil Damai 纺织公司, 总裁

ANEX2021将于2021年5月或6月在上海举办。

2019年下列会议已经确认:

- ISO TC38/WG9 标准工作会议将于2019年3月的IDEA期间举行
- ANFA、INDA、EDANA会议将于2019年3月的IDEA期间举行

4) 新一届(2019.1.1-2021.12.31)理事选举及批准

5) ANEX 2018(亚洲非织造材料展览会)报告

6) 2019年ANFA研讨会(于印度举办)

7) ANEX 2021展览会计划及安排

8) 2019年活动计划和预算

9) 其它事项

理事会批准通过了协会2017年和2018年(1-9月及10-12月费用预算)的财务报告。

理事会选举新一届(2019年1月1日-2021年12月31日)机构人员及理事并获批准:

最高顾问:	戴荣吉
名誉会长:	王延熹、黄清山
会长:	Dr. Kanai Hiroaki
副会长:	Ku Pyung Kil、郭开铸、林国明
监事:	Yabutani Norihiro
工作委员会主任:	向阳
秘书长:	Tsuchiya Hideo

- GNS(全球非织造材料工业峰会)将于2019年3月的IDEA期间举行

- 2019ANFA理事会将于2019年11月5日或6日在印度举行

- 2019ANFA研讨会将于2019年11月6-7日或7-8日举行

行业信息

最后由ANFA现会长黄清山致闭幕辞。全体与会者真诚感谢黄清山作为ANFA会长（至2018年年底）三年任期内为协会作出的强有力的支持和巨大贡献。

再创历史 | FSA 2018圆满落幕，精彩回顾

12月5-7日 | 上海新国际博览中心

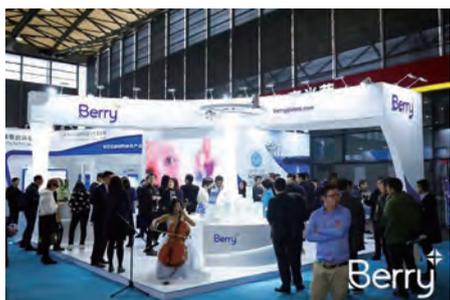
第七届亚洲过滤与分离工业展览会暨第十届中国国际过滤与分离工业展览会7日圆满落幕。展会三天，人头攒动，展会观众数量达到8,674人，较上届增长16.2%。

本届亮点一

本届展会展商数增加30%，展出产品更多，各大企业展位人气爆棚。本届更多高大的展位，看看这些企业现场情况如何：



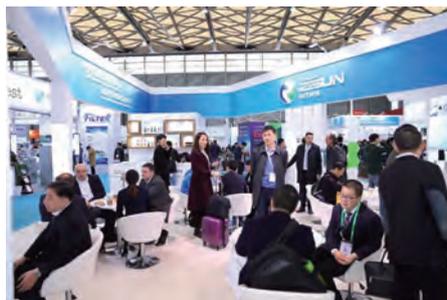
贝里国际集团



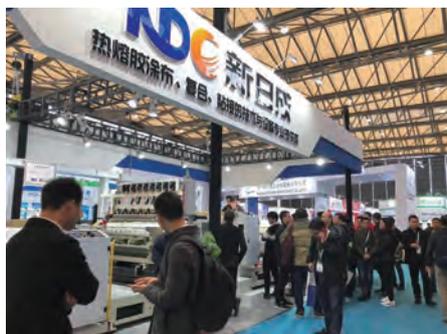
东洋纺



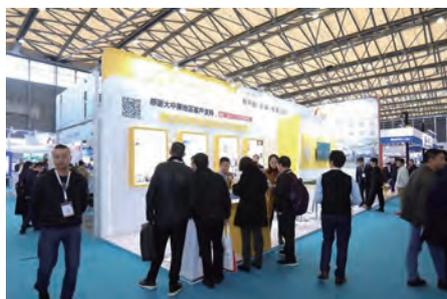
重庆再升科技股份有限公司



泉州新日成热熔胶设备有限公司



格林施（香港）有限公司



AHLSTROM-MUNKSJÖ



温州市德嘉滤清器设备有限公司



贺氏（苏州）特殊材料有限公司



NEENAH FILTRATION



本届亮点二

本届的同期活动FILTREX™ ASIA、2018过滤与分离技术推介会成为本届展会的一大亮点。

FILTREX™ ASIA由EDANA、中国技术市场协会过滤与分离专业委员会（CFS）、上海希达科技有限公司（CNTA）、博闻中国（UBM）联合主办。在此之前，FILTREX™

行业信息

ASIA成功举办了11届，其中6届在欧洲，1届在中国香港，1届在韩国，3届在印度。会议于12月4-5日在上海世纪皇冠假日酒店举办。会议两天到场听众共计222名，其中国内听众172名，海外听众49名。29名行业专家及学者聚集于此，在本届会议上展开演讲。

台湾区不织布工业同业公会8月16日以“同心创40、掌握新机遇”为主题，在台北凯达饭店举行盛大的系列庆祝活动，同时日本、印度、印度尼西亚、香港、中国大陆等地区不织布业者近400人参与盛会。

开幕式由陈胜龙、戴荣吉及黄清山等理事长致词，多位前后任理事长到场与会员同庆，亚洲不织布协会（ANFA）代表也以贵宾身份出席盛会，并邀请产、官、学、研各代表性的专家、学者与会，以不织布产业目前最受关注的医疗卫材、过滤清洁、环保永续等主题进行专题演讲，期能使不织布业者于严峻的国际局势与竞争压力下，具备足够应变力与创新力，使台湾成为一个全球不织布最重要的研发中心之一，让与会者藉此平台可相互沟通与学习。

论坛邀请庆烽科技纺织副总经理林锡钟主讲不织布创造附加价值、纺织所组长彭兆群主讲新型不织布研究开发、工研院高信敬博士主讲聚苯硫醚PPS高端纤维滤材应用与发展、台科大教授吴昌谋讲高性能微米纤维技术开发、昆山科大教授陈建宏主讲高防火气凝胶/非织物材料开发、文化大学助理教授朱政昆主讲不织布废弃物回收再利用技术开发等当前热门议题。庆祝活动结合专业论坛，并在丰盛的晚宴下画下圆满句点。

今年是台湾区不织布工业同业公会成立40年，代理理事长陈胜龙指出，不织布台湾的历史超过50年，制程种类从早期的针轧、熔喷、纺粘，进步到热压复合、热粘合、薄膜、涂层，各项技术与制程，台湾区从不缺席，在不织布产业的发展中位居重要地位。在历届理事长睿智的领导、各届理监事的督导鞭策，以及全体会员的共同支持下，会员同业引领不织布产业大步向前，在全球不织布产业领域写下无数的优异成果。

不织布公会于1978年创立，40年来扮演着台湾区不织布产业与产、官、学、研间以及国际相关组织的桥梁，致力协助推动台湾区不织布产业迈向国际发展，提供同业一个各项信息交流的平台。陈胜龙指出，不织布公会透过此次庆祝活动，促进台

FILTREX™ ASIA照片集锦



2018过滤与分离技术推介会于12月5-6日在上海新国际博览中心W5-M8会议室举办，会议期间来自石家庄辰泰滤纸有限公司、上海弘知生物科技有限公司、Norafin Industries (Germany) GmbH、Math2Market GmbH、禄博纳、EUROPLASMA NV、上海洪利净化科技有限公司、Palas® GmbH、ACA Systems Oy 共10位专业人士带来精彩的演讲。

过滤与分离技术推介会照片集锦



下届展会

第八届亚洲过滤与分离工业展览会
第十一届中国国际过滤与分离工业展览会
将于2020年举办
敬请关注！

台湾区不织布工业同业公会欢庆四十周年“同心创40、掌握新机遇！”

技术论坛隆重召开 建构技术交流平台
台湾区不织布工业同业公会8月16日喜迎创会40周年庆

湾区不织布产业知识交流，承先启后，向海内外业界展示台湾区不织布实力，薪火相传，继往开来。

元的燕巢新厂即将投产，在燕巢产能加入后，南六明年即将超越日本东丽成为亚洲第一的不织布公司。



不织布公会代理理事长陈胜龙邀请业界共享公会创会40周年喜庆。图/公会提供



康那香公司董事长戴荣吉。图/公会提供



南六董事长黄青山。图/公会提供

公会长期筹组参展团拓展海内外市场，协助业者拓展贸易，提高不织布业者世界地位以及促进外贸之机会；并持续举办国际研讨会、技术讲座及人才培养，协助提升台湾区不织布产业知识水平。与会员同业凝聚共识制定标准，使业者产品有所依循，在产、官、学、研、友好协会的协助与支持下，以团队的力量，由各届理事长带领整体不织布产业快速提升产业形象和业界的竞争力。

庆祝大会由荣誉理事长戴荣吉、名誉理事长黄青山、代理理事长陈胜龙共同致词，为整个活动揭开序幕，论坛议题涵盖医疗卫材、过滤清洁、环保永续等主题。

亚洲不织布协会（ANFA）创会会长、不织布工业同业公会荣誉理事长戴荣吉指出，他任内在纺拓会与外贸协会帮忙下，1992年公会首次到美国设立台湾区展馆参展，之后台湾区不织布工业同业公会开始组团征战各国，把高质量的不织布推销出去。戴荣吉希望有意南向做生意或是到当地进行制造的会员，都要有组织，发生事情可互相照应，也可以回来台湾区不织布工业同业公会取经。

现任亚洲不织布协会会长、公会名誉理事长黄青山指出，1980~1990年是台湾区经济发展最辉煌灿烂的时间，加上台湾人的韧性和意志力，使台湾区不织布制造商能在亚洲占一席之地，后来经历金融风暴、下游产业外移、低价与仿冒品考验，南六像「压不死的玫瑰」一样活了下来，接下来要朝着产品多样化、高值化，转型升级，跟上时代潮流、做出区隔性。台湾区不织布业者韧性坚强，充满活力，近年来大陆快速崛起，同业会员应该采用多样化生产，开发区隔性的产品，提升产品附加价值，朝向转型升级的目标前进。

台湾区不织布去年出口总值4亿美元、增加9.33%，在亚洲中产阶级总数增加、对卫生耗材需求攀升的状况下，预计今年还会维持成长。其中增产动能大部分来自不织布股王南六（6504），该公司耗资30亿

当天同时举行第14届理事长补选，友丽工业公司总经理陈世中出线。陈世中表示，未来将加强公会网站交流平台的倡导，培训人才，拓展海外市场。



不织布公会第11、12届理事长邱正中（前排左四起）、代理理事长陈胜龙、亚洲不织布协会会长黄青山、贵宾及理、监事代表共同欢庆公会40周年。图/公会提供



不织布公会第11、12届理事长邱正中（前排左四起）、代理理事长陈胜龙、亚洲不织布协会会长黄青山、贵宾及会员共同欢庆公会40周年。图/公会提供

贝里国际集团宣布熔喷技术产能投资项目

美国印第安纳州埃文斯维尔市(EVANSVILLE, Ind.) - 2018年11月16日，贝里国际集团（以下简称：Berry）（纽约证券交易所代码：BERY）宣布将投资一条高效熔喷过滤材料设备用于服务亚洲市场，该项目预计将在2019年开始商业化生产。

此项投资针对集团医疗，卫生和特种材料事业部，旨在满足预期市场和客户的需求增长需求，将聚焦于空气净化器，工业口罩和汽车空调滤市场的高端产品应用。

贝里国际集团医疗，卫生和特种材料事业部总裁Scott Tracey先生表示：“亚洲过滤



台湾区不织布工业同业公会举行40周年庆，参会贵宾齐聚一堂。图/公会提供

行业信息



安德里茨高产能eXcelle针刺生产线



坚固的针刺机生产的产品质量稳定



Grupo SARI (鲁比工业)的非织造产品

市场发展迅速，我们对于增强Berry产能，满足不断增长的过滤市场需求感到非常兴奋。Berry秉持对过滤材料市场的坚实承诺，在亚洲新投资的熔喷设备迈出了Berry加速拓展全球过滤材料解决方案领导地位的重要一步。”

安德里茨为西班牙Grupo SARI (鲁比工业)提供完整针刺生产线

国际技术集团安德里茨已获得Grupo SARI (鲁比工业)的订单，为其生产针刺毛毡提供一条neXline针刺生产线。

该生产线将加工多种原材料，如聚酯、聚丙烯、双组分纤维和粘胶纤维，并将生产用于技术市场(汽车、建筑、过滤等)的针刺毡。该生产线计划于2018年底开车启动。

供货范围包括所有机器和设备—从开松混合到生产线末端。该生产线采用了先进的安德里茨技术和设备，例如：

- 1 TCF-X高产能气压棉箱
- 1 eXcelle Dynamic活力梳理机
- 1 Dynamic活力交叉铺网机
- 最前沿的用于重量自调匀整ProDyn和Isolayer系统
- 1 牵伸机
- 1 高速针刺机A50.

Grupo SARI (鲁比工业)总部位于西班牙鲁比，专业生产非织造布。该公司在西班牙和法国拥有多家工厂，主要在欧洲销售它的产品。它通过关键性投资逐步扩大它在各种技术领域(如汽车、过滤或建筑)的业务，并增加它的研发能力，持续专注于发展它在这些市场的竞争能力，以进一步发挥其作为主要生产者的关键作用。

为了实现这一目标，Grupo SARI (鲁比工业)将推出此条针刺生产线，采用最先进的安德里茨技术和多种功能，提供广泛的产品，以便为上述每种技术市场提供最适合的解决方案。

更多详情，请联系 michael.buchbauer@andritz.com & andritz.com

贝里国际集团参展FSA 2018, 揭幕精彩看点

* 最新投资，聚焦亚洲 – 亚洲熔喷技术设

备投资

* 前沿科技，深度解读 – “亚微米级技术在液体过滤中的应用”主题演讲

* 丰富展品，全面呈现 – 领略先进的Berry过滤材料解决方案

美国印第安纳州埃文斯维尔市(EVANSVILLE, Ind.) 2018年11月16日 - 全球领先的创新非织造布和膜解决方案领导者贝里国际集团(纽约证券交易所代码: BERY), 揭幕参展FSA 2018(第七届亚洲过滤与分离工业展览会)精彩看点, 为过滤市场带来整体解决方案。

FSA是亚洲规模最大的过滤与分离主题展览会。在12月5日-7日期间, 来自全球15个国家和地区的200多家参展商, 10,000多名观众将汇聚上海新国际博览中心, 共襄盛会。

作为在亚洲拥有领先的生产能力和宽泛客户群的全球非织造布生产商, Berry非常重视此次盛会, 并积极参与其中: 创新设计的展台, 前沿科技的论坛演讲, 先进过滤材料解决方案。内容丰富, 令人期待, 充分体现出Berry致力于“始终以保护重要事物为己任”的集团使命。

精彩看点, 提前揭幕:

- 分享Berry亚洲最新高效过滤材料熔喷技术设备投资项目的进展
- Berry专利熔喷技术在空气过滤以及Typar和Reemay品牌材料在液体过滤领域的应用介绍
- 来自Berry HH&S事业部全球特种材料业务副总裁Wendy Warner博士将在FILTREX™ Asia过滤行业峰会上发表题为“亚微米级技术在液体过滤中的应用”的演讲, 以国际化的视角深度解读Berry面向高端液体过滤市场应用的创新技术解决方案

Berry 全球市场, 战略和创新执行副总裁David Parks先生表示: “我们对即将参展FSA盛会满怀期待! Berry特种材料业务在不断增长的亚洲市场展现蓬勃生机, 亚洲也是Berry全球团队关注的焦点。将于2019年在中国实现商业化生产的熔喷设备投资项目体现了Berry在充满活力的亚洲市场持续快速发展的坚定承诺。FSA展览会将为我们提供绝佳的机会与前来展台参观的观众交流Berry作为过滤材料战略伙伴在品质和创新领域的独特优势。”

行业信息

更多详情，请登录集团网站垂询 www.berryglobal.com。

Unicharm收购泰国尿片制造商

通过收购DSGCL集团为其在东南亚地区增添低价品牌

亚洲最大的卫生用品公司Unicharm已签署协议收购DSG（开曼）有限公司（DSGCL）的全部股份，该公司是东南亚尿片和其他吸收性产品制造商DSG国际的控股公司。据称这笔交易价值5.3亿美元，是Unicharm有史以来最大的海外收购之一，并将大大扩充其在东南亚的中低价尿片市场，同时也增加了在新兴国家的生产能力。

DSGCL集团是一家为婴儿和成人生产一次性尿片的公司，在泰国、马来西亚、印度尼西亚和新加坡设有办事处。DSGCL旗下的婴儿尿片品牌包括BabyLove、Fitti和PetPet，而其成人尿片品牌包括Certainty。据报道，该公司是泰国领先的成人尿片制造商和第二大婴儿尿片制造商，并一直在努力缩小与未来的业主Unicharm之间的差距。2016年，该公司之前推出Baby Love nanopower，尿片采用申请了专利的超薄薄片，并在此次推出了裤型尿片。

据报道，去年该公司实现销售额2.53亿美元。

Unicharm于2016年制定了第10个中期管理计划，旨在加速其业务的全球化和增长。根据该计划，Unicharm的目标是将其合并后净销售额增加至8000亿日元或70亿美元，复合年增长率为7%，核心运营利润率为15%，净资产收益率为15%，并同时解决多个问题，例如社会问题。为了实现这些目标，Unicharm积极扩展其业务，特别是在亚洲的高增长市场，作为专注于优先国家和地区战略的重要组成部分。

DSGCL集团与Unicharm的整合将有助于扩大和改善其产品阵容，提升市场地位，实现东南亚地区，特别是泰国和马来西亚的规模经济。Unicharm还预计此次收购将通过整合物流和其他功能，来降低成本和产生协同效应，并最终推动东南亚地区的增长。

Unicharm一直在除日本以外的亚洲地区稳步发展业务。该公司于2011年收购了越南

卫生用品生产商Diana，并于2014年收购了缅甸护理品牌，近年来稳步投资中国和印度等快速增长的市场。去年，其在本国以外的销售额占总业务的比例接近43%。

今年早些时候，Unicharm首席执行官Takahara Takahara告诉nonwovens-industry网的记者，由于东南亚年轻人口的增长以及人均一次性产品消费的增加，故该区域市场是相当重要的。“一次性尿片和卫生用品的使用仍然有很大的前景，预计会有高增长，”他说。“从这个意义上说，进一步开拓东南亚国家的市场相当重要。”（资料来源：“www.nonwovens-industry.com”）

三井（Mitsui）增加泰国产能

公司新增6000吨高性能非织造布产量

三井化学为其泰国子公司MHM增加了一条年产能达到6000吨的新生产线。该生产线能够生产高性能、优质非织造布，包括该公司的Airyfa纺粘非织造布。去年推出的Airyfa采用专有的纺丝技术，可以生产对皮肤温和的高性能非织造布，同时达到强力高且柔软的特点。

在其他方面，三井在泰国扩大了透气薄膜产能，将Espoir薄膜的年产量提高到10,900吨。三井的透气薄膜因其优异的性能和良好的可被印刷性而得到东部和东南部制造商的广泛认可，这两者都是优质尿片的重要要求，因此有大的销售增长。（资料来源：“www.nonwovens-industry.com”）

Andritz Wetlace生产线在大连瑞光安装及运行

可冲散湿巾系列在亚洲树立了新标杆

中国大连瑞光非织造布集团引进的Andritz neXline Wetlace生产线用于生产擦巾，成功实现了年产能为15,000吨的满负荷生产。

Andritz为大连瑞光提供了一条完整的neXline湿法生产线，集成了浆料制备、湿法成网、水力缠结和干燥。由于生产线的灵活性，客户能够生产全系列的擦巾，包括工业复合擦巾。

高度灵活的Andritz Wetlace技术结合了湿法成网和水力缠结，特别适用于生产可分散、100%生物降解且不含任何化学粘合

行业信息

剂的可冲散湿巾。使得最终产品符合最高环境标准，并根据最新的EDANA / INDA可冲散湿巾指南来生产可达到质量要求的非织造产品。

Andritz neXline湿法线的成功为亚洲树立了新的标杆，并强调了Andritz作为全球非织造布生产线，关键零部件和服务全球市场的领导者之一的地位。

大连瑞光非织造布集团是中国领先的非织造布生产商之一，主要向国际客户销售产品。

“neXline湿法生产线生产的可冲散湿巾性能优良，符合最高环保标准。我们的客户非常满意。”大连瑞光总裁谷源明说。
(资料来源:“www.nonwovens-industry.com”)

Bondex推出Nomex®和Kevlar®水刺非织造布

Bondex自豪地宣布他们扩大了水刺产品系列，包括Nomex®和Kevlar®水刺材料，以用于多种工业应用。杜邦公司最近发布了Nomex®E88、Nomex®E88C和Kevlar®Z11产品的精炼价值链，并将向Bondex销售Nomex®和Kevlar®纤维，以生产符合这些规

格的产品，应用于各种场合。

Bondex正在研发一些与商业产品线相关的专利技术，其中产品使用Nomex®和Kevlar®纤维，并被应用于一些特殊用途。作为技术扩展计划的一部分，Bondex投资了特种高温压延辊，该技术将用于生产E88C产品。

Bondex通过简化供应链，并提供优质的服务，为杜邦的客户群体带来收益。Bondex还开发了一系列符合E88、EB8C和Z11规格的产品，客户可以直接从杜邦购买来满足他们的商业需求。

在Bondex整个服务市场中，创新被证明是产品差异化的关键因素。由于Bondex在商业和技术上的敏锐性，我们邀请杜邦公司的水刺客户来挑战Bondex团队，共同开发定制解决方案，以更好地满足在一些特殊应用中的需求。

有兴趣的客户可以访问Bondex的官方网站了解更多信息，也欢迎您通过下面列出的团队成员直接与我们联系。

(资料来源:“www.bondexinc.com”)

(上接第50页)

面部 (105美元)、口腔 (75美元)、眼睛 (80美元)、颈部 (90美元) 和手部 (85美元) 护理可改善肌肤质地和肤色，同时胶原蛋白和弹性蛋白等强效修复功效有助于减少细纹和皱纹，使肤色更明亮，

更年轻的肌肤。在面膜使用三小时后测量，临床研究显示皱纹减少20%、水合作用增加62%。

(资料来源:“www.converternews.com”)

(上接第39页)

等领域。

德克萨斯理工大学校长Lawrence Schovanec博士表示，农业是德克萨斯理工大学的核心理研究领域之一，Herrera-Estrella博士对棉花基因组学的研究将有助于改善西德克萨斯州和该州的经济。Schovanec博士的愿景是提升TTU作为国际知名研究型大学的形象，吸引高度认可的研究人员，以帮助加强TTU在棉花、风能和水电等战略领域的研究。

为此Schovanec博士及其团队专注于本科研究和国际合作教育等工作，例如与中国、哥斯达黎加和其他国家的联系，仅举几例。

TTU的棉花研究不仅关注产量和质量，还关注增值应用。纤维和生物聚合物研究所以及非织造布和先进材料实验室的研究活动产生了高性能产品，如生物气凝胶、棉基油吸附剂和有毒化学去污巾。

(资料来源:“www.nonwovens-industry.com”)

市场动态



安德里茨水刺机neXjet水刺头



台湾桃园胜宏厂区

安德里茨将向台湾胜宏提供水刺工厂

格拉茨2018年11月19日讯。国际技术集团安德里茨已接到台湾胜宏实业有限公司的订单，将在胜宏位于桃园的工厂提供一个完整的水刺工厂。这一最新投资项目是目前胜宏的第四条安德里茨水刺生产线，它将使胜宏进一步创新其针对特种非织造布以及厚重面料的产品。该生产线将于2019年第二季度投产。

由安德里茨交付的多变、交叉铺网毛网形成工厂将生产克重30~400克/平方米多级产品，它将配备一个工程设计、高质量打孔/提花解决方案，以及一个Jetlace Avantage C水刺单元。这条生产线末端配置了一台高效的neXdry Avantage热风穿透烘干机以及安德里茨过滤系统，从而满足当地严格的环境要求。

在过去的60年里，胜宏已成为远东地区增值产品、医用、合成皮革、弹性网等领域非织造布的市场领导者，最近又开发出一种采用专利技术用于室内装饰的精细工艺印刷用独特面料。“我们在扩大业务机会的同时，保持我们的核心竞争力，为我们的产品创造附加值。我们先进的质量控制管理和环保产品也已通过ISO-14001和ISO-50001认证。”胜宏董事长Keynese S.C.Chen如此介绍到。

亚马逊推出天然尿片

致优公司推出Earth + Eden尿片

亚马逊以Mama Bear品牌进军一次性尿片市场十个月后，与致优婴儿用品公司（First Quality Baby Products）合作，在其网站上推出了独家优质尿片品牌——Earth + Eden。该品牌产品采用经认证的可持续来源绒毛制成，未经动物实验，并印有无毒水性油墨，与Jessica Alba's Honest公司出售的产品相似。尿片还在顶部设有印花带以及棉混纺干燥层，且不含天然乳胶、氯化物和粘合剂。

尿片的价格从1号的21美分到7号的51美分，定价与Luvs、Huggies和Pampers等主流尿片品牌价格相比，明显低于Honest，Parasol和Pampers Pure等类似的尿片。

根据消费者网站-Just In, Earth + Eden商标

归致优婴儿用品公司所有，致优正在回应亚马逊产品页面上的客户问题，这些产品在宾夕法尼亚州和佐治亚州的工厂生产。

亚马逊进军一次性尿片市场并非没有问题，2015年首次以Elements品牌进入市场。一经推出便大力宣传，承诺提高原料采购和制造的透明度，但在消费者不满意后几周，公司将其Irving个人护理产品从网站上下架。该电子零售商于11月通过其Mama Bear自有品牌重新进军市场。Earth + Eden赢得了消费者是良好的初步评价，在基于131个顾客评论上，该品牌目前拥有4.4星（满分5星）。

（资料来源：“www.thefreelibrary.com”）

Drylock, P & G签署全球交叉许可协议

协议涉及公司的渠道技术

宝洁公司（P & G）和Drylock Technologies NV（Drylock）已签订全球交叉许可协议，将其知识产权扩展到所谓的“渠道”和“渠道”以及相关的湿度指示条技术。

“渠道”技术应用于增强吸收性卫生产品，例如婴儿护理胶带式尿片、成人失禁垫和失禁裤。Drylock和P & G提供了各自的渠道技术：Drylock以品牌“Magical Tubes”提供和销售这项受专利保护的创新技术，而宝洁以“Air Channels”品牌商标化其专利保护创新。宝洁和Drylock之间交叉许可协议的条款和条件是保密的。

（资料来源：“https://nonwovens.com”）

Glatfelter完成对Georgia-Pacific欧洲非织造布业务的收购

宾夕法尼亚州约克郡，2018年10月1日Glatfelter宣布，已完成在此前宣布的以1.85亿美元收购Georgia-Pacific的欧洲非织造布业务，但需按惯例调整收购价格。

该收购业务包括Georgia-Pacific在德国Steinfurt的业务，以及位于法国和意大利的销售办事处。Steinfurt工厂生产高品质的气流成网产品，用于桌面、擦拭巾、卫生巾、食品垫和其他非织造材料市场，以及专注于消费者应用的其他材料。Steinfurt是一个最先进的、生产能力可达32,000吨的制造工厂，拥有约220名员工。

“非织造布业务的扩张是我们成为全

市场动态

球领先的工程材料公司的又一里程碑，” Glatfelter董事长兼首席执行官Dante C. Parrini表示。“此次收购是对Glatfelter现有业务极好的补充，并将提供即时的经济利益。展望未来，我们将继续专注于加速增长我们工程材料业务。”

Glatfelter的收购资金来源于持有现金和现有循环信贷额度下的借款。

瑞士信贷担任该交易的财务顾问，Shearman & Sterling LLP担任法律顾问。
(资料来源:“www.glatfelter.com”)

3M提供新型的医用胶带

3M 4076长期绑扎的医用胶带是一种基于丙烯酸的非织造布，可长期绑扎在皮肤上。3M在其产品系列中增加了3M 4076 长期绑扎的医用胶带。3M公司的医用材料和技术业务为医疗设备制造商和工程师提供了一种非织造布，长期绑扎和丙烯酸基粘合剂解决方案，旨在增加患者的舒适度，并在具有挑战性的应用中提供牢固可靠的粘合。

开发无致敏性，适应性粘合剂用于长期绑扎，特点是坚固且舒适的粘合，患者甚至可能意识不到他们在使用该装置。这使得工程师和制造商只能关注设备的设计和应用、激发创新，同时确保满足时间轴和预算要求。

3M关键和慢性长期保健解决方案部敏捷商业化总监Diana Eitzman博士说：“粘皮肤是医疗器械行业面临的主要挑战”。“通过为客户提供最新的胶粘剂技术，我们有为他们解决最具挑战设计的能力，并对全球的患者生活产生积极的影响。”

符合ISO: 10993和ISO: 10993-10，医疗行业法规评估产品产生刺激和皮肤过敏，4076长期绑扎医用胶带被批准用于完整皮肤。
(资料来源:“www.nonwovens-industry.com”)

DiloGroup在Kisbu集团投入了最新的梳理技术

德国EBERBACH，2018年二季度- DiloGroup公司已投入运行一项新开发的高效梳理机，其工作宽度为3800毫米，其中包括在土耳其Muratli/Tekirdag、Kisbu A.S 的

MultiFeed梳理机和DON定量开松机。

该纤维的制备阶段包括了Baltromix纤维的开松机、柳木梳理机和混纺的DiloTemafa的纤维混纺装置。梳理机安装后，可以在后续安装水刺生产线、各种烘干机、自动生产控制系统以及切割、卷绕设备。

这条生产线设计可用于生产不同原料的产品。新生产线的产品可应用于医药、卫生、工业、汽车等行业。

Kisbu集团成立于1978年。自成立后，他们成功地扩展到纺织、合成材料和建筑行业，并于1997年开始生产非织造布。

在非织造布领域，该集团产品有：PP纺粘非织造布(SS、SMMS)，热/化学加固材料、PE熔喷非织造布、涂层、热熔胶层和印刷产品。
(资料来源:“Dilo集团”)

新ASTM国际土工合成标准支持侵蚀控制

W. CONSHOHOCKEN, Pa. — 2018年3月26日—一个新的ASTM国际标准将支持土工合成胶凝复合垫(GCCM)，一个新的材料家族，可以帮助控制侵蚀、保护斜坡和护坡、以及为沟渠和涵洞划线。

新标准(D8173)确定了GCCM的合理布局、安装和水化过程。它还还为设计人员、检查人员和安装人员描述了设备信息，以及为购买者在安装前准备使用的检查表。

“这个新标准提供了关于紧固、重叠、附件、锚定和其他对良好的GCCM安装至关重要的问题的细节，” ASTM国际会员John Paulson说，“这将有助于减少或消除首次安装者可能犯的常见错误。”

Paulson指出，由于GCCM在土工合成和控制侵蚀的应用上有独特之处，委员会希望开发更多与测试、安装和分类相关的标准。
(资料来源:“www.textileworld.com”)

Domtar发布其可持续性发展

公司已经超过了2020年的一些目标。Domtar公司发布了2018年可持续性发展，

市场动态

强调了公司正努力从长远角度为股东、客户、员工和社区创造和保持价值。在其2017年报告中，Domtar宣布该公司已达到或超过该公司六项2020年可持续发展目标中的三项。

“在Domtar，每个人都在可持续发展中发挥作用，因为这是我们每天开展业务的方式，” Domtar总裁兼首席执行官John D. Williams解释道。“可持续发展是我们长期发展战略中不可或缺的一部分，这正是我们能够在2018年达到或超过2020年可持续发展目标的一半，以及为什么我们能够顺利实现剩余目标的原因。”

在2018年的发展中，Domtar致力于将可持续性纳入其长期发展战略，致力于实现公司2020年目标的关键成就，包括：

- 自2010年以来，温室气体（GHG）排放量减少了18%，超过了Domtar 2020年目标的15%。Domtar的2020年目标是到2020年将纸浆和造纸厂购买能源的直接和间接温室气体（GHG）排放总量从2010年的水平降低15%。在过去几年中，六个动力锅炉从煤炭到天然气的燃料转换提供了大部分削减。
- 在2020年计划之前完成Domtar纸浆和造纸厂的水费模型。今年实现了2020年为公司纸浆和造纸厂开发一个模型以衡量并更具战略性地管理用水的全部成本的目标。过去两年，该模型在五个工厂进行试点研究，以结合独特的、特定地点的水条件。Domtar计划在2018年开始将水的全部成本纳入业务决策，并在其他工厂进行额外的水费评估。
- 森林管理委员会（FSC）认证的用于生产Domtar纸浆和造纸厂的纤维用量增加到纤维总量的22%，超过了公司2020年目标的20%。Domtar仍致力于降低技术和财务障碍，以提高木材采购区域的森林认证。

2018年可持续性发展还展示了公司如何实现其剩余的2020年目标，在关键领域取得显著进展，包括：

- 将Domtar的可记录安全事故率降至0.78，这是该公司有史以来最好的一年，自2008年以来减少了55%。该公司正在努力实现其2020年目标，通过增加关注和努力，防止重伤，消除非核心、高风险任务，从而将其可记录的安全事故率降低到

0.50。

- 将Domtar的EarthChoice大使（ECA）计划扩展到76%的公司设施。截至2018年，Domtar已在4个国家的26个地点建立了ECA团队，使公司更接近其目标，即到2020年，通过我们在每个工厂的ECA计划让员工参与可持续发展。
- 自2013年以来，将纸浆和造纸厂输送到垃圾填埋场的总废物减少了36%，接近2020年目标，即从2013年的水平减少40%。减少我们工厂送往垃圾填埋场的材料数量的进展是减少源头的举措和新的、扩大的有益使用计划的结果。

“在Domtar，我们对可持续发展的投资植根于责任、效率和参与” Domtar可持续发展副总裁Paige Goff说。“我们对可持续发展的承诺使我们能够激励员工、降低风险、提升品牌声誉、推动企业成功并增加股东价值。”

作为2018年可持续性发展的补充，Domtar还制作了一个简短的视频，说明了公司对可持续发展的承诺。虽然企业可持续发展报告传统上很复杂，但Domtar的最新视频将公司的2020年可持续发展之旅带入生活，有助于使所有受众更容易获得技术主题并激发灵感。

(资料来源:“www.4-traders.com”)

Mogul参加亚洲非织造展（ANEX） 创新和高性能产品目标市场范围

Mogul非织造布是土耳其一家国际非织造卷材生产商，在土耳其和美国拥有四家工厂，并被Nonwovens Industry杂志评为全球40家非织造布公司。Mogul将其大部分产能出口到全球四大洲的53个国家，具有始终如一的质量，低成本和令人满意的服务。我们服务的主要市场包括空气/液体过滤、湿/干擦拭巾、汽车、床上用品、人造革、面膜、卫生、干燥纸、户外/运动服装和溢出控制。

在亚洲非织造展上，Mogul展示了其新的创新和高性能产品，特别是全新的Madaline。这些产品适用于满足当前环境问题，汽车材料选择的挑战，人口增长以及亚洲国家生活水平的提高。亚洲地区积极的业务增长是Mogul业务战略的重点之一。

市场动态

产品包括:

Madaline®双组分超纤水刺。适用于防螨家纺、户外/运动服、人造革、面膜、干擦拭巾、精密包装、汽车顶棚内饰/音响、平面设计等应用。

Buffalo®双组分 (PET/CoPET) 纺粘 (芯层和皮层, 圆形和尖三叶形长丝)。适用于空气/液体过滤、汽车、PTFE复合、干燥纸应用和其它应用。

Mopet®100% PET纺粘 (圆形和三叶形长丝)。适用于空气/液体过滤、汽车、干燥纸和其它应用。

Durell®交叉铺网水刺, 可选配增值化学处理。适用于人造革、面膜、汽车顶棚/内饰、干擦拭巾、医用绷带等其它应用。

Aqualace®平行铺网水刺, 是湿巾行业全球公认的优质产品, 受到美国、欧洲、中东和亚洲客户的青睐。

Ultrasorb®PP熔喷和复合材料。适用于石油/化学品溢出控制的成本效益的解决方案, 例如海洋/河流港口、油田、石油工业、机器维护/清洁、汽车装配线和其它应用。

(资料来源:“www.nonwovens-industry.com”)

BST集团参加亚洲非洲造展 (ANEX)

非织造布市场质量保证的亮点

BST集团, 特别是BST eltromat国际, BST eltromat日本, BST eltromat上海和BST eltromat上海的代理商BXD, 在今年东京的亚洲非织造展中展示非织造布行业质量保证体系的几个亮点。该公司展示了可靠的解决方案和产品, 用于网带纠偏和100%检查。观众还可了解有关其它产品细分的更多信息: 定位控制、纤网监控、颜色测量、表面检测、色彩管理、工作流程、自动化、厚度测量和基重测量。

产品部门的网带纠偏成为BST eltromat的焦点。该公司的客户可以根据切割或非织造制品深加工的技术和经济要求, 在不同的网带纠偏系统中进行选择。可以选择生态、基本和高端解决方案, 可根据要求轻松调整到特定任务。BST eltromat的非织造行业网带纠偏组合, 例如包括用于导辊的各种纤网边缘传感器、制动器、导向装置、控制器和涂层。这使BST eltromat能够覆盖该市场中加工的大量材料。在东京展会, 观众可看到一个带有运行纤网的演示机器, 配备了不同的网带纠偏系统和组

件: 带有宽阵列传感器的紧凑导轨, 以及带红外传感器IR 2011的中式基础导轨。

通过其控制器, 紧凑的导轨非常易于使用, 这对所有操作员来说是关键。直观的操作是按逻辑构建的, 操作员可以一目了然地看到材料是否被精确控制。使用BST eltromat的子公司AccuWeb的宽阵列传感器在非织造行业中非常普遍。由于测量面积大, 这些久经考验, 无磨损, 因此无需维护的纤网边缘传感器在使用不同的纤网宽度时无需进行机械调整或对齐。在运行过程中, 它们会自动补偿环境影响, 如粉尘污染或温度波动。基础导轨也用于非织造布行业。它是一种十分强大、经济高效且结构紧凑的导向装置, 可通过即插即用功能快速轻松地投入使用, 就像紧凑导轨导向装置一样。同时展出了其它组件, 如数字控制器ekr 500数字和其他宽阵列传感器。

(资料来源:“www.bst.group”)

美国德克萨斯州地方政府资助棉花研究 当地政府支持德州理工大学的项目

德克萨斯州地方政府资助500万美元, 用于德克萨斯州拉伯克的德克萨斯理工大学 (TTU) 推动棉花研究和教育。

通过州长大学研究计划提供的州政府资金与大学相匹配, 建立一个研究所专注对棉花环境压力的研究。该计划将由Luis Rafael Herrera-Estrella领导, 他是国际公认的植物科学研究员和国家科学院的外国副院士。

Herrera-Estrella成为TTU的第一位国家科学院院士, 加入了5位美国国家工程学会的大学教授。

德克萨斯州的高原是世界上最大的连续棉花产区, 但由于缺少雨水, 影响棉花生产和质量。对于旱和其它环境压力的研究与高原棉花产业具有高度相关性, 并具有国际意义。

TTU植物与土壤科学系主任Eric Hequet表示, 新的棉花研究所将专注于细胞生物学、应激生理学和生物化学、生物信息学

(下转第35页)

市场趋势

Avgol 在 Hygienix 上展示微生物解决方案

(资料来源:“www.nonwovens-industry.com”)

beneFit控制为卫生产品带来益处

Avgol, 是高性能非织造产品制造技术解决方案的全球领先者, 在Hygienix 2018上展示其beneFit技术。

beneFit范围已通过Avgol的创新思维开发(FIT)策略, 利用公司的专业知识, 为婴儿尿片、成人失禁用品和最具有前沿消费需求的女性卫生用品的市场创造高性能技术。

该战略构成了Avgol不断研究和发展成为革命性解决方案的基础, 以满足全球卫生市场不断增长的需求。

Nick Carter, Avgol公司的市场情报和知识产权总监, 在Avgol的FIT策略和技术活动中发言。Carter的演讲将采用beneFit控制, 由Avgol开发的一系列化学成分和工艺过程, 为了提供卓越的性能和舒适性的消费者范围。

beneFit控制可以与Avgol的其他FIT技术一起使用, 以增强卫生产品的功能。

Carter先生说: “Hygienix 2018是一个行业领先的展览会, 也是Avgol公司在最新市场上, 向那些代表传授技术的一个极好平台。展示我们的FIT技术如何为增强性能和最终用户舒适性提供可定制的解决方案。”

Avgol公司的先进抗菌解决方案, beneFit控制, 也在活动中被提名为Hygienix 2018的创新奖。

(资料来源:“www.avgol.com”)

Daiwabo开发聚烯烃替代品

生态退化的替代办法

Daiwabo人造丝开发了一种防水环保型人造丝材料, 并以E-Reabelas品牌销售。该材料纤维表面涂覆有非氟基的材料, 并且该非织造产品能够在提供拒水或除臭功能之外, 还能在pH中显示为弱酸性。

Eco Repellas的应用如尿片和其他卫生材料, 在这些应用中, 它能够提供更生物降解性和其他益处, 并且可以作为聚烯烃非织造布的可行替代品。

Asahi 开发了过滤材料

产品是一种纺粘/水刺复合工艺的产品

随着滤料的发展, Asahi Kasei结合纺粘/水刺复合工艺, 研发了一种具有超细纤维非织造布, 旨在推动汽车工业的发展。该滤料为非织造材料, 在过滤器中代替了织物。在该应用中优选非织造材料, 因为当燃料泵暴露于高压并且泵模块分配燃料时, 他们的性能可以显著提高。

(资料来源:“www.nonwovens-industry.com”)

Fibertex在巴西扩张

收购八个月以来, 公司扩大Duci20%的生产能力

为了满足汽车和其他工业对专用产品不断增长的需求, Fibertex公司将增加在巴西20%的生产能力。这家总部位于丹麦的非织造布生产商在2018年2月从Duci公司购买了该地皮, 并已显著增加了对南美一些客户的销售。

“接管巴西工厂的过程远远超出了我们的预期。我们的南美客户给了我们非常热烈的欢迎, 而我们已经面临产能紧急短缺,” Fibertex公司首席执行官Jrgen Bech Madsen说, “自从收购Duci以来, 我们一直计划扩大产能, 但需求增长比我们预期的要快, 我们将立即开始对现有生产线进行升级。从以前的经验中知道, 在扩大我们其他工厂的地皮, 升级可以增加生产能力的20%。此外, 我们还将加快其他扩建项目的规划。”

该投资预计花费1500万丹麦克朗, 并在2019夏季全面实施。Bech Madsen解释说: “Fibertex公司已经把额外的产能卖给了不断增长的巴西市场, 巴西市场是世界第六大市场, 占据了整个南美市场一半以上的市场份额。巴西Fibertex公司的水刺技术是由美国南部的另一家公司生产的。Fibertex已经在法国和土耳其生产这种类型的非织造布, 它在这一领域的经验是其成功的关键因素。”

“这些年, 在我们国家, 公司已经积累了大量的非织造布经验, 但简单大批量产品之间有很大的差异, 如土工布和一些特殊用途的产品, 用在过滤、降噪, 汽车内部

市场趋势

和外部，还有其他用途的，如特种擦拭用品或制鞋行业的产品。我们在特殊用途产品上全球领先，显然我们有将自己的知识和生产方法很好的应用在巴西的新工厂。这给了我们一些独特的市场优势。” Bech Madsen继续说道。

事实上，对特殊用途产品的需求增长速度比其他行业都要快，而不仅仅是巴西市场，包括阿根廷在内的其他几个南美市场报告了工业生产的强劲增长。

“从历史上看，非织造布市场的增长速度是我们GDP的三倍，且仍然有巨大的潜力。巴西消费者平均只花掉美国或欧洲消费者三分之一的费用，非织造布在其中起着重要作用，” Fibertex巴西子公司的CEO Carlos Benatto解释说，“这种增长速度不仅仅适用于巴西的大型汽车工业，几乎所有的美国、欧洲和日本汽车制造商都积极参与其中。在向汽车工业供应非织造布中，Fibertex公司是市场的领导者。在欧洲，平均一辆汽车含有约30平方米的特殊用途非织造布，包括从头巾、座椅、包裹托盘到用于车轮外壳、电机绝缘或车身底

部零件的外部应用，在巴西的投资，使得Fibertex公司为现有和新的汽车客户提供了一个专门服务的平台。”

(资料来源:“www.nonwovens-industry.com”)

电池展览会的“创新管理”

慕尼黑电池展览会BST ELTROMAT的“创新管理”

Michael Dattner博士，BST ELTROMAT国际创新公司的经理，在EES（电能存储）欧洲发言。欧洲EES是欧洲最大和最受欢迎的国际电池和储能系统展览会。标题为“整体质量保证的概念——幻想还是现实？” Michael Dattner博士在印刷和轮胎工业的质量保证体系中展示了该公司的核心竞争力。他展示了一个通过将管理技术和管理诀窍转移到电池行业的机会，重点是在跨行业的方法中结合不同的解决方案，观众很欣赏这种方法。博士进一步强调的是关于BST ELTROMAT概念的在线容量估计的讨论。这可以在电极生产过程中，开始阶段通过BST预控器的同位素传输测量进行随机控制，并获得最终电池容量的估计。对于100%检验概念，传感器目前处于由“创新管理”驱动的可行性研究中。

(资料来源:“www.bst.group”)

(上接第49页)

与此同时，Andritz通过使用包含Andritz Asselin-Thibeau组件和系统灵活多变的交叉铺网机对全棉水刺过程进行分析，以实现最佳的纤网结构。Andritz的Michalon说：“对更加轻质非织造布的需求也为棉花和面膜市场提供了动力。”

美国的Bondex公司在过滤和其他领域中也使用了水刺。作为工业过滤知名企业Andrew工业公司的子公司，Bondex在2016年投资2000万美元扩建水力缠结水刺产品到其现有产品组合。此前，该公司的产品范围包括面粘和点粘热轧非织造布以及各种层压和涂层产品。

Trützschler的水刺加工技术包括纤维加工生产线，以及后续的400 bar高压水力缠结单元。这些单元为Bondex提供了生产各种水刺非织造布的能力，包括PPS、间位和对位芳纶、PET、PP和聚酰亚胺，重量范围为20~600g/m²，宽度可达225厘米（88英寸）。投资还包括各种精加工设备，如烧毛、压延、层压、

化学浸渍、热定型和分切。

该系列的新产品包括Hydrolox，是一种用于工业过滤市场的技术。

根据Bondex的说法，历史上，工业过滤毡是通过传统的针织机生产的，这种针织机满足了一些市场需求并具有特殊的性能平衡。Hydrolox这种过滤材料将针织纤维缠结的优势与革命性的水力缠结技术相结合，提供行业领先的容尘能力。用高压水射流缠结纤维使得在材料产生了较低孔径的独特平衡。

Hydrolox通过提供具有显着提高滤效和容尘量的产品，随时间变化更低的压降以及反冲周期更长，代表了过滤产品的新范例。此外，Hydrolox HCE可作为一系列过滤介质使用细纤维，与膜层压针刺毡相比，提供更高的集尘效率。

水刺生产商目录（略）

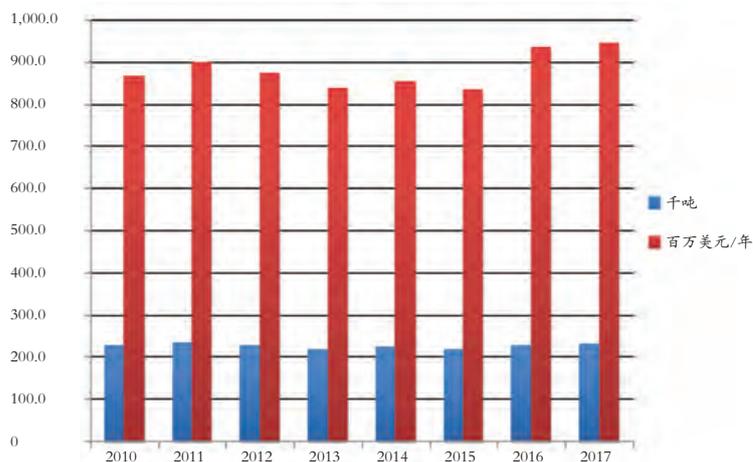
(资料来源:“www.nonwovens-industry.com”)

2017年韩国 非织造材料 产量

韩国非织造材料产量 (2010~2017)

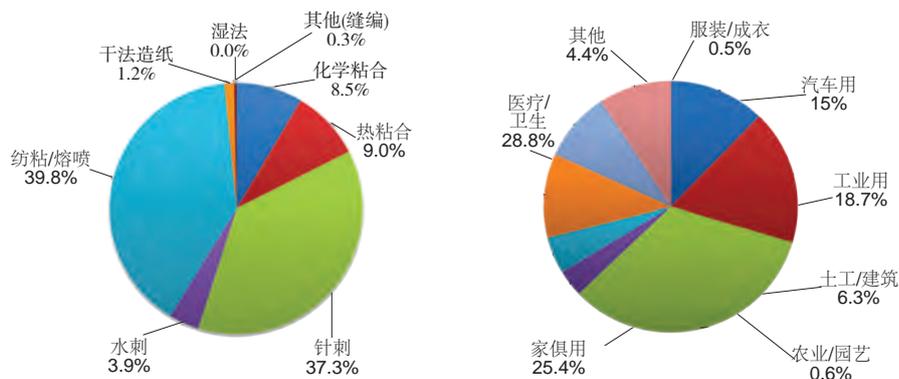
资料来源: KNIC

	2010	2011	2012	2013	2014	2015	2016	2017
千吨	224.9	233.2	226.2	217.1	221.3	216.2	225.5	227.8
百万 美元/年	865.0	897.8	872.0	837.1	853.1	833.2	932.3	941.9
美元/公斤	3.85	3.85	3.85	3.86	3.85	3.85	4.13	4.13



按加工工艺和应用分类的非织造材料产量 (2017) (227.8千吨)

资料来源: KNIC



韩国非织造材料进出口量 (2010~2017)

资料来源: KNIC

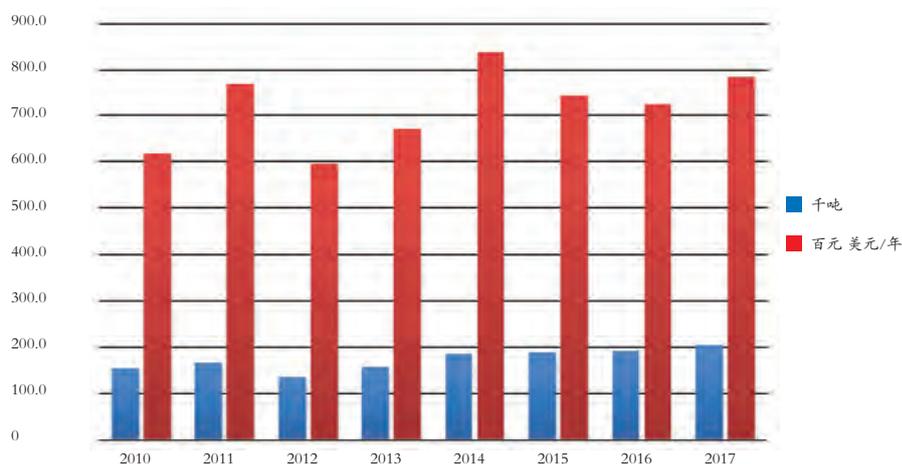
		2010	2011	2012	2013	2014	2015	2016	2017
千吨	出口	83.3	78.9	77.5	79.8	77.8	70.4	62.0	65.5
	进口	48.9	48.1	50.7	63.8	80.5	91.5	106.9	117.4
百万 美元	出口	348.4	397.9	387.8	397.5	404.4	400.4	400.0	400.0
	进口	212.7	248.7	250.7	281.6	334.0	344.0	415.7	453.5
美元/公斤	出口	4.18	5.04	5.00	4.98	5.20	5.69	6.45	6.11
	进口	4.35	5.17	4.94	4.41	4.15	3.76	3.89	3.86

2017年台湾非织造材料产量

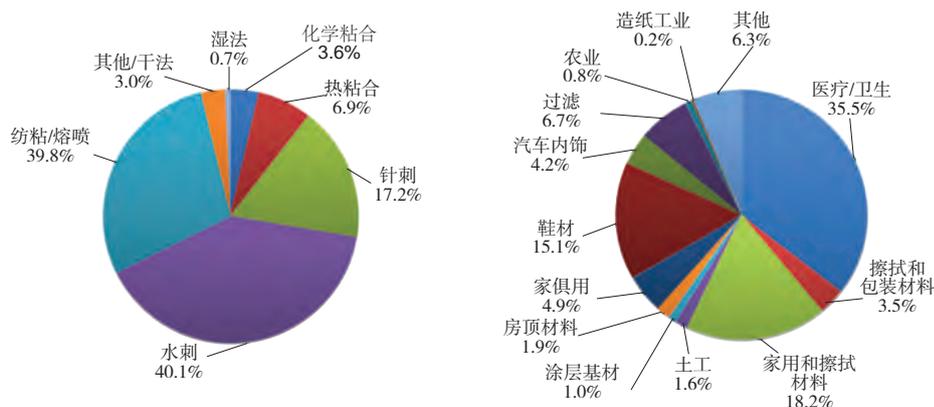
2017台湾非织造材料产量 (2010~2017)

资料来源: 台湾不织布工业同业公会

	2010	2011	2012	2013	2014	2015	2016	2017
千吨	150.0	164.8	130.5	153.1	181.5	183.7	188.0	200.4
百万 美元/年	614.1	765.1	591.8	667.2	833.4	739.3	721.8	781.7
美元/公斤	4.1	4.6	4.5	4.4	4.6	4.0	3.8	3.9



按应用分类的台湾非织造材料产量 (2017) (200.4千吨)



台湾非织造材料进出口量 (2011-2017)

		2011	2012	2013	2014	2015	2016	2017
千吨	出口	71.6	74.0	82.3	93.4	94.0	98.2	106.0
	进口	31.4	27.8	26.6	26.7	24.7	26.6	26.1
百万 美元	出口	322.2	324.2	338.5	369.5	378.1	372.5	407.3
	进口	150.0	130.3	122.2	122.6	110.4	103.2	103.3
美元/公斤	出口	4.50	4.38	4.11	3.96	4.02	3.79	3.84
	进口	4.78	4.69	4.59	4.59	4.47	3.88	3.96

无纺布创新和 个人卫生用品市场 的发展

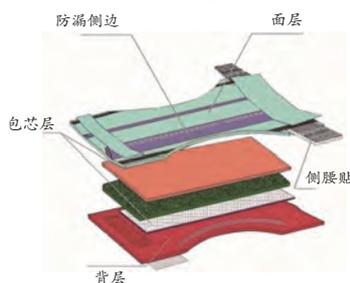
青岛大学
宁新博士，教授



无纺布与卫生医疗防护产品的关系

- ★ 材料技术是产品创新的发动机，赋予产品差异化的特性并促使用户优选
- ★ 技术造就市场优势
- ☆ 柔软性
- ☆ 超薄性
- ★ 亚洲市场的技术和产品开发有其独特性

产品里有哪些材料组件呢？



无纺布在个人卫生用品上的应用

- ◇ 婴儿和成人尿裤的面层
- ◇ 婴儿和成人尿裤的侧翼
- ◇ 婴儿和成人尿裤的背面层
- ◇ 婴儿和成人尿裤的魔术贴基布
- ◇ 婴儿和成人尿裤的侧腰或侧耳
- ◇ 包芯层
- ◇ 卫生巾/护垫面层
- ◇ 卫生巾/护垫的单个包装袋
- ◇ 液体吸收芯体？

卫生用品中使用的无纺布种类

- 基于梳理铺网成布（短纤）
 - ◇ 短纤种类包括PP，PET，PP/PE bico，PET/co-PET bico，Rayon，PLA，棉，生物质纤维等
 - ◇ 通过热辊压粘（TBCW）
 - ◇ 通过热风粘合（TACW）
 - ◇ 通过空气铺网（Airlaid或无尘纸）
 - ◇ 通过高压水针缠绕（水刺）
- 基于熔融纺丝（纺熔；连续长纤维）
 - ◇ 纺粘（SB），双组份纺粘（PP/PE，PET/co-PET，PLA）
 - ◇ 熔喷（MB）
 - ◇ 纺粘熔喷复合（SMS）
 - ◇ 其他复合组合（与薄膜，弹性丝等）

亚洲在卫生用材开发应用上领跑世界潮流

- 产量/用量的快速增加
 - ◇ 全球最大的(持续增长)市场

- ◇ 中国，东南亚，印度.....
- ◇ 普通产品和高端产品俱全

• 技术创新与多样化

- ◇ 尿裤使用卫生巾的特性材料和设计（热风，压纹，打孔结构等）
- ◇ 差异化，高端化
- ◇ 不含绒毛浆的吸水芯体

产品设计中思维定势的变迁

亚洲对比北美/欧洲亚洲

• 亚洲无纺技术的多元化

- ◇ PP/PE Bico热风无纺布已经成为与皮肤接触材料的优选
- ◇ 改性的PP纺粘无纺布是全世界最柔软的产品！

• 亚洲无纺布供应能力的强化

- ◇ 最近几年石油基布产品的大幅降价
- ◇ 双组分ES纤维的生产与低价供应；纺粘增柔添加成分（弹性体，相容添加剂等）的充分开发
- ◇ 高端成品销售价格足够高

对产品柔软性的追求

- ◆ 全球的消费者都有此需求
- ◆ 亚洲消费者的追求最为强烈，其产品柔软度的进步引领世界
- ◆ 产品结构设计和组分材料特质都对整体柔软度做贡献

• 使用者的接触

- ◇ 面层
- ◇ 防水侧翼
- ◇ 腰围

• 照料人的评判

- ◇ 手的触感
- ◇ 产品整体柔软度
- ◇ 是否合身合体

柔软度的定义和测试

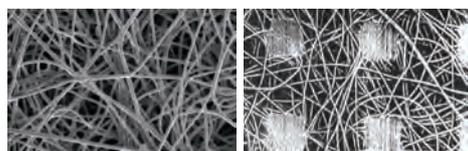
• 实验室测试

柔软度的物理测试方法有织物条，织物杯，模量，弯曲度，摩擦系数

• 感官感觉

柔软的感觉基于三大感官

- ◇ 表面触觉
- ◇ 整体弯曲变形
- ◇ 目视



技术信息

纤维基础-柔性的源泉

• 纤维性能

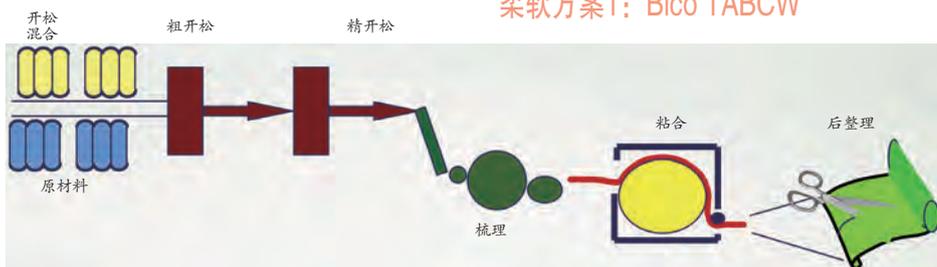
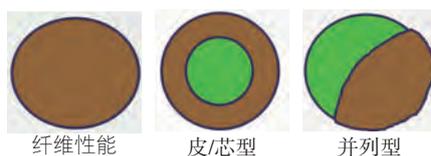
- ◇ 模量
- ◇ 表面触感
- ◇ 形态 (卷曲度)
- ◇ 热粘特性

• 单组份纤维

- ◇ PP, PE
- ◇ 改性

• 双组份纤维

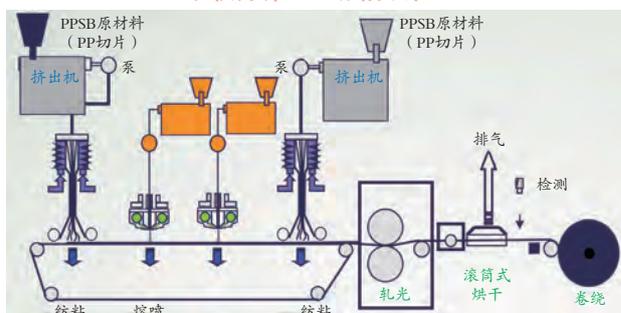
- ◇ PE/PP
- ◇ PE/PET, PET/co-PET
- ◇ PLA/PP
- ◇ PP/PP



柔软方案1: Bico TABCW

- 不同旦数和表面油剂的PP/PE Bico纤维
- PET/PE, PET/co PET Bico Fiber
- PLA and PLA bio fibers
- ES纤维与生物质纤维的混合 (棉, 黏胶, 海藻)

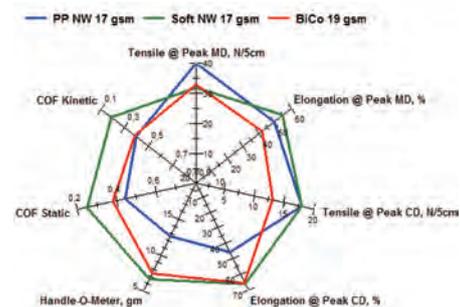
柔软方案2: 纺粘改性



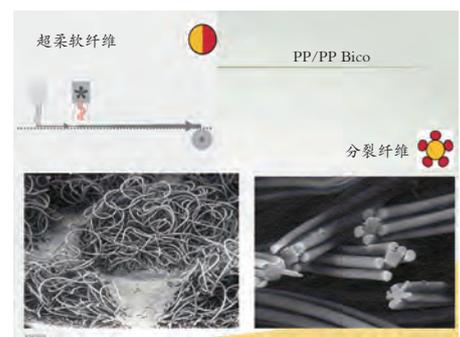
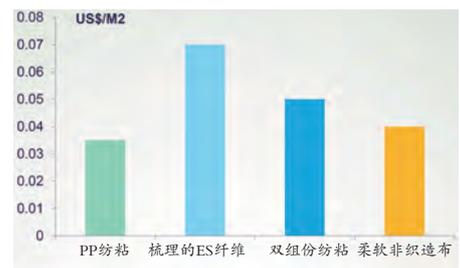
- 以PP原料为基础的共混改性配方带来具有价格优势的柔软无纺布纺粘材料
- 添加剂帮助纺丝加工效率, 产品手感和针对终端产品的适用性

- 共混物中包括高分子共聚物, 弹性体, 相容剂, 纺丝稳定剂 (Exxon, Dow, Idemitsu...)

材料多项性能的平衡



应用价值----性价比



对产品薄型的追求

- ◆ 薄=合体=舒适
- ◆ 薄=减少包装量和成本=富余的货架空间
- 木浆/SAP复合芯体
- ☆ 尿裤发展历史上的一大创新
- ☆ 在液体吸收和液体扩散和导流上达到平衡

- 无木浆芯体
- ☆ SAP颗粒在产品中的分布和定位依靠无纺布结构
- ☆ 无纺布液体扩散和导流结构
- ☆ 吸水芯体卷材的前景

技术信息

产品吸液能力与薄度的相关与矛盾



超声波固结SAP/无纺布芯体



US 9, 295, 593 B2 (2016)
ENVIRONMENTALLY FRIENDLY ABSORBENT
STRUCTURE

SAP吸水纸



- 双层或多层结构
- ☆ SAP包裹在纸之间
- ☆ SAP包裹在热风无纺布之间
- ☆ 用胶还是热固结?

宏观经济大趋势的影响

- 性能
- ☆ 柔软度
- ☆ 轻薄度
- 性价比
- 产品设计的进化



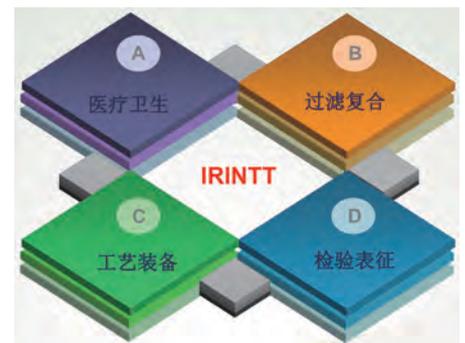
技术创新

- 由无纺布创新带来的产品性能的进化
- 亚洲区消费市场和供应群体的特性和发展趋势
- 在卫生和医用(?)产品创新上引领潮流
- 在可持续发展上引领潮流

青岛大学

非织造及产业纺织品创新研究院

产业应用驱动的研究院布局



卫生与医疗研究开发方向

项目方向	材料特性
高性能低成本 医疗隔离材料	更简单的SMS
可分散型无纺布开发	用于湿中, 特种纸张
纤维复合材料, 后加工	多种用途
天然纤维无纺布开发	用于面层, 湿巾

过滤与复合研究开发方向

项目方向	材料特性
高性能气/液过滤材料	表面科学
针刺复合材料	工程应用
汽车航空非织造复合材料	材料轻量化

工艺和装备研究开发方向

项目方向	特性
纳米级纤维熔喷设备	工艺拓展
高通量静电纺丝无纺布设备	降低成本
湿法无纺布工艺和设备	
特种聚合物无纺设备概念	

IRINTT, 创新产业化, 国际化的平台

- 新的起点, 共同打造
 - 跨学科的人才, 跨学科的研究项目
 - 国内外高校, 企业和市场资源
- (资料来源: "ANFA会议论文集", 本篇已节选)

技术发展趋势

水刺市场报告

投资、产品开发和亚洲正在塑造全球市场
水刺非织造材料的市场正日益增长。专家表示尽管某些地区供过于求，但对该行业未来产能的利用率仍持乐观态度。

这种乐观的态度主要是源于可冲散湿巾行业的发展。消费者对湿巾的使用意识不断提高，从而促使非织造布生产商在这部分业务进行技术扩充。

“全球市场需求的可冲散湿巾经历了繁荣期，许多加工商都在寻找具有这种特性的擦拭巾。” Andritz Perfojet的销售总监 Andre Michalon说。

20年前，Andritz以其新配置的水力缠结单元扩展了设备组合，该单元完全适用于可冲散湿巾的生产，被称为Wetlace。“众所周知，我们基于使用木浆的Wetlace技术适用于可冲散产品的生产，对市场而言这非常重要。”他补充道。

尽管对可冲散基材有很大的需求，但由于增加了一系列新产能，导致可冲散湿巾的产能明显高于市场需求，Price Hanna Consultants的合伙人David Price表示。“类似于纺粘聚丙烯，新的水刺生产线容量通常大，并且由于这些大型生产线的安装，产品不太可能立即完全被消耗。”他补充道。

一些投资可能会先于市场，特别是在可冲散产品上的投资，但是对于标准擦拭基材领域还是很乐观的，因为他们在往更宽更深的市场渗透，呈现增长的趋势。“我认为这是通过改善世界各地的经济状况，无论是发达国家的市场还是发展中国家的市场，他们对可冲散湿巾的兴趣，对卫生市场的渗透等，同时这也导致了一些地区的产能过剩，但可能这只是暂时的。”

一家自有品牌湿巾制造商EcoWipes正试图增加可冲散湿巾的生产线。这家波兰公司也自主生产非织造布，最近订购了第三条非织造布生产线。

由于消费者对可生物降解材料不断增加的兴趣，EcoWipes选择了Trützschler Nonwovens和Voith湿法水刺（WLS）生产

线。这两家公司开发的湿法水刺非织造布所提倡的可持续概念是EcoWipes系列产品的理想选择。它既可以生产可冲散的擦拭巾，也可以生产可回收和可生物降解的产品。

新生产线是一条灵活的干湿非织造布设施。Voith正在供应HydroFormer技术，它是新生产线的主要组成部分之一。采用HydroFormer技术，悬浮液具有高度稀释性，因此可完全由纤维素生产，而纤维素是一种可再生且具有成本效益的原材料。

Trützschler Nonwovens不仅提供水力缠结、干燥和卷绕设备，还将提供其最新的高速梳理设备。这种灵活的配置使EcoWipes能够生产各种各样的湿法成网/水刺或梳理/水刺非织造布。

与此同时，芬兰水刺非织造布知名企业Suominen宣布，它将在其位于Green Bay, WI的工厂投资600万欧元。用于在现有的水刺生产线上安装新的梳理机。它将提高工厂的产能，并进一步支持Suominen开发和供应创新产品。

一旦升级，该生产线将提高Suominen产能，为家庭护理、个人护理、工作场所擦拭巾以及卫生应用提供高附加值非织造布，所有这些都是Suominen寻求增长的类别。该投资还为Suominen的客户供应更有效的婴儿湿巾非织造布。

在发布这一消息时，总裁兼首席执行官Nina Kopola表示：“此次投资再次证明了我们对于扩充产能认真的态度，符合改革策略。这是对Suominen目前生产技术明显的升级，扩大了我们在全球的产品供应并提高了生产能力。从长远来看，我们还可以增加Green Bay工厂高附加值非织造布的份额。”

Suominen在此地拥有两条水刺线。

土耳其非织造布生产商Mogul也在投资水刺产品，该公司去年年初开启了其最新投资，Mogul South Carolina Nonwovens。该工厂位于Grey Court, SC，设有幅宽为3.2米、高速平行铺网水刺生产线年产能15000吨。这是Mogul首次在土耳其以外的投资，将有助于满足Mogul对擦拭巾、卫生、过滤和汽车市场的非织造布技术的需求。

技术发展趋势

该公司表示，通过扩展到美国市场，它已经将自己定位为更好地服务现有客户，并充分利用北美、南美以及亚太地区对高品质非织造布的不断增长的需求。

Mogul最近还在位于土耳其Istanbul附近的Luleburgaz工厂增加了一条交叉铺网水刺生产线，从而增加了其水刺非织造布产能。以Durell品牌推出的交叉铺网产品补充了Mogul现有的Aqualace平行铺网水刺产品的不足。新的交叉铺网设备为Mogul的水刺非织造布系列带来了高性能产品。

据Mogul的说法，交叉铺网与平行铺网不同之处在于，交叉铺网以与生产线的方向呈90°角来铺设梳理好的纤维。在平行铺网过程中，经梳理后的纤维平行于生产线的方向铺设。交叉铺网得到的水刺产品在纵向（MD）和横向（CD）上有相似的强度。

Mogul首席执行官Serkan Gogus表示，新生产线将用于擦拭巾、汽车、人造革、医疗、脱毛蜡带和其他应用。

Jacob Holm今年宣布将在西班牙Asturias的生产基地投资超过200万欧元。该基地于2012年从杜邦公司收购，用于生产Sontara水刺非织造布。此次扩建将使用新安装的生产技术增加产品数量。

公司报告称，该资金将投资于先进的技术，更准确地定制其产品的性能，从而使其能够追求消费者日益增长的新需求。这一举措将为客户提供了大量的定制产品和针对性能关键应用的新型产品。

聚焦亚洲

专家认为今天的水刺市场以亚洲为中心。事实上，中国是世界上最大的水刺市场。

“中国是水刺非织造布生产的中心，并且可能会继续发展，”David Price说，“这是水刺非织造布容量最大的地区。在中国和亚太地区，水刺基材的使用范围不断扩大，对其他区域市场的出口也在增加。”

去年，水刺设备供应商Trützschler Nonwovens见证了大量资金投入在新生产线上，特别是在中国和东亚地区。其中一

个因素是中国、日本和韩国中产阶级的崛起，他们购买越来越多的便捷商品，如个人护理和家用擦拭巾以及卫生用品。

“柔软性和天然材料起重要作用，我们看到了将棉纤维用于各种非传统产品的趋势，”Trützschler Nonwovens人造纤维销售总经理Marc Wolpers说，“例如，一个成功的例子就是‘棉柔巾’。这种消费行为在很大程度上推动了增长。”

Wolpers将效率视为新水刺投资的另一个因素。“由于生产速度的限制，旧生产线缺乏竞争力，”他说，“特别是梳理机在过去十年取得了巨大进步，因此生产商停掉旧生产线并投资新生产线这一举措是值得的。”

Andritz的Michalon认为2017年是亚洲水刺投资不平凡的一年，中国确立了自己的领导地位。“该地区生活水平的提高，城市化不断的发展以及2015年底独生子女政策的终结，促进了水刺投资的增加。”他补充道。

“独生子女政策的终结促使中国水刺生产商预测到未来的市场需求从而进行新的投资，”Michalon解释说，“中国知名水刺生产商在2014年和2015年仅进行了一小部分投资，在取消独生子女政策后，他们投资了新一代水刺生产线，不仅针对国内市场，而且针对全球需求。”

最后，Michalon补充说：“中国经济从以出口为导向到面向国内消费市场也正在影响该国的水刺市场。”

德国非织造布生产商Sandler也在亚洲见证了诸多水刺投资。Sandler卫生湿巾销售总监Carolin Weber表示，中国将对市场产生重大影响。“不言而喻，我们将密切关注市场发展。”她补充道。

由于中产阶级的崛起，中国的水刺产能正在被内部消费，也有一部分出口到西方国家。

“显然中国正在向北美出口，”Price说道，“并不是说它碾压了当地的生产商，但中国水刺非织造布肯定会出口到北美，一定程度上出口到欧洲。”

技术发展趋势

不止是湿巾市场

湿巾无疑是水刺非织造布最大的市场，对于大多数水刺生产商而言，它是其产量最大的市场。

“如今，日常生活中随处可见湿巾的用处：从婴儿护理到化妆品，从汽车护理到清洁家具或电脑屏幕，” Sandler's Weber说，“即使在旅途中，随时可用且易于使用，对它的需求可能会持续增长。尽管主要领域的供应与需求相匹配，但仍有机会通过印刷或浮雕图案的视觉差异化，以及通过增加功能，创新产品结构、组合和不同特性寻求进一步发展。”

尽管擦拭巾持续占领水刺市场大部分的份额，但该材料也在进军其他应用领域。

Price承认水刺产品也渗透到除湿巾市场的其他领域，特别是在卫材方面。“我认为这很大程度上是由于一些地区产能过剩，水刺非织造布生产商为实现产品线的延伸和扩张以及设备的进一步利用所驱动的，”他说，“尽管用于卫生产品导流层或其他组件的水刺产品仍相对较少。”

就其本身而言，Mogul一直致力于技术应用和卫生领域。“我们观察到卫生市场对水刺产品的关注，如果这成为一种增长趋势，将显著改变这项业务，” Gogus说道。

Mogul关注到另一个不断增长的市场是医疗领域。“由于柔软性、吸收性和可控的拉伸性能，水刺非织造布在医疗和保健应用中对皮肤有一定的作用，” Mogul美洲业务开发经理Jonathan Layer说，“我们运用团队具有制药行业的背景，建立了一个全面的微型实验室，以确保产品在进入这些关键应用之前是清洁的并且具有极低的微副作用。”

虽然Suominen的一小部分销售市场不是擦拭巾——其护理业务部主要生产卫生用和医疗用非织造布——但擦拭巾占其净销售额的90%以上，属于快消业务领域。

“擦拭巾是我们的核心市场，也是我们选择进军的市场。” Suominen快消业务高级

副总裁Ernesto S. Levy说。

“Suominen的重点是婴儿、个人护理、家庭和工作场所擦拭市场，” Levy说道，“总体而言，擦拭巾市场继续显示健康的增长迹象，因为全球消费者都在寻求更加快捷的生活方式。”

“随着人口的增加，婴儿湿巾用量也在增长，” Levy表示，“这在南美和亚洲尤其明显。此外，随着创新产品提供更专业化的家居清洁和美容解决方案，家庭和个人护理市场将继续增长。”而且，他认为虽然是消费者在持续推动湿巾市场的增长，但世界各地的废水系统也需要像卫生纸一样可冲散的产品。“我们正在每个市场进行创新。”他说。

与此同时，Welspun正迅速成为一家创新公司，声称在卫材、擦拭巾、洁净室、航空航天等领域取得了成功。印度水刺制造商最近开发了一种名为Comfina（专利在申请中）的非织造布，专为女性护理和尿片而设计的。“最近在Comfina取得了很大的成功，我们正在考虑在这些领域发展水刺业务。” Welspun首席执行官Milind Hardikar说。

在擦拭巾领域，Welspun提供专为特定应用而设计的品牌，包括Welicate、3DSwipe和FibroSplit。Welicate特征为超柔软和精致——婴儿湿巾的理想选择；3DSwipe是一款坚固而高效的刮水器，专为高性能清洁开发；FibroSplit坚固且不掉毛，专为洁净室和航空航天应用而设计。

“我们一直致力于开发用于航空航天的天然纤维非织造布，” Hardikar说，“我们的产品符合航空航天材料标准（AMS）和波音材料规范（BMS）。我们对这一发展感到自豪，并期待它满足航空航天的要求。”

该产品经过认证，具有低绒毛和高吸水性，可有效处理坚固的清洁表面。它不含硅、不具有静电性能，并经过了溶剂兼容性测试。凭借其首发产品令人满意的成果，Welspun将推出一系列为航空航天清洁而开发的产品。

（下转第41页）

产品集锦

Lydall推出气相过滤材料

LydAir GP过滤材料由高度均匀、高效特种吸附剂颗粒组成

Lydall, Inc公司通过其全资子公司Lydall Performance Materials宣布，通过推出新型LydAir GP气相过滤材料，扩大其产品种类。LydAir GP介质分散在可打褶的基材中，由高度均匀、高效的特种吸附剂颗粒组成，有助于吸附酸和碱性污染物以及其他挥发性有机化合物。

通过使用LydAir GP过滤材料和Lydall的核心过滤颗粒，Lydall工艺的灵活性为先进复合材料的开发提供了多种技术选择。颗粒层的范围可以从MERV 8 / G4到HEPA，并且可以与各种Lydall吸附层进行层压复合，使得一种材料中可以去除多种悬浮在空气中颗粒物。

Lydall Performance Materials总裁Paul A. Marold表示：“我们对这一项转型举措感到非常兴奋。我们进入气相过滤领域，这将支持我们继续在过滤领域和邻近地区投资和发展的战略，以及我们客户所重视的高品质、高性能产品。”

该公司表示，全球过滤器制造商将受益于Lydall在设计 and 功能方面广泛的气相选择，这在当今行业中是无与伦比的。此外，Lydall可以提供卷状或褶皱面板的工程复合材料 - 这为客户节省了时间和金钱。

业务开发总监Chris Sipes评论说：“我们提供的多层复合过滤材料为复杂问题提供创新的解决方案。通过Lydall的专业复合材料工程和新型LydAir GP媒介的卓越性能，我们期待满足全球过滤专家在去除空气中分子污染物方面的需求。”

LydAir GP材料非常适用于办公楼、机场、餐厅、医院、工厂、汽车驾驶室空气或任何需要空气过滤的环境。
(资料来源:“www.converternews.com”)

Technical Absorbents 推出100%安全针刺非织造布

Technical Absorbents (TAL) 宣布推出一种非常独特的超吸收性面料。正在申请专利

的100% SAF非织造布针刺毡已经开发和测试了一段时间，现已上市。TAL是一家世界领先的制造商，旗下著名的产品有高吸水性纤维(SAF)和含SAF非织造布，纱线和胶带。

超吸收性SAF针刺毡已经在许多应用中使用，自2015年安装自己的生产线以来，TAL已经创造了大量的吸水性面料，并支持了许多新产品的研发。最新的面料是独一无二的，将为可完全浸染超吸收性溶液的应用打开大门。

“开发一种仅仅含有SAF而不含其他任何纤维，例如合成纤维、天然纤维或粘合纤维的产品非常令人兴奋。我们并不知道还有其他什么制造商可以生产这种面料，这为我们的新产品提供了机会。目前还没有其他100%的超吸收面料。”产品开发总监Mark Paterson在一份新闻稿中说。

两米宽的针刺毡生产线可生产面密度为130~1000克的吸水产品。为了在加工过程中保护光泽度，该生产线被安装在湿度受控的环境中。其他非吸收性产品也可以在生产线上生产，例如100%聚酯纤维。短期的试运行也可促进一些商业行为。

“最初，该生产线用于研究和开发以及制造商业产品。最初的几年，我们开发了我们的产品系列 - 含有高达80%的SAF - 现在用于从医疗到过滤的许多不同应用。新的100% SAF面料是我们开发的众多产品中的第一种，因为我们正努力为我们的核心SAF技术寻找新的机会。”Mark补充道
(资料来源:“www.technicaltextile.net”)

Nannette de Gaspé 推出可重复使用的干燥面膜

面膜基于棉质非织造材料

Nannette de Gaspé的Youth Revealed系列提供一系列可重复使用的干面膜，采用棉质非织造布制成。同时采用可穿戴的护肤技术，针对面部、眼部、嘴部、颈部和手部的特定需求。这些面膜完全不含水，含有87%活性成分的独特混合物，让肌肤在15分钟内恢复活力，是一款富有创新和首次推向市场的产品。

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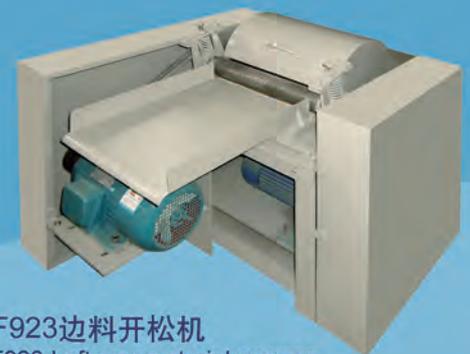
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