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NonwovensAsia

亚洲非织造材料工业 ノンウオーブンス·アジア 부직포 아시아

FEILONG 飛龍

2016年新款产品
Newest product

高速梳理机
High-speed carding machine

机器宽幅：2.5M、3.0M、3.8M
Machine width: 2.5M, 3.0M, 3.8M
出网速度：可达120M/min
Output speed: up to 120M/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120M/min
Production speed: up to 120M/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

常熟市飞龙无纺机械有限公司
Changshu Feilong Nonwoven Machinery Co.,Ltd.
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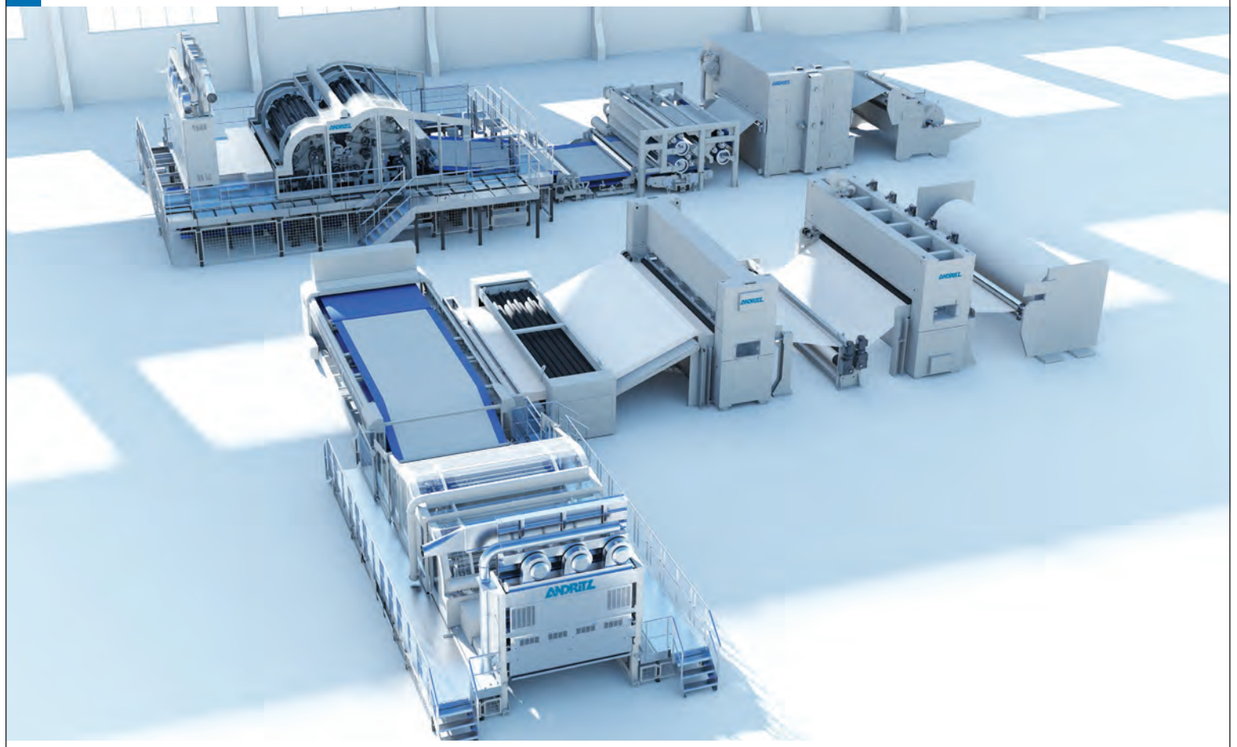
ANDRITZ

A competitive edge with the aXcess range

Efficient lines for spunlace and needlepunch



Designed in Europe – Made in Jiangsu.
The new neXline spunlace and needle-punch aXcess ranges are the right solutions for nonwovens producers who want to offer large annual capacities at a competitive price level. All key components have been tested and approved by European process experts, and the equipment is manufactured at ANDRITZ Wuxi (member of the CNITA association). ANDRITZ is the right partner for high-level technologies with local manufacturing and spot-on services. Team up with ANDRITZ Nonwoven at CINTE Techtextil China, booth E7 C02, October 12-14, 2016, Shanghai (PRC) and ITMA ASIA, October 21-25, 2016, hall H2, booth C47.

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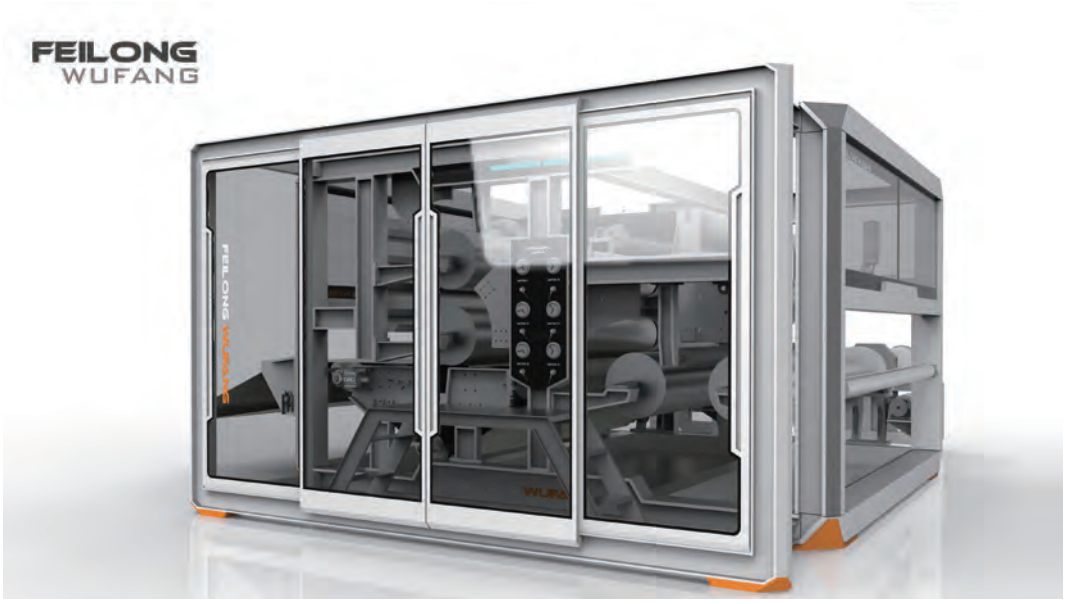
nonwoven excellence



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150M/min
Production speed: up to 150M/min

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

高速针刺机
High-speed needle loom

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

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

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【领航未来】

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LYG Boulder Industrial Co.,Ltd

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

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

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Business News

Staples PP market growth

The global staples PP nonwoven fabric market is expected to reach US$9.02bn by 2020. Growing demand for baby diapers and adult incontinence products is expected to drive the global staples PP nonwoven fabric market over the next six years. Increasing staples PP nonwoven fabrics penetration in automotive and industrial applications is also expected to have a positive influence on market growth. Increasing healthcare expenditure in the emerging markets of China and India prompted demand for protective medical apparel which is further expected to impact growth. While the volatile price of polypropylene is expected to remain a key challenge for market participants.

Hygiene was the largest application segment and accounted for 37.5% of the total market volume in 2013. The increasing geriatric population base, particularly in the US, Japan, and Western Europe is expected to remain a key driver for this segment. High birth rates in North African countries and the Middle East, coupled with increasing baby diaper usage in Southeast Asian countries are also expected to have a positive impact on the segment growth. Medical is expected to witness the highest growth rate of 7.7% from 2014 t0 2020. The presence of sophisticated healthcare systems in the developed economies of US and Europe, coupled with increasing healthcare expenditure in South American and Asian countries is expected to drive the segment.
(Source from: "IDEA16")

Optima is the complete package

German nonwovens packaging company Optima Nonwovens has announced it for the IDEA exhibition in Boston, US.

The firm will display its range of packaging machinery for nonwovens products, including semi or fully automated machinery and complete lines, which pack with the utmost precision for low speed and high speed applications.

Optima says its machinery offers maximum flexibility and ideal system efficiency. It adds that its adjustable compression units and high precision processing means that machines provide the right packaging to best showcase logos and printing at the point of sale.

The company now says that a multitude of new options are possible, including the ability to produce small packaging sizes at high speeds. The machines can be adjusted quickly to a large range of formats.

Another area of focus at IDEA will be the new digitally-based service functions "TCAM": Total Care Asset Management. The aim of TCAM is to increase line efficiency and at the same time lower production costs. TCAM consists of a digital information tool and an optional condition monitoring system.

Optima says that with TCAM, the packaging lines are completely digitalised, comparable with digital CAD drawings. Maintenance personnel can call up this virtual twin on a tablet or stationary PC, for example. Condition monitoring automatically generates statements on future servicing requirements of the line via sensors and, as necessary, sends out a warning ahead of time.
(Source from: "IDEA16")

Rise of the machines for Dilo

Dilo, the leading equipment supplier of complete lines for staple fibre nonwoven fabric production, has revealed its plans for IDEA. New machine concepts-split between DiloGroup companies DiloTemafa, DiloSpinnbau and DiloMachines - will be on display, with an emphasis placed on new equipment components that improve product quality and increase line capacity.

DiloTemafa has introduced versions of the Baltromix bale opener and the card willow, which are particularly suited to the processing of longer fibres at highest throughput. The design changes also mean longer cleaning intervals and shorter cleaning times. The DON dosing opener remains as an intermediate between fibre preparation and the card feeder, and provides a fine opening stage.

DiloSpinnbau has a new 'Unifeed' card feeder, which combines the principle of volumetric charged feeding with the characteristics of a chute feeder, but without the conventional overhead trunk - which allows for lower ceiling height requirement.

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The fibre flock matt is condensed by a vacuum delivery apron to give better uniformity of mass distribution. Additional flaps control this over the working width. This feeder can be adapted for medium/fine to coarse and medium to long staple fibres.

The newly developed card, Vector Quadro Card, incorporates a modular transfer group between breast and main section. The quick change facility of this roller group provides different carding options. The delivery system is also flexible to provide parallel laid, random or condensed web. The preopener section on this card has four worker/stripper pairs, with five pairs on the main cylinder. Emphasis is on high throughput with good web quality.

DiloMachines has a new DLSC horizontal crosslapper version, which allows electromechanical web infeed speeds up to 200 m/min, depending on fibre specification. Such infeed speeds will prevent the lapper being the line bottleneck. This lapper works in conjunction with the proven CV1A web regulation system for improved felt evenness and the potential for fibre savings. This very high web infeed speed has been made possible by a further increase in the drive power within the three apron layering technology. A web guiding system ('extended web guide') can be added to avoid web wrinkles at lapper reversals.

Dilo is also pursuing developments in the needling process, such as including needle module technology - where needles are pre-mounted in multiple units of 22, for insertion into very high density boards. Dilo says needle insertion and precision will be increased, particularly with the possible use of robot technology.

Variopunch needling technology could employ these multi-needle modules to erase bad spots in a felt by a variable needle arrangement, which would achieve a better evenness of the stitching pattern. When fully developed, Variopunch is intended to allow a more homogeneous distribution of stitches for superior surface quality.

In addition to wide needling lines for the economic production of large volume products as in the geotextile industry, Dilo offers a compact line that is designed for the production of small amounts of high quality felt used, for example, in the medical sector and for specialty felts made from specialty fibres.

This compact line includes fibre opening and blending, card feeding, carding and crosslapping, needling and winding. The working width of the compact carding machine is l.1 m, and the layering width is 2.2m. Dilo says the line, which was first presented at ITMA 2015 in Milan, Italy, is characterised by consistent focus on a compact line layout, a fast adaption to changing production conditions and an economic mode of operation.
(Source from: "IDEA16")

Mitsui Chemicals to add to Japanese output

Flexible, expandable nonwovens will help drive growth in premium diaper markets

Mitsui Chemicals will add 6000 tons of spunbond capacity at its Sunrex facility in Yokkaichi, Japan in an effort to support growth in the baby diaper market in Japan and throughout Asia.

The new line will feature proprietary technology to enhance the standard spunbond process. This results in a nonwoven that offers excellent flexibility and expandability accompanied by superior comfort. These attributes will help Mistui expand its role in premium diaper markets.

According to executives, Mitsui's mid-term plan is to position its healthcare business as a targeted business domain and the nonwovens business is a part of that segment. Expansion into Asian diaper markets is considered a significant part of this plan. The expansion is expected to be complete in late 2017.
(Source from: "www.nonwovens-industry.com")

Oji starts up Malaysian baby diaper line

Oji Holdings has begun production on a new baby diaper line 31, May in Malaysia that will produce 10 million pieces per month to satisfy domestic demand. Oji also has plans to export more than half the products to neighboring countries such as Indonesia and

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Thailand.

While Oji manufactures baby diapers in Indonesia and will be exporting diapers produced in Malaysia for the time being, they have plans to adjust local production in Indonesia.
(Source from: "www.nonwovens-industry.com")

Nonwovens investment moves into South Africa

Pegas and Spunchem both eye hygiene market growth in the Rainbow Nation

Interest in South Africa continues to build. At the end of June, not one but two companies—locally owned Spunchem and Czech-based Pegas—expressed interest in establishing a local supply for the country's hygiene market, which is growing about 4% according to international tracker Euromonitor. In announcing their attentions, both companies pointed to stellar growth prospects for hygiene as well as limited local production as motivators for this interest.

In fact, Euromonitor predicts the country's hygiene market will see a positive 6% CAGR value growth between 2015 and 2020. The unmet market potential in disposable hygiene in the country is valued at more than $400 million, and the unmet potential in volume terms is estimated to be more than 900 million units in diapers, 1.3 billion units in sanitary protection items and over 70 million units in adult incontinence products.

Western hygiene manufacturers have had a presence in the country for several years. Procter & Gamble began making baby diapers in Johannesburg in 2009 and established a large manufacturing hub for products including feminine hygiene items and laundry detergents—there in 2014. Last year, Procter had the No. 1 position in the South African baby diaper market with a 41% marketshare.

P&G rival Kimberly-Clark has been making feminine hygiene products and baby diapers, among other things, at a facility in Epping Mill since at least 2013 and currently has a No. 2 position in the baby diaper market. Coming in at No. 3 is the Cuddlers brand, which is evenly owned by Sweden's SCA and South African firm Nampack..

David Price, a nonwovens industry consultant specialized in the spunbond and spunmelt markets, sees room for two new nonwovens suppliers in the South African hygiene market, which is now fed through imports, mainly from North Africa, South America and Asia—although one local player Cordustex, has operated a spunbond line there since 1995. "It is a standard play to replace imports," Price adds. "The market is big enough to justify local production."

Spunchem, whose roots are mainly in industrial nonwovens, says it enlisted the help of a top-tier diaper manufacturer to run trials using its new technology in diaper manufacturing. As its first hygiene-centric investment nears completion this summer, the company has already said it will add a second line sometime in 2018. Spunchem has been making spunbond nonwovens for industrial markets for 20 years and currently operates three spunbond lines dedicated to these markets. No supplier has been named for the new line.

Meanwhile, Pegas announced last month its board of directors had voted to establish a South African subsidiary, a move that executives feel will result in the purchase of land and eventual construction of a small-scale Reicofil 4 spunmelt line in the country. Pegas already has a North African operation in Egypt.

"The establishment of the company represents the beginning of a project, at the end of which, I firmly believe, will be another production plant built outside the boundaries of the Czech Republic," says, CEO Frantisek Rezac. "Together with the establishment of this company, we are starting to take steps that will lead to the purchase of the identified parcel and expect that the entire land purchase process will be formally completed during the next few months."

According to Price, Pegas can offer international scope and sophisticated and cost efficient Reicofil technology to this growing market while Spunchem, with its role as a locally owned company, can offer stellar market know-how and cultural awareness.

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"These companies don't decide to start up these operations without doing their research," he adds. "They are negotiating, they are looking for partnerships. It's a smart decision."

For starters, these companies are expected to target the disposable diaper market, which currently represents the lion's share of retail hygiene sales thanks to South Africa's disproportionately large youth population and high birth rates—relative to those of developed markets. Sanitary protection products are the second largest category in absolute value, with sales reaching $122 million in 2015. It is, however, the smallest retail hygiene category—adult incontinence that is seeing the fastest growth rates in recent several years, rising by a further 8% in value in 2015.
(Source from: "www.nonwovens-industry.com")

The 6th Filtration & Separation Asia / The 9th China Internation Filtration & Separation Exhibition Exhibitors preview

Johns Manville

Johns Manville, a Berkshire Hathaway company, is a leading manufacturer and marketer of premium-quality products for building insulation, mechanical insulation, commercial roofing, and roof insulation, as well as fibers and nonwovens for commercial, industrial and residential applications. JM serves markets that include aerospace, automotive and transportation, air handling, appliance, HVAC, pipe and equipment, filtration, waterproofing, building, flooring, interiors and wind energy. In business since 1858, the Denver-based company has annual sales of approximately $2.6 billion and holds leadership positions in all of the key markets that it serves. JM employs approximately 7,000 people and operates 43 manufacturing facilities in North America, Europe and China.

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

JOFO

In March, 2000, Guangdong JOFO Group and Hongkong TIMI Co., Ltd. joint-ventured Shandong JOFO Nonwoven Co., Ltd. From 2000 to present, as a specialized nonwoven technical manufacturer, JOFO has been growing from 1 production line to 7 meltblown production lines, 4 spunbond production lines, 1 SMS line and 1 after treatment line. Company products are sold overseas and wildly used in filtration material, medical field, industrial protection, agriculture, home textile, and housing area, etc. Products quality and company credibility are earned good reputation.

CHONGQING ZISUN

Chongqing Zisun Technology Corp. Ltd., established in 2007, was honored as National High & New Tech enterprise. In January 2015, Zisun had successfully IPO in Shanghai Stock Exchange with ticker symbol 603601. Zisun specializes in developing, manufacturing and marketing of glass microfiber products, and has a relatively complete system of intellectual property protection together with the unique business management model, which wins its leading position in industry and brand awareness worldwide.

Focusing on "High Efficient Energy-Saving" and "Air Purifying" this dual main business model, Zisun also taking into account extensive development for reaching the goal of ten billion production value.

In the field of High Efficient Energy-Saving, Zisun serves for the application on the industrial chain of luxury residence, refrigerators, cold storage, cold chain logistics, automatics energy saving, aircraft

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insulation etc, continuously exploiting the great market of energy-saving.

In the field of Air Purifying, Zisun has the ability of providing clean air solution and supporting high-end equipment. Based on core filtration absorption material, Zisun is creating a high ground in air filtration industry, marketing for clean space to industrial /military/commercial/medical and residential.

SHIJIAZHUANG CHENTAI

As a manufacturer specialized in filter paper, Shijiazhuang Chentai Filter Paper Company has accumulated more than 20 years' experiences. Until now, The company have become a leading enterprise in industry that combines R & D with production and marketing. The company product includes air filter paper, oil filter paper, fuel filter paper, cabin filter paper, gas turbine filter paper and dust collection filter paper etc. Chentai Filter Paper Company is always devoting himself to becoming the expert of filter paper industry. Chentai Filter Paper Company will keep the high passion to grow into an environment-friendly enterprise of world-class.

WENZHOU XINYU

Wenzhou Xinyu Non-woven Fabric Co., Ltd. specializes in producing chemical bonding (foam bonding) non-woven, air-laid non-woven, and other non-woven interlining. At present, the annual output and sales of the non-woven fabrics and its finished products are more than 6000 tons. The main products include filtration non-woven, cable wrapping non-woven fabrics, medical treatment non-woven, embroidery non-woven, printed non-woven wipes, fusible interlining, and so on.

SHANGHAI FENG CHENG

Shanghai Feng Cheng Machinery Engineering Co., Ltd. was established in May 1994, is a specialized company to manufacture the filter production equipment, air filter purification and test stand. The company devotes into the research and development of the filter machinery. The have more than 300 consumers in domestic and the products have been exported to 65 countries and areas, including U.K., U.S.A., France, Russia, Japan and etc. The test stands have successfully won the bidding for national and provincial inspection centers.

HANDAN HENGYONG

Handan Hengyong Protective & Clean Products Co., Ltd is specializing in the development, production and sales of the air filter media, respirator and coverall workwear from 1989. The registered capital amount of Hengyong is RMB 100 Millions and the area of factory premises is over 177,000 square meters with 800 employees. Hengyong sells their products to more than 40 counties.

SANLI

Sanli are specialized in producing auto air filter cloth, auto air-conditioner filter cloth (activated carbon), internal combustion engine fuel and oil filter cloth, and for utilization of spraying powder, indoor air conditioner filter etc. Based on the advantages of good technical talents, advanced production equipment, innovation-orientated, high quality and perfect after-sales service, Sanli has earned praises and trust from domestic and overseas clients.

GUANGDONG XINTAO

Guangdong Xintao New Materials S&T Co., Ltd., a National High-tech Enterprise, is specialist at research, manufacturing, and marketing of hot melt adhesive. The products are applied to air filter of vehicle, HEPA, air purifier, vacuum, etc. Xintao products are odorless, expandable, high temperature resistance, and can be fold by 360 degree.

HANGZHOU FILTER

Hangzhou Filter Equipment Manufacturing Co., Ltd is located in No. 2 Huafeng Road, Xiacheng District, Hangzhou. The company have twenty years of experience in producing pleating machines, specializing in developing and manufacturing pleaters for all kinds of media. The company now have roller-type, plate-type and air filter pleating machines. As the leading company, The company pleating

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Chuzhou Jinchun Nonwoven Co., Ltd. in innovation - driven development Documentary

In the autumn of 2016, the CNTA delegation of Mr. Wang Yanxi (Honorary Chairman), Mr. XiangYang (Chairman), Mr. Zhangbo (Secretary - General) visited Chuzhou Jinchun Nonwoven Co., Ltd. on invitation. Mr. Cao Songting, general manager of the company, and other leaders arrange a visit and responds to their questions of interest. Jinchun give the delegation members a deep impression about their innovation-driven, rapid expansion, latest equipments and advanced management. The Delegation of Association also visited the Langya Chuzhou Economic Development Zone in the afternoon. Chuzhou Langya District leaders meet with the Delegation and desire to receive the support of the Association in Langya District of nonwovens industry chin's development.

Production equipments

Anhui Jinchun Nonwoven Co., Ltd is located in No. 218 Nanjing Road, Langya Economic Development Zone, Chuzhou city, Anhui province. It's officially established on July 21, 2011 with an area of two hundred thousand square meters. Registered Capital: RMB 68 million. It aims to set up eight spunlace production lines and currently four have gone into operation. December 25, 2015 witnesses its public listing in New OTC Market. (Securities Lode: 835140) It is mainly engaged in the production, development and marketing of spunlace and hot air through nonwovens.

Spunlace Nonwoven

Production equipments

Four spunlace production lines have been set up successively. The equipment of the first line is from one of domestic well-known nonwoven machinery equipment companies-Zhenzhou Textile Machinery Co., Ltd. The main products are big pear-grained, leather substrates and other full-cross spunlace (55-140gsm) with an annual output of 3600 tons, mainly used in wet wipes, leather and medical, filtering and packaging material, etc.

The second line was put into production in March 2012. Half –imported and half–crossed with plain–structured, little pearl-grained and 22-mesh-hole spunlace as its main production orders. The annual output accounts to 3600 tons mainly used in wet wipes, shirt band and other differentiated products.

The third line was set up in March, 2014 full-imported and half-crossed with an annual production of 4000 tons, mainly for high-end hygienic material, substrates, etc.

The fourth line was put into use in September 2014, mainly aiming at hygiene wipes markets at home and abroad. It is and entirely European double carding, high-speed and direct line, equipped with Italian Autefa high speed carding. French Andritz spunlce machine and Italian Acelli coiler (Width: 3.5 meters) with production speed of up to 300 m/min and an annual output of 15,000 tons. As China's most advanced, productive spunlace line, it has set domestic precedent by its fast speed, high production and top quality.

The fifth and sixth lines are due for production at the end of 2016 and the products can be fully launched on the market before 2018, when its annual output will reach 50,000 tons. With a total investment of over 1 billion Yuan, it will definitely be the large-scale and influential spunlace production base, meanwhile it is actively preparing for IPO in A share, greatly boosting the influence and popularity.

Jinchun's spunlace nonwoven products

Household wipes(Weight:40gms-90gsm; Embossing; Plain, Mesh and so on; Material: Polyester and Viscose; Features: Mostly, these fabric take 100% polyester and Hydrophilic, cheap and fine; Especially the Mesh Household fabric, they have good dust removal ability, perfect for household use.)

Mask, Wet wipes

Mask (Weight: 40gms-70gsm; Embossing; Plain; Material: Polyester and Viscose; Features: more than 40% viscose, keep the essences for a long time, soft and perfect for skins.)

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Automotive interior

Wet wipes (Weight:30gms-65gsm; Embossing; Plain, Big Dot, Small Dot, Mesh and so on; Material: Polyester and Viscose; Features: soft water absorption and the formaldehyde, free of heavy metals and other harmful substances, attractive and popular for customers.)

Automotive interior, Filter materials

Filter material (Weight: 75gms - 120gsm; Embossing; Plain; Material: Polyester; Features: made from polyester, Hydrophilic and Resin binder with good strength, long services life, low air resistance and high filter efficiency)

Automotive interior (Weight: 40gms - 160gsm; Embossing; Plain; Material: Polyester; Features: According to different Cars, It can provide the Customers with different Fabric. If necessary, we can add waterproof oil-proof and fire prevention materials.)

Medical and health care

Medical and health care

Medical Clothing and sheet (Weight: 40gms - 80gsm; Material: Polyester and Viscose; Features: Good evenness, good strength, produced according to European standards)

Hot Air through nonwoven fabric

Jinchun started the project of air through nonwoven fabric with investment of 300 million RMB in Apr, 2016. As a professional manufacturer of nonwoven materials for personal sanitary products, the new project will include 10 new lines of air through nonwoven, with annual output of RMB 350 million, the company is structured into Research & Development Department, Production Department and Sales Department. In order to ensure the high quality, It is certified by QS ISO 9001, every production line is designed and managed according latest hygiene requirements and as dust-free workshop. This line can produce gradient fabrics using different ES fibers. It give more performance to air through nonwoven fabric and provide customers more diverse high quality products.

Hot air through nonwovens equipments

First two lines will be installed in June 2016 and production will be started at the beginning of 2017. The products are mainly used for women and the baby's hygiene things (diapers, feminine hygiene products), Surgery clothes, masks, composite fabric, clothing materials etc.

Applications: Baby diapers and Sanitary napkins

Baby diapers and Sanitary napkins (Weight: 18gms-55gsm; Embossing; Plain Dot, mesh; Material: ES (Ethylene-Propylene Side By Side), Features: These fabrics are accordance with the national microbial detection indicators for production, soft and water absorption, it's good for baby skins, rest assured use.)

Testing Instruments and Laboratory

The company increasingly increases investment in product quality. The production line is equipped with German's defect detection and metal detectors together with professional mosquito control on the production sites and outer environment to eliminate mosquito contamination.

Jinchun is fully based on product quality and have passed ISO 9001 Quality Management System. It is equipped with conventional quality testing machines and has set up different chemical and biological laboratories, where the sum of microbe, pathogenic viruses in inspected strictly. In addition, water, raw materials, air and staff involved are microbial detected.

Its products have been mainly sold to such renowned clients as Jinhongye APP, Heng'an paper, Chongqing Zhen'ai, etc. And also exported to Korea, Japan, Southeast Asia, Brazil as well as European and American markets. High quality, excellent service and well-deserved reputation bring us widespread praise at home and abroad, demand greatly exceeding supply.

With firm pursuit of the spirit of pioneering, devotion, excellence, the company introduces globally advanced equipment and outstanding technical and management talents, and firmly adhere to technological innovation and optimized administration program.

The Company has been committed in technological innovation and absorption

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of international advanced technologies for improving nonwovens materials. The multiple patented technologies enable us to produce more satisfactory nonwoven to better serve customers' needs.

Reicofil touts high loft nonwovens

New technology adds to softness in hygiene, has potential in packaging

Nonwovens machinery specialist Reicofil has developed new nonwovens technology that will allow it to improve its offerings to hygiene applications while expanding into new market areas. The company's developments in high loft spunbond technology offers unique possibilities for the manufacture of thick, soft nonwovens that have the potential to unlock new areas of application for our customers, according Michael Maas, operations director research & development at Reicofil.

The hygiene market is seeing an uptick in demand for bulky and soft nonwovens, a trend that is being driven by Asia and influencing the European and U.S. diaper markets: These soft touch applications play an increasingly important role, especially in topsheet and back sheet applications where mid-segment product ranges are being gradually squeezed out of the market by premium products. Maas comments: "In the future, our customers will have to offer soft nonwoven products all over the world. It is critical to their businesses to adopt developments early and to be innovative. We already started years ago to develop the technology basis for softer products. Today we are able to offer various solutions for different customer needs."

Voluminous nonwovens generally consist of self-crimping fibers but the Reicofil technology, uses filaments from two different raw materials produced in a side-by-side structure and bonded using hot air or a special embossing calendar. The result is a premium nonwoven used as a top and backsheet in premium diapers.

"Our technology is reliable and efficient, Maas says. It offers a perfect balance of production costs and product properties."

The process for 3D nonwovens is being constantly developed at the Reicofil Technology Center, the world's largest research and development center dedicated to the production of spunbond nonwovens. In Troisdorf, Reicofil uses three high-tech lines to carry out research in close cooperation with customers, institutions and other partners.

Another area where Reicofil sees potential for its high loft nonwovesn is in packaging of bulk goods. The company's "Rethinking Packaging" project includes solutions for packaging bulk materials with nonwovens. The team has developed nonwoven cement bag prototypes. "Imagine transferring this solution to packaging all kinds of bulk goods—there is a gigantic potential for nonwovens in the packaging industry," Maas adds. "Our current developments will wipe away paper bags and woven polypropylene bags due to its superior performance per weight and its unbeatable price.

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

Lenzing to offer fiber sourced from recycled cotton

To be most ecological wood-based fiber on planet

Lenzing is launching a new Tencel fiber made from cotton waste fabrics to drive 'circular economy' solutions in the textile industry. The new generation of lyocell fibers will be the most ecological wood-based fiber on the planet—combining cotton waste recycling with Lenzing's pioneering closed-loop TENCEL® production on a commercial scale.

Lenzing achieved another milestone in its innovation heritage in the textile industry by developing a Tencel fiber based on cotton fabric waste. Lenzing is the first manufacturer worldwide to offer such cellulose fibers incorporating recycled materials on a commercial scale. Tencel, already a market success as an eco-friendly fiber, is now achieving another key milestone by creating from natural resources what is likely the most sustainable fiber. Tencel from cotton waste fabrics will further build Lenzing's reputation as a leader in the field of environmental technology and will push new solutions in the textile industry towards circular economy by recycling waste.

"For Lenzing, developing circular business

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models in the fashion industry ensures the decoupling of business growth from pressure on ecological resource consumption. It reduces the need to extract additional virgin resources from nature, and reduces the net impact on ecological resources," says Robert van de Kerkhof, CCO of Lenzing.

Tencel has already been awarded the EU award for the most eco-friendly production process based on 99.7% closed loop circulation in the production and use of bio-energy. The renewable raw material of wood from sustainable forestry is another key advantage in terms of sustainability for Tencel. The latest next-generation Tencel fiber combines the best of two worlds—recycling cotton waste fabrics and using the most sustainable Tencel technology—to create one of the most ecological wood-based fibers on the planet. The recycling of cotton waste fabrics into virgin textile Tencel fibers offers a practical solution to enable circular economy in the apparel industry.
(Source from: "www.nonwovens-industry.com")

DuPont, Dow merger approved

Shareholders say yes to transaction; should close by end of 2016

Shareholders of DuPont and The Dow Chemical Company have voted to approve all stockholder proposals necessary to complete the merger of equals transaction – a key milestone in the process to merge the two companies and subsequently pursue the intended spins of three highly focused, independent companies. The companies expect the merger transaction to close in the second half of 2016, subject to customary closing conditions, including receipt of regulatory approvals.

"The overwhelming support of Dow and DuPont stockholders to approve this historic merger transaction is a clear testament to the compelling value proposition and enhanced shareholder value that DowDuPont represents," says Andrew N. Liveris, Dow's chairman and chief executive officer. "Today is a pivotal step toward bringing together these two iconic enterprises, and to the subsequent intended separation into three leading, independent technology and innovation-based science companies that will generate significant benefits for all stakeholders."

Ed Breen, chair and CEO of DuPont, adds: "We are pleased to receive such strong support from our stockholders, which represents an essential milestone in the combination of our two companies and our intention to subsequently separate into three independent companies. We are now focused on important next steps toward completing the merger transaction, including working with regulators in the appropriate jurisdictions. We are confident that this merger will create long-term, sustainable value for stockholders and superior solutions and choices for customers."

DuPont and Dow intend that, following the consummation of the merger, the combined company will pursue the separation of the combined company's Agriculture business, Material Science business and Specialty Products business into three independent, publicly traded companies, subject to approval by the DowDuPont board and receipt of any required regulatory approvals. The establishment of the three companies is expected to be complete 18-24 months after the close of the merger.
(Source from: "www.nonwovens-industry.com")

Babyganics sale to SC Johnson Finalized

Babyganics' family-focused products include diapers and wipes

VMG Partners, a private equity firm that specializes in investing in and building branded consumer product companies in the lower middle market, has completed the sale of Babyganics, a rapidly growing brand of personal care and household products for families with children, to SC Johnson. Founded in 2004, Babyganics is a pioneering lifestyle brand offering family-focused products including skin care, bath care, sun care, insect repellent, oral care, hand hygiene, surface cleaners, laundry products, dish soaps, diapers and wipes.

Kara Roell, managing director of VMG, says, "The Babyganics brand has emerged as a true leader in the pursuit of providing unique and innovative products for today's parents and their children. VMG is extremely appreciative of the partnership built with Kevin Schwartz and Keith Garber, the leaders of Babyganics, and of the collaboration, creativity and exceptional performance of the

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entire Babyganics team in redefining the well-baby category."

Mr. Schwartz, founder & CEO of Babyganics, comments, "The partnership with VMG has provided us access to the right tools each step of the way, enabling our brand to grow and thrive - we're thrilled with all that we've been able to accomplish together. As we look to the future, our entire team is excited about the next phase for Babyganics with SC Johnson by our side."
(Source from: "www.nonwovens-industry.com")

Ahlstrom to hold onto building and wind business

Deal with Owens Corning after regulatory clearance fails in Germany

Ahlstrom and Owens Corning have terminated an agreement regarding the planned divestiture of Ahlstrom's Building & Wind business unit to Owens Corning following challenges associated with obtaining regulatory clearance in Germany for the transaction.

Ahlstrom will continue to operate and develop the Building & Wind business unit as before and it will be reported as part of the Filtration & Performance segment. In 2015, net sales of the Building & Wind business unit were €83.5 million and the adjusted operating profit was €5.9 million. In January-March 2016, net sales amounted to €23.5 million and the adjusted operating profit was €2.1 million.

In 2015 we were approached by Owens Corning to acquire the Building & Wind business unit and engaged in exclusive negotiations with them. Following the unexpected challenges with the German competition authorities, and after careful consideration, we have decided to keep the business intact as part of the Ahlstrom portfolio of innovative fiber-based materials. The performance of the Building & Wind business unit, as that of the entire Ahlstrom Group, has clearly improved since negotiations were initiated and the business is today contributing positively to our profitability and cash flow," says Marco Levi, president and CEO. "We are fully committed to serving our customers and reinforcing the unit's competitive position. The business will contribute to our strategic goals of adjusted operating profit margin above 8% by 2018 and maintaining gearing below 100%."

The divestment was announced in January; the German competition authority opened a second-phase investigation into the planned transaction in early April.
(Source from: "www.nonwovens-industry.com")

ANDRITZ nonwoven

Preview

Drylaid or wetlaid nonwovens, spunbond, spunlace, or needlepunch: ANDRITZ Nonwoven supplies integrated solutions from web forming systems to finishing. Recently, customers and experts at the IDEA fair in Boston were able to verify this. In the following report, we will take our readers to the French town of Elbeuf – the location of ANDRITZ Asselin-Thibeau, which is part of international technology Group ANDRITZ.

General manager Mr. Johannes Haep (R) and sales president Mr. Jean-Philippe Dumon

What are the core competences in carding, crosslapping, and needling?

Johannes Haep: ANDRITZ Nonwoven always has a global approach to the different manufacturing processes and develops solutions that integrate various technologies to the benefit of its customers. ANDRITZ Asselin-Thibeau is the competence center for drylaid processes that involve the use of cards, crosslappers, and bonding technologies, especially needlepunch technology.

Based on many years of experience and intensive market research, ANDRITZ designs solutions in close cooperation with its customers in order to improve fabric evenness, to bring added value to nonwoven webs through additional fabric performance, or to develop systems to optimize productivity and minimize maintenance requirements. Over the years, this has led to many outstanding innovations, such as

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the eXcelle TT card design, the TCF-X chute feed that also operates with long fibers at high throughput, the well-known ProDyn weight profiling system, and the Isolayer draft control, to name but a few.

Listening to nonwovens producers and meeting their challenges is our daily mission. We have developed extensive simulation tools to identify the potential limits or highlight the advantages of various process solutions. The simulation tools can easily compare alternative solutions in terms of productivity and quality, taking account of the range of fabrics our customers want to consider. This important step, combined with trials in our ANDRITZ pilot facilities, provides our customers with the necessary confidence to decide what the right investment is for their specific project.

ANDRITZ neXline needlepunch lines

The value of this diagnosis is underlined by offering a very wide range of alternative solutions. Whatever the customers' project requirements are, they can easily find the right combination in the eXcelle (state-of-the-art equipment for large capacities) and aXcess (equipment for medium capacities) ranges for neXline needlepunch lines.

Needlepunch test production line located ANDRITZ Asselin-Thibeau technical center

How is neXline needlepunch technology integrated into your technical center in Elbeuf ?

Jean-Philippe Dumon: The ANDRITZ Asselin-Thibeau technical center located in Elbeuf is equipped with an industrial-scale neXline needlepunch eXcelle pilot line. It combines all of the most advanced technologies developed by ANDRITZ for the needlepunch market. Our technical center is available for trials, product developments, marketing tests, and technical training, and also offers expert support. For nonwovens producers, it is the perfect opportunity to experience advanced technologies and witness the fabric performance they can achieve with ANDRITZ lines and also to assess the investment and maintenance requirements.

Our main line concept is very flexible because it can combine different types of fiber raw materials. The TCF-X chute feed can process short and long fibers with an accuracy of ≤ 3% basis weight CV in cross direction (CD), feeding a double eXcelle card that can handle fibers up to 120 mm. ProDyn and Isolayer technologies can be used or switched off to evaluate their input, and nonwoven and woven fabrics can be introduced at different stages of the bonding process. The needling effect can be carried out in different steps, from both sides or from one fabric side only. A large number of different needle patterns and needle types are available to simulate industrial conditions. The bonding process can associate needling with batt drafting and/or felt drafting to modify fabric performance in terms of tensile strength, elongation, and so on. Testing equipment in our laboratory is available to shorten the equipment adjustment time. The complete line is equipped with the SCADA system, an "intelligent" industry 4.0 product from ANDRITZ. Its features for production management, maintenance assistance, and operating cost management can be demonstrated to visitors.

Besides the main carding-needling line, off-line needlepunch machines are available for further needling processes at speeds up to 100 m/min, or for random velour effects. On the SDV-2 needleloom equipped with the patented, inclined brush conveyor, we can demonstrate the superior fabric abrasion resistance that can be achieved.

In order to be able to conduct reliable trials in the medium-capacity range, ANDRITZ also has an industrial-scale neXline needlepunch aXcess pilot line at its technical center in Wuxi, China. The 2.5 m-wide pilot line is configured with opening and blending units, aXcess card, Profile crosslapper, and A.30 needleloom to demonstrate the machinery capability at full speed.

What are the main technical and technological characteristics of this new technology ?

Jean-Philippe Dumon: The neXline needlepunch concept offers several specific advantages, from web forming to web bonding. ANDRITZ system solutions integrate many machines working together as if they were a single machine unit. All ANDRITZ Asselin-Thibeau machines use the Siemens MicroBox solution, which has been implemented with great success.

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Such integrated systems are delivered nowadays for most of our projects, thus underlining that cost and quality management have become a key criterion in maintaining a competitive edge.

In the following, we would like to summarize the key components of a modern ANDRITZ neXline needlepunch:
The new **TCF-X chute feed** is included in more than 80% of the latest ANDRITZ neXline needlepunch lines. It is flexible with regard to fiber types and length ranges, and it has a high production capability, frequently more than 1,200 kg/hour in 2.5 m working width.

The **double eXcelle card** produces homogeneous and perfectly even webs. This is an extremely important criterion nowadays because most customers seek to make their lightweight fabrics with a minimum number of folds on the crosslapper.

The **ProDyn weight profiling system** remains a "must-have" for new production lines. It is already known worldwide for its capabilities, as it optimizes the weight profile and allows fiber savings. It is a controlled loop, acting on the quantity of fibers delivered at the card outlet and the speed of the crosslapper, thus generating cost savings for the operator year after year.

Profile and Dynamic crosslappers, two ranges that were introduced many years ago, benefit from the short textile path. Our new generation of crosslappers is easy to maintain, with fewer cleaning requirements.

The **Isolayer draft** control enhances the line's ability to produce homogeneous fabrics, even when using two crosslaid folds. It is able to absorb the speed difference at the outlet conveyor of the crosslapper, it improves overlap, and it has a faster running speed. The Isolayer creates a more balanced shrinkage effect over the entire fabric width, thus bringing more added value to the final products.

The **ANDRITZ needlelooms from A.30 to A.50** include a wide range of alternative solutions, with various maximum speed and punching load capabilities to meet any market requirement. Over the years, market demands have increased the punching load requirements for higher throughput, yet most lines have the same number of needlelooms. Our needlelooms have been redesigned in order to have more strength, and their reputation for robustness is steadily gaining market recognition. ANDRITZ needlelooms use oil for lubrication and cooling purposes. The robust design is such that some customers have been able to use their machines intensively (as in a 24/7 spunbond process) without changing their module bearings for many years. These needlelooms are designed to minimize unwanted draft and shrinkage; random needle patterns provide high flexibility for nonwovens producers by allowing advanced pitches with almost no effect on the harmonics of the web.

Last but not least, drafters have become an essential contribution to the drylaid needlepunch process. With the Isoweb and Zeta drafters, ANDRITZ has developed unique solutions that maximize drafting benefits with minimal fabric distortion. The production capacity for lightweight fabrics is enhanced with improved MD/CD ratio strength values.

What are the main product fields for this technology?
Johannes Haep: The above mentioned ANDRITZ solutions can be used almost universally for all drylaid products. Currently, the automotive, geotextile, filtration, industrial, and domestic end uses are particularly active. Synthetic leather, bedding, wipes, etc. can also benefit from these advanced technologies.

End use automotive industry

Please give us an overview of the main parameters for the aXcess and eXcelle line ranges.
Johannes Haep: ANDRITZ offers two types of neXline needlepunch: aXcess and eXcelle.

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Both lines are able to cover a wide range of applications. Not all nonwovens producers have the market potential for high capacity or for outstanding fabric performance. Nevertheless, all customers deserve high-quality machines at competitive prices. The neXline needlepunch aXcess line is perfectly suited for producers entering the nonwovens market with a capacity range up to 4,500 t/a. This aXcess range is designed for medium production levels, also allowing emerging countries to benefit from proven technologies based on many years of ANDRITZ experience.

With the neXline needlepunch eXcelle range, ANDRITZ offers comprehensive solutions for premium drylaid lines. Process engineers select and combine the corresponding individual machines according to their technology and capacity results in production lines. One of the market trends for state-of-the-art needlepunch production is to provide lines with high productivity. In this field, ANDRITZ offers an outstanding solution by combining the carding machine with the new high-speed crosslapper D.630. This needlepunch line configuration can achieve a capacity of up to 12,600 t/a.

Industrial production line located ANDRITZ Asselin-Thibeau

What are the advantages of the new crosslapper D.630 compared to previous models?

Jean-Philippe Dumon: ANDRITZ Nonwoven recently launched the D.630 high-speed crosslapper on the market in response to nonwovens producers' demands for production lines with larger capacities.

Thanks to the new D.630 crosslapper, the latest needlepunch lines installed by ANDRITZ produce over 1,700 kg/h of roll goods. The D.630 model has a robust design specially developed to withstand the acceleration required by the ProDyn system. In order to meet the high expectations in terms of even fabric weight, modern production lines often require crosslapper speed variations of +/-20% of the average crosslapper inlet speed. For even higher demands, ProDyn can generate card web weight variations of +/- 25% by using the D.630 crosslapper at a lower infeed speed.

In addition, the new crosslapper D.630 is equipped with HSC high-speed carriages. Our R&D department is constantly looking for increased performance, with reduced cleaning and maintenance requirements at the same time. Our pilot line is now equipped with these HSC carriages, and customers can run tests with their fibers to evaluate how much faster and/or more efficiently they can produce their fabrics. Such systems are also available for retrofits, depending on the crosslapper model. In particular with bulky web, condensed or not, the HSC system shows improved production performance.

What parameter fields for input width, maximum layering width, and maximum input speed does this new machine cover?

Jean-Philippe Dumon: This latest addition to the Dynamic crosslapper range has been designed for a maximum speed of 205 m/min at the input for an infeed width of 3 m, allowing an average inlet speed of 170 m/min with the ProDyn system instead of the 140 m/min achieved by the previous D.530 crosslapper.

How is the ProDyn system placed on the market?

Jean-Philippe Dumon: The Prodyn system leads the market because it ensures the uniformity of the final fabric. It provides a clear competitive edge for nonwovens producers. ANDRITZ crosslaid lines offer an automatic adjustment loop system that includes a weight control gauge at the very end of the production line for self-adjustment of the card output speed. This system's benefits include weight quality and fiber savings.

What are the possible percentage evenness parameters of the area weight in MD and CD direction depending on fiber parameters and product weight?

Jean-Philippe Dumon: The ProDyn web

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profiling efficiency does not basically depend on the type of fiber, fabric weight, and production speed. Most customers want to have balanced MD/CD strength ratios. For lightweight to medium-weight fabrics, the process generally requires a high percentage of drafting during the bonding process. The main drawback is that the fabric usually shrinks over the working width, increasing fabric weight at the edges. Such shrinkage ratios are frequently between 10 and 30% depending on the end use and the bonding section of the production line.

Another important factor is to understand the expectations of the end user in terms of fabric elongation. More and more, we see modern lines that are dedicated either to low-elongation fabrics or to high-elongation fabrics. With some adjustments, ANDRITZ can also deliver solutions for customers that have a need for maximum flexibility to cater to a wide variety of product end uses. ProDyn is the first response to this weight deformation. The design of the bonding machine is also important in order to minimize fabric distortion. The way draft occurs is a key point. You may create large clouds in the fabric or obtain a nice looking fabric while using the same global percentage of overall draft. The batt drafter, pre-needling feed system such as SFD, pre-needling zone design, infeed and delivery press on needlelooms, and the use of felt drafting units are among the many parameters to consider. Each parameter and combination of parameters are all part of the ANDRITZ expertise when designing high-performance needlepunch lines.

Moving on to medium-weight and heavy felts, balanced MD/CD strength is also requested, but is somewhat more difficult to achieve on wide production lines in combination with high throughput. The revolutionary concept of the eXcelle TT card, now also applied to the crosslapping processes, provides highly uniform webs with MD/CD ratios of less than 3:1. This line is capable of producing needled felts with low to high elongation percentages and with high tensile strength values. Final MD/CD tensile strength ratios of 1:1 will be possible once the felt reaches the winder, even using a low drafting ratio.

What new solutions can customers find in the line control systems?

Johannes Haep: The SCADA monitoring system developed by ANDRITZ helps production managers to improve textile performance of the line by generating production reports that show all the parameters. Thus, recipes can be reproduced quickly and operators receive the relevant production information in real time. ANDRITZ textile engineers provide a monthly executive report with proposals on how to improve production. It is also possible to use "walking cameras" to explain a situation or a problem easily to the remote ANDRITZ support team. The system sends you preventive maintenance alerts that help to anticipate problems and reduce unplanned down time.

How can the machine systems be integrated into an automatic factory in line with Industry 4.0?

Johannes Haep: The system is designed to be integrated into a fully automatic factory according to the Industry 4.0 concept. It controls the line parameters constantly and creates the best configuration to enhance production. It guarantees smooth operation, optimizes the process, maximizes the yield contribution, and improves plant profitability.

How are automatic machine monitoring, maintenance, and service supported?

Johannes Haep: The ANDRITZ commitment is to ensure that our customers receive prompt and reliable service to keep the machines at the peak of their performance. For spare parts, an ANDRITZ sales team is at your disposal to help producers make the right choice. Coupled with a dedicated supply chain, this ensures a fast and efficient response to your requirements.

In addition to scheduled maintenance and repairs, ANDRITZ process experts are available to inspect and audit the production lines and to propose possible improvements or upgrade opportunities.

With the goal of providing the most efficient and responsive service as possible to nonwovens producers, ANDRITZ provides a dedicated team of skilled technicians, as well as automation and textile engineers. These experts are also available worldwide thanks to the various service centers close to our customers' locations.

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As ANDRITZ wants to support its customers around the clock and around the globe, a 24/7 hotline is available. Nonwovens producers will find competent partners to address their process, mechanical, or electrical issues.

Which fairs and trade shows will you use for presentations this year?

Jean-Philippe Dumon: After the IDEA show, ANDRITZ will participate in several conferences and/or exhibitions around the world, such as IranTex from September 3 to 6 in Teheran, CINTE from October 12 to 14 in Shanghai, ITMA Asia from October 24 to 28 in Shanghai, and a conference from November 8 to 10 in Hof, Germany.

Can we mention any new references or customer plants ?

What can we report about your new plant delivered recently to India ?

Jean-Philippe Dumon: ANDRITZ has recently concluded several projects in South East Asia. Many remain confidential until the equipment has been commissioned and superior products are ready for sale.

Among the orders from India at the end of 2015, ANDRITZ received an order from Autotech Nonwovens, based in the automotive hub of Gujarat state. Autotech Nonwovens is one of the leading suppliers of high-quality nonwovens to the automotive industry in India. The complete needlepunch line is dedicated to flexible production of nonwovens for automotive, filtration, and coating substrate applications. Start-up of the complete needlepunch line is scheduled for mid-2016. The ANDRITZ neXline needlepunch is designed for high production capacities and integrates fiber opening and blending, chute feed, carding, crosslapping, drafting, needleloom, and winding technologies. The complete process is controlled by the ProDyn closed loop system and allows for extremely demanding profile requirements. The highly reliable ANDRITZ needlepunch technology meets the most stringent quality demands.

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machines have been sold to Europe, North America and south Asia.

The company complies with the complete and scientific quality management system. The products have got the CE certificate. Company've earned the recognition in the industry for its integrity, strength and high quality. The company can provide tailored non-standardized pleating machines according to the various requirements of customers. The products are the preferred choices for domestic filter manufacturers.

SHANGHAI HANSI

Shanghai Hansi Industrial Co., Ltd. / Shanghai Ningrui Chemical Engineering Co., Ltd. specialize in research, development and manufacturing of industrial adhesives. As one of the pioneers in the adhesive field, Shanghai Hansi Industrial Co., Ltd. / Shanghai Ningrui Chemical Engineering Co., Ltd. with its them professional research team, excellent and devoted staffs, scientific management system enjoy a high reputation in the R&D, manufacturing and sales aspect in China. Company possess a vast application experience in the field of train, construction, filter, refrigerator car, ship, assembly, automotive and electronics industries.

SUZHOU PULISEN

Suzhou PuLiSen Machinery Co., Ltd. is a machinery company, specialized in filters production equipment. Through many years' experience in the filter production technology, PuliSen constantly innovated to develop lots of advanced, high-efficiency, easily operable and reliable automated machines. The products mainly include many kinds of pleating machines, edge bonding machines and filter cutting machines, as well as other auxiliary equipment for filter production, which are applicate in automobile cabin air filter, air purification and water treatment, made very good response from customers.

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TFP launches new Supacool variant

Supacool cryogenic tissues provide a cost effective option for achieving super insulation

Technical Fibre Products has announced two new developments with its Supacool range of lightweight cryogenic tissues; the launch of a new variant and successful certification of materials to key industry standards.

TFP's new Supacool variant is a lightweight microfine glass spacer tissue co-wound with aluminium foil. The material is the first co-wound Supacool product developed by TFP; it forms the basis of multi-layer insulation (MLI) or super insulation which can be inserted, for example, between the inner and outer walls of a cryogenic vessel.

This new hybrid Supacool variant (58111A) has been developed specifically to offer the key benefit of reduced wrapping time while simultaneously improving thermal performance. Advantages to using the new material include; consistent alignment of the spacer tissue with the reflective layers, reduced thermal shorting due to the combination of alternating reflective foil and low conductivity spacer layers in a single product, as well as minimal outgassing in a vacuum due to the absence of adhesive or binder.

The new Supacool material has, along with Supacool M, successfully achieved certification to key industry standards which validate its suitability for production of liquid oxygen vessels. The standards achieved are the Impact Test in Liquid Oxygen according to EN 1797 and the Autogenous Ignition Test with Oxygen according to NF EN ISO 11114-3 standard, demonstrating proven performance in combination with the time saving advantages of a co-wound product.

TFP's high performance and lightweight Supacool cryogenic tissues provide a highly cost effective option for achieving super insulation. Supacool is part of a broader range of technically advanced nonwovens which provide solutions for an array of challenging applications across industries ranging from aerospace and defence to automotive, energy, industrial, construction and healthcare. Typical applications for TFP's materials include aiding fabrication and delivering a high quality, functional surface finish in composites, as well as providing solutions for fire protection, high temperature thermal insulation and power generation.
(Source from: "www.nonwovens-industry.com")

New study tracks India diaper market

Research and Markets has added the "India Diaper Market Overview" report to their offering. India's diaper market was growing with a CAGR of 22.23% over past five years.

In 2014, the market for baby diapers in urban India grew with a CAGR of 19.99% whereas in rural India the growth was much higher than urban. On the basis of age, the report categorizes the India diaper market into baby diapers and adult diapers. Baby diapers constitute the leading category in the market. During the forecast horizon, adult diapers market is expected to grow significantly due to the increasing healthcare standards in the country.However, social and economic constraints of using adult diapers are hampering the market growth.

P&G's Pampers dominates the overall diaper industry, followed by Huggies and Mamy Poko. P&G's lack of innovation and focus on higher margins amid aggressive strategies adopted by its competitors to increase their market share is expected to decrease the brand's market share in future. Japanese firm Unicharm, which sells Mamy Poko diapers, overtook Kimberly-Clark in the baby diaper segment nearly two years ago. In the baby diaper segment, Pampers, Mamy Poko and Huggies constitute more than 85% of the market by value whereas in adult diaper segment, Nobel Hygiene and Actifit dominate the industry heavily. Diapers are broadly categorized into two types i.e. disposable diapers and cloth diapers. Disposable diapers constitute the largest market share and are seeing increasing investments by manufacturers in their research and development. In the last few years, modern cloth diapers have become a fast moving trend worldwide for families looking for a natural modern way to diaper their babies. Sales of cloth diapers were 140 lakh units in 2014 and are expected to climb up in the forecast period, owing to environmental benefits. Other type of diapers includes swim pants and training pants, which have a

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marginal market share in India.
(Source from: "www.nonwovens-industry.com")

Nippon Paper entering Chinese market

Company joins ranks of Japanese diaper makers looking to China for growth

Nippon Paper Industries is making plans to enter the Chinese diaper market, according to a report published on Nikkei Asian Review. The Japanese company is negotiating with several local concerns and expects to begin supplying diapers to China as an original equipment manufacturer as early as April 2017 from an expanded plant in Japan.

Interest in the Chinese diaper market has been increasing as the country has changed its child bearing policy to allow couples to have two children.This shift has improved the prospects of the Chinese dipaer market, particularly in comparison to the Jpaanese market where a low birth rate has forced domestic and foreign diaper makers to battle for marketshare.

Nippon Paper's new facility at its Kyoto plant in Fukuchiyama will make diapers for babies and incontinence products for older adults. The new lines, which will be complete in the middle of next year, will be able to make nearly 100 million pieces per year. The company is investing about $42 million in the project and is hoping to double its healthcare division sales to ¥20 billion by 2017.

High quality, foreign-made diaper are in high demand in China. Japan's Kao and Unicharm and well as U.S.-based Procter & Gamble have all had considerable success. Meanwhile, investments keep coming. Japan's Oji Holdings is prepping to expand its presence there with a new Japanese site that would start operations is expected to be mainly used for Chinese exports while Kao plans to spend ¥30 billion over the next two to three years to boost production mainly of its Merries diapers.
(Source from: "www.nonwovens-industry.com")

Clarcor purchases filter bag and cartridge maker

TDC Manufacturing reports sales of $17 million

Clarocor Industrial Air division has acquired the operational and intangible assets of TDC Filter Manufacturing, a leading U.S. manufacturer and supplier of pleated filter bags, dust collection cartridges and gas turbine air filters, for a purchase price of about $11 million. TDC had sales of approximately $17 million oin 2015. Under the terms of the transaction, Clarcor Industrial Air will assume open purchase orders from TDC and move TDC's operational assets into its facilities in Slater, MO. Clarcor will not acquire any real property or assume any employee-related liabilities. The transaction is not anticipated to be materially accretive or dilutive to Clarcor's 2016 earnings.

Christopher L. Conway, Clarcor's chairman, president and CEO comments, "The TDC product line is widely recognized and respected in the industrial air filtration space, particularly with OEM customers, and will be a strong complement to our existing BHA business. This, in combination with the operational synergies we expect to achieve as we increase volumes through our Slater facility, makes the acquisition an attractive one for Clarocor Industrial Air and for Clarcor."

Keith White, the President of CLARCOR Industrial Air, agreed, stating, "We are excited about this acquisition, as it expands distribution channels in our target markets, aligns with our BHA aftermarket filter business, and builds on both our manufacturing strength and great technology."

Clarco, based in Franklin, TN, and is a diversified marketer and manufacturer of mobile, industrial and environmental filtration products. It is publicly traded on the New York Stock Exchange.
(Source from: "www.nonwovens-industry.com")

Investment group buys stake in Algerian diaper maker

The Abraaj Group invests in Cepro, maker of diapers and fem hy items

The Abraaj Group, a leading investor operating in global growth markets, has acquired a significant minority stake in Cellulose Processing (Cepro), a leading manufacturer and distributor of baby diapers

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and feminine sanitary pads in Algeria. The acquisition was made through Abraaj's second generation North Africa Fund.

Founded in 2003 by Djamel Mehri of the Mehri Family, a prominent diversified family conglomerate, Cepro has grown to become the fourth largest player in the Algerian baby diaper segment in terms of marketshare.

Abraaj, in partnership with the Mehri Family, hopes to use its significant investment expertise to increase production capacity and efficiency, diversify Cepro's product offering, enhance marketing efforts through a new branding strategy and expand its network by developing new distribution channels in Algeria and Sub-Saharan Africa.

Ahmed Badreldin, partner and regional head of Mena for The Abraaj Group, says. "Cepro represents an exciting investment partnership for us, as it is a direct beneficiary of the African consumer opportunity driven by market necessity, rapid population growth and the rise of the middle class. "We will apply our global experience in the consumer businesses sector to create local value through job creation, industrial development and investment, and knowledge transfer. We look forward to working closely with the Mehri Family, one of the most established entrepreneurial groups in Algeria, to further strengthen Cepro's position in the market and expand regionally with a focus on Sub-Saharan Africa," he adds.

Djamel Mehri, founder and chairman of Cepro, adds: "Having built the business over the last 10 years into one of the leading home grown diaper manufacturers in Algeria, we believe this is an opportune time for Cepro to expand its footprint nationally and regionally by offering the most advanced products to our clients.

"Our group recognizes Abraaj's deep experience in North Africa and its successful track record of developing FMCG businesses in growth markets globally. Together, we are confident of successfully executing our next phase of growth and look forward to a successful partnership," Mehri added.
(Source from: "www.nonwovens-industry.com")

Composites update

Nonwovens join with other materials to add benefits in many markets

What are nonwovens role in the composites market? The answer depends on the end use market. From automotives to roofing to adult incontinence, nonwovens are teaming up with a range of other products to offer flexibility, lower costs, lighter weights and many other benefits. The combination of nonwovens with other technologies or with other nonwovens continues to open up new doors to the industry. Here is a round up of recent developments of nonwovens in the composites market.

R3 Composites Turns to Nonwovens Production

Compression molder and compounder R3 Composites has established a nonwovens operation that will largely serve its own composites business, which supplies injected molded materials to the automotives market.

Carver Non-Woven Technologies will be headquartered in Fremont, IN, in a renovated plant where it would begin commercial production in July.

Calling the nonwovens process not proprietary but unique, president Mark Glidden said the new company will concentrate on five blends of materials. "Our ability to homogeneously blend different materials is what will set us apart," he says. "We have been able to come up with a matrix of a natural fiber carbon system that offers lightweight and mechanical properties. The result is lower gsm materials that have two or three times mechanical properties at similar blends."

This is the first time that R3 is using nonwovens in its composite structures. The company decided to manufacture its own product because it allows them to achieve the flexibility and lightweightedness necessary and to control the production process from start to finish.

Glidden also had some quality concerns with sourcing nonwovens externally. "There can be a weight difference between what you order and what you receive," he says. "A

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plus or minus differential of 20% would be common in the industry. We are able to have a plus or minus 5% variance. That is very significant."

Of course this upped the initial investment for Carver but Glidden thinks the ability to significantly decrease weights, increase mechanicals and have control of the fiber opening process from the get go justifies this multimillion investment.

"We think with our technology we can get people to look more to nonwovens and away from traditional things they have been using in the past," he says. "We did this by maintaining quality of fiber all the way through the system. Understanding that nonwovens is essentially the entanglement of fibers, we want to make sure these fibers are entangled as closely together as possible."

For door panels, a key application for the technology, this technology has allowed R3/Carver to make products as light as 600 gsm that are able to compete with earlier generation products that are as high as 1200 gsm.

"The general usage of nonwovens is a smart move economically," says Gary Balthes, president of nonwovens consultancy Indyco. "Then, the flexibility with how you build the blends of fibers and layer them differently in the matrix adds to the benefits." Within automotives, the development of lighter weight, similarly performing products is crucial as new fuel economy standards dictate car design.

"There are only so many ways to adjust the air train to get mileage down. You have to move into aerodynamics and then weight," says Glidden.

Elsewhere in the car, the R3/Carver technology can be applied to underbody aeroshielding. Other applications for the technology include building products and furniture.

Conwed Plastics Offers Netting Solutions

Conwed Plastics' co-extruded netting allows its customers to design the most advanced, flexible and strong composites. Co-extrusion is a multi-layer extruded netting than can be subsequently oriented where different polymers can form different layers on the same netting configuration. It is a square netting construction and Conwed has the ability to build netting with A/B, A/B/A, and A/B/C layer combinations.

Conwed's Thermanet Heat-Activated Reinforcement Netting brings together two or more substrates into a single, improved composite structure. Adhesive properties are actually built into the netting to bond and strengthen a diverse range of materials. This technology offers a wide range of product configurations, providing design versatility to match strict performance requirements and can be laminated with a variety of materials.

Conwed's Rebound elastomeric netting is used in elastic nonwoven composites for waistbands and side panels in adult incontinence underwear and briefs. Depending on the final product application, manufacturers, converters, and laminators may produce composites with film, foam, paper, membrane, nonwoven, tissue and other fabrics used in various industrial and consumer applications. These composites can provide customized drapability, flexibility, elasticity and recovery based on the versatility of its elastomeric netting.

Chomarat and Norafin Develop Roofing Felt

Nonwovens have merged with other materials to offer solutions to the roofing market

Chomarat has launched a new generation of reinforcements for roofing felt—Rotaflam Neo, which was developed in collaboration with spunlace manufacturer Norafin. Billed as the only reinforcement on the market offering the benefits of both glass and polyester, Rotaflam Neo also combines the performances of laid scrim (strength and dimensional stability) and nonwoven materials (puncture, fire and tear resistance) in a single layer.

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Rotaflam Neo is made up of a fiberglass and/or polyester-based laid scrim, a nonwoven and a glass veil. The nonwoven is made through hydroentanglement, which guarantees the performances of the laid scrim. Using a laid scrim that combines glass and polyester offers two benefits—thanks to its intrinsic properties, the glass adds stability on the roof but also on the membrane production lines, while the polyester brings elongation and strength.

By combining their know-how, the two companies can offer a reinforcement that rises to the challenges of the waterproofing market, offering improved performance while reducing the thickness of the membranes. The reduced weight of the bitumen significantly cuts the production costs of the membranes. Moreover, the membranes produced with Rotaflam Neo pass all the European fire resistance tests (BROOF T1,T2, T3). Rotaflam Neo improves the fire resistance of the waterproofing membrane and does away with the need to include certain chemical additives in the formulation, which also reduces the environmental impact of this solution.

Johns Manville Composites Business Targets Many Applications

Johns Manville's composite panels using its own nonwovens can optimize performance, mass and value. At the outer layer, a surfacing veils provide a smooth finish that can also be painted for protection from the elements, and thicker, nonwoven glass mats can be applied as sub-surface layers that cover honeycomb cores. Polyester spunbond or glass fiber nonwoven materials can also be used as a compressed core to increase mechanical properties with minimal weight.

The company reports that the global demand for composite structures is growing rapidly. JM has applied this technology to windmill blades, automotive headliners, lightweight body panels, forming parts and structural elements, panel boards for trucks and trailers, honeycomb acoustic panels in office spaces and ship and railroad building.

Mogul Nonwovens

Turkey-based Mogul Nonwovens offers a number of composite materials for a range of industries. Its PEVA film, available in widths of 160 cm, is available in combination with its nonwoven fabrics and can be used in many applications ranging from dust covers and shower curtains to garment bags and medical products.

Meanwhile its coated and medical fabrics allow the company to make hydrophilic water repellent stiffened and fire-resistant grades. Its PP/PE extrusion coated and laminated fabrics are marketed under the Integrale brand name and the technology ranges include a spunbond/meltblown, sandwich coated and backside coated and combinations with plastics, net raffia and woven materials.

Finally, Mogul's Allucoat range fabrics are a metallized form of nonwoven fabrics. Mogul offers PP and PET spunbond and SMS fabrics in this range. Applications are packaging, building industry, agriculture, insulation. Allucoat fabrics have light reflective properties, and 270 cm max width for metallized fabrics in a wide range of grammages are available.

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

Taiwan nonwovens production

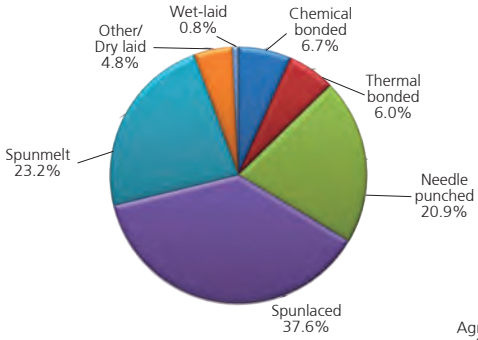
Taiwan nonwovens production (2008 – 2015)

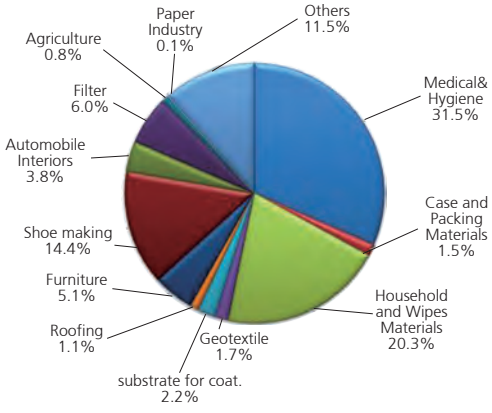
(Source: TNFIA)

	2009	2010	2011	2012	2013	2014	2015
K tonnes	140.1	150.0	164.8	130.5	153.1	181.5	183.7
Mil.USD	550.8	614.1	765.1	591.8	667.2	833.4	739.3
USD/kg	3.93	4.09	4.64	4.53	4.36	4.59	4.02

Taiwan nonwovens production by technology & application (2015) (183.7 K tonnes)

(Source: TNFIA)





Taiwan trend in export & import (2010 – 2015)

(Source: TNFIA)

		2010	2011	2012	2013	2014	2015
K tonnes	Export	73.6	71.6	74.0	82.3	93.4	94.0
	Import	27.1	31.4	27.8	26.6	26.7	24.7
Thou. USD	Export	292.2	322.2	324.2	338.5	369.5	378.1
	Import	114.8	150.0	130.3	122.2	122.6	110.4
USD/kg	Export	3.97	4.50	4.38	4.11	3.96	4.02
	Import	4.24	4.78	4.69	4.59	4.59	4.47

India nonwovens production

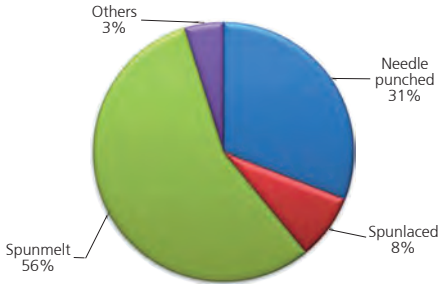
India nonwovens production (2011 – 2015)

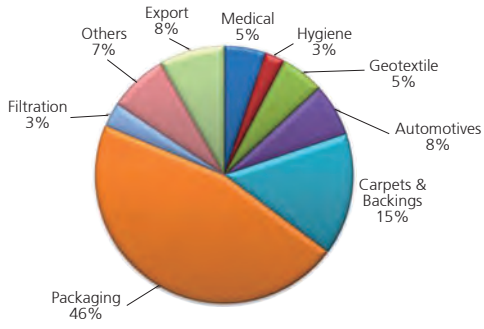
(K tonnes) (Source: BCH)

	2011	2012	2013	2014	2015
Needle punched	59.6	75.0	85.3	90.5	96.5
Spunlaced	13.0	19.6	19.7	25.0	25.5
Spunmelt	106.2	120.0	138.7	152.7	175.0
Others (Chemical bonded / Thermal bonded / Wetlaid etc)	7.5	8.0	8.8	9.0	15.0
Total	186.3	222.6	252.5	277.1	312.0

India nonwovens production by technology & application (2015) (312.0 K tonnes)

(Source: BCH)





India trend in export & import (2010 – 2015)

(Source: BCH)

		2010	2011	2012	2013	2014	2015
K tonnes	Export	20.5	18.8	20.9	27.5	27.6	25.7
	Import	19.3	25.6	30.9	28.1	40.4	44.3
Mil. INR	Export	2.5	2.8	3.2	4.5	4.6	4.00
	Import	3.2	4.5	6.4	7.5	10.3	10.40
INR/kg	Export	122	149	153	164	167	156
	Import	166	176	207	267	255	235

Top 5 Countries in export & import of India

(Source: TNFIA)

	2015	
Export	USA	1.3
	United Kingdom	0.4
	Canada	0.2
	Korea	0.2
	UAE	0.2

	2015	
Import	China mainland	3.4
	USA	1.2
	Korea	0.9
	Japan	0.8
	Thailand	0.7

The latest trend of Hygiene products and nonwovens for them

Koudai Furuya
Group Manager, Strategic Sourcing Group
Procurement Department Global R&D Division Unicharm Corporation

Contents

Self introduction

Join in Unicharm: April 1998
1998-2000 R&D of Nonwovens

TOW fiber for cleaning wipes

Bico spunbonded nonwoven for leg Cuff

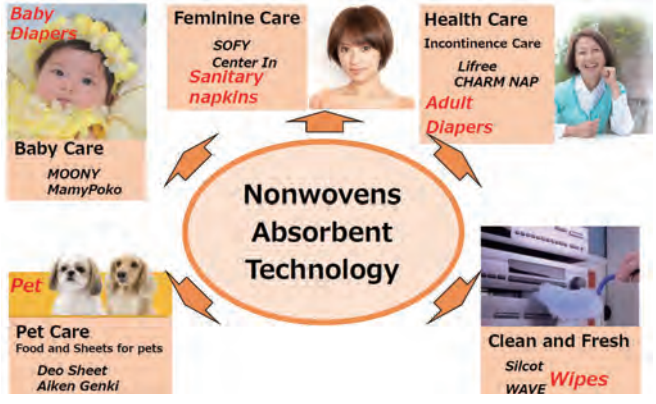
2001-Now Procurement
- NW·Film·HMA·SAP·PULP·Spandex·Tape

Company introduction

Corporate Profile

Date of Establishment	February 10, 1961
Paid-in Capital	15,992 million yen
Number of Shares Issued	206,944,773
Number of Associates	1,264(12,795 on a consolidated basis as of March 2014)
Listed Exchange	First Section of the Tokyo Stock Exchange
Business Operations:	Sales of baby and child care products, feminine care products, health care products, cosmetic products, household products, pet care products, industrial materials and food-packaging materials, ets.

Strategic business units

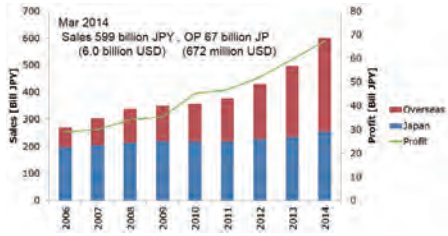


Global production sites

15 countriess and 23 production site

Sales and operating profit change

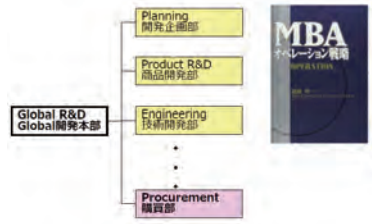
Net Sales/Operating Profit



Japanese sales is slightly increasing. Overseas sales is rapidly increasing.

Global R&D organization

Unicharm procurement department is belong with Global R&D division.



* Unicharm procurement organization is published in MBA text book.
* MBA OPERATION (Globis)

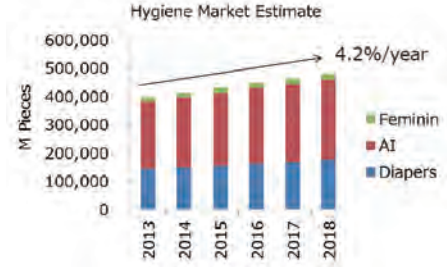
Procurement function

Procurement department functions are not only sourcing, but also raw material R&D.(deciding Supplier, Price, Quantity, Specification globally)

Trend of hygiene products

Hygiene products market

Hygiene market growth rate will be 4%/year, Key driver is Asia.



Hygiene market will grow about 4% every year.

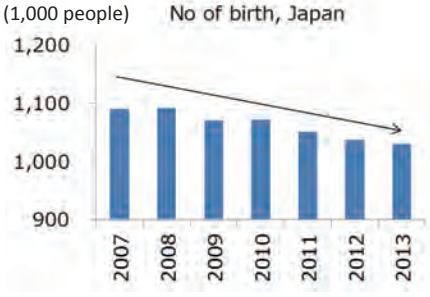
Technology News

Growth Rate Each Region

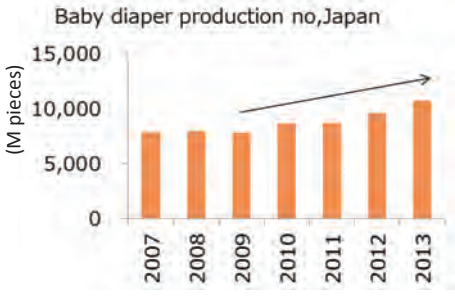
Region	2013-18 % CAGR
Asia Pacific	5.3%
EU,ME,NA	3.1%
Latin America	2.7%
North America	1.2%
Global	**4.2%**

Asia pacific region is key driver for growth.

Japanese baby number is decreasing. Why does Japanese baby diaper production number increase?



Japanese number of birth is decreasing

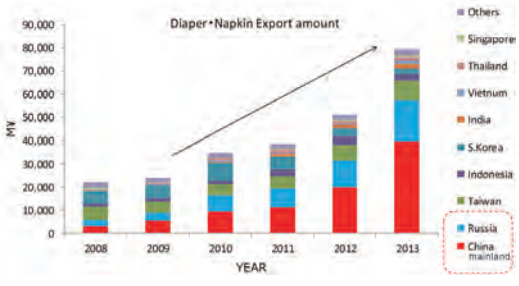


Japanese number of baby diaper is increasing

Change of diaper construction structure

NW contribute to the evolution of diaper.

Diaper, Napkin export amounts are increasing, especially China, Russia.

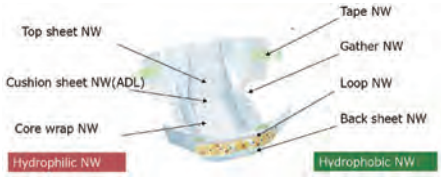


Trend of latest hygiene products

Trend of hygiene products are comfort, fit, thinner, design, sustainability and discretion.

Trend of nonwoven fabrics(NW) for hygiene products

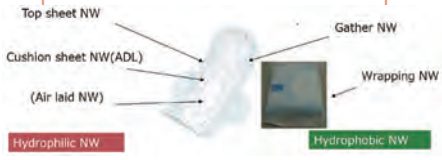
Properties of NW for diaper



Absorbent properties
(Permeability Strike thru, Rewet)
Soft feel (softness, Smooth)

Hydrophobic
(Hydro resistance)
Soft feel(Softness, Smooth)
Strength(Break strength)

Properties of NW for feminine napkins



Absorbent properties
(Permeability, Strike thru, Rewet)
Soft feel(Softness, Smooth)

Hydrophobic
(Hydro resistance)
Soft feel (Softness, Smooth)
Strength(break strength)
Design noiseless

Latest NW trend for hygiene products

For satisfy benefit of hygiene products, various NW are developed.

Processing for shaping and making holes (skin care)

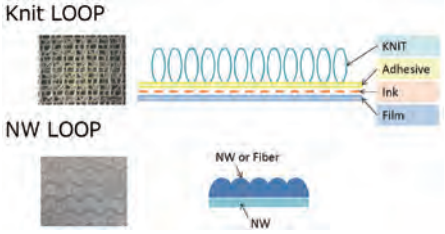
UC top sheet NW. Our original processing change NW surface shape for softness and dryness for skin care.

Natural fiber or natural material (Natural)
Unicharm Korea product. They are using materials included Chinese herbs or Korean carrot.

Stretchable material (Stretch)
Japanese Unicharm products. To use stretch NW, improving fitting and softness.

Multi-colored Material (Printing)
Japanese Unicharm products. To use multi color printing NW, this product is felt like swim wear.

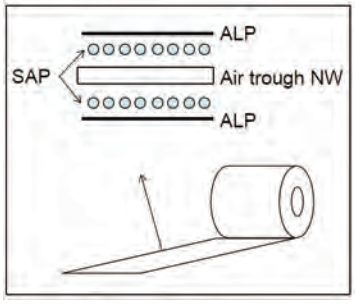
Nonwovens LOOP (Soft NW)



To change NW Loop from Knit Loop, to improve softness.

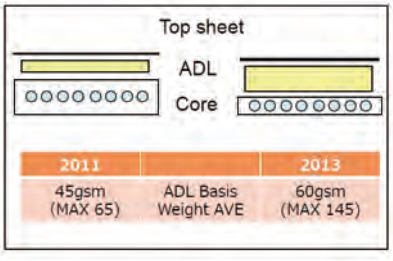
NW for thinner products (ALP, High BW ADL)
For covering strike through property depend on reducing fluff core, ADL become high basis weight.

ALP+SAP+AT core material



5 LAYEr (ALP +SAP +AT)

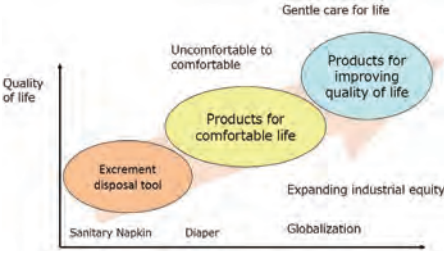
High basis weight ADL for thinner core



Future trend

Different consumer needs of each regions.
* It is need to develop hygiene products for matching each region requirement.
- Pull up diaper is majored;
- Tape type diaper is majored in worldwide.
* It is need insight and it have to match between regional needs and NW technology.

Principle of hygiene products



Summary

1) Hygiene market will be grown at about 4% pa.
2) NW contribute to the evolution of diaper in performance.
3) Product trend: Comfort, Fit,Thinner, Design, Discretion, Sustainability.
4) NW trend: softness Elastic, ALP, High BW, Printing, Natural, Skin care.
5) Future trend: Matching each region needs.

(The article extract)

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and electrospinning. Electrospinning provides particular advantages in the processing of this technology. Fibers of the invention can also be prepared by phase separation, casting in pores, and by film slitting.

Suitable absorbent materials include polyesters, polyethers, polyester-polyethers, polymers having pendant acids or pendant hydroxyls, polysiloxanes, polyacrylamides, kaolins, serpentines, smectites, glauconite, chlorites, vermiculites, attapulgite, sepio¬lite, allophane, imogolite, sodium acrylates, and 2-propenamide-co-2-propenoic acid. Particularly suitable absorbent materials are sodium acrylates and 2-propenamide-co-2-propenoic acid.

Applications for the technology include medical dressings, diapers, sanitary napkins, absorbent towels or wipes, mops, sponges, transdermal or oral delivery systems for therapeutic and prophylactic substances, spill management, water transport and management in fuel cells and for collecting and transporting water or other fluids from coalescence filters.

Claims of the disclosure target a liquid trapping device, a process for making a liquid trapping device, a means of absorbing liquids, nonwoven fiber assemblies, a method of producing nonwovens, a method of applying the nonwoven containing an adhesive to patients and an apparatus for forming the composite fibers and nonwovens.
(Source from: "Nonwovens Markets")

Technical Trends

University of Akron shows stretchable, high wet strength nanofiber absorbent

Absorbent technologies for disposable absorbent products have evolved to enable very thin product designs for better fit, comfort and other benefits such as packaging. High capacity and permeability superabsorbents have replaced some or all of the wood pulp in many diapers targeting ultra-thinness. The use of such high levels of superabsorbent particles, however, has led to other technical challenges including superabsorbent particle capture, fluid distribution, thin pad stiffness and harsh feel. In order to capture the superabsorbent within the diaper cores the particles are typically sandwiched between two layers of hydrophilic nonwovens and/or bonded with adhesives. Some stretchable adhesive coatings have also been developed which do not constrain the superabsorbent particles swelling upon wetting. Despite these advancements alternative absorbent structures are being pursued to fully address these thin product performance challenges.

In this patent application by the University of Akron, nanofiber and meltblown nonwovens are disclosed with good wet mechanical properties, high absorbency and elasticity suitable for diapers, wipes and medical bandages. The nonwoven structures contain fine fiber or nanofiber hydrophilic elastomeric materials (HEFC) and an absorbent or superabsorbent material in physical proximity to the fibers. Upon wetting the HEFC fibers partially absorb then wick the fluid to the superabsorbent material in fluid communication with the fibers. Differences in absorbent rate and capacity between the fibers and superabsorbent result in a net fluid flow to the superabsorbent which captures the free liquid. The fibrous HEFC network is elastic and able to accommodate expansion of the superabsorbent during the absorption process. The structure may optionally contain an adhesive, which in the case of medical bandages, can function to attach the structure to healthy skin.

In one key embodiment of the invention, the HEFC nanofibers are produced from polyurethane by electrospinning. The superabsorbent material is a sodium polyacrylate and the structure can absorb 500-1250% by weight of an artificial urine solution with a 100% equilibrium capacity intake time of about 5 seconds. The wet strength of the structure is 0.25-3.0 MPa with 850-900% strain at the breaking point. Here, superabsorbents are defined as absorbent materi¬als capable of absorbing at least 50X their weight of a liquid.

The HEFC microfibers or nanofibers are produced from hydrophilic, elastomeric materials which are capable of being spun into fibers, wick and absorb fluids and can withstand the strain that results from dimensional changes of the absorbent component. The fibers can be produced from blends, mixtures or solid solutions of elastomerogenic and hydrophilogenic subcomponents. The hydrophilic and elastomeric materials can be mixed in a solution as a uniform mixture, in the form of well-defined phases, a solid-solution and a portion which is phase separated, well-defined separated phases, block copolymers with elastomeric and hydrophilic blocks or segmented fibers with hydrophilic and elastomeric portions.

Such materials can be copolymers of elastomeric mers and hydrophilic mers e.g. random copolymers block copolymers and the like. Homopolymers where the components are both hydrophilic and elastomeric are also useful. Example HEFC fiber materials include polyester elastomers, zein protein, polydimethylsiloxane, hydrophilic poly (ether-co-ester) elastomers, silicone-co-polyethyleneglycol elastomers, polyacrylates, thermoplastic polyurethanes, poly (ether-co-urethanes) and polyurethanes. Particularly advantageous materials are poly (ether-co-urethanes) and polyurethanes.

The absorbent or superabsorbent materials can be combined with the HEFC fibers by any means as long as it is in close physical proximity. The absorbent material can be physisorbed, chemisorbed, mechanically entrapped or entangled or embedded in the HEFC fibers. The morphology of the absorbent material can be irregular, amorphous, globular, elongated, fibrous, azimuthal, ellipsoidal or spherical. A variety of stress-strain properties are also acceptable.

The nonwovens can be produced by meltblowing, nanofiber gas jet techniques

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Product News

VAE emulsion - the ideal choice for automotive carpet

Traditional auto industry adopts SBL (styrene-butadiene latex) as carpet adhesive which has advantage of high content of hazardous substance, heavy odor, poor flame retardation, the carpet prepared with it would will continue to release harmful substances, such as VOC (volatile organic compounds), benzene, aldehydes and ketones, etc. , causing continual damage to the occupant's physical and mental health.

In recent years, with the growing awareness of environmental protection and the improved safety regulations, higher requirements for the safety of the environmental interior materials are put forward in this area. In response to the new market demand, Wacker Chemicals introduced VINNAPAS® VAE automotive carpet adhesive.

VAE is based on ethylene and vinyl acetate prepared by free radical emulsion polymerization techniques. No solvents, plasticizers and formaldehyde added during production process, unique process endows emulsion with small odor and low VOC characteristics that would help customer meet stringent automotive carpet environmental qualification.

Further, owning to special structural characteristics of VAE, heat quantity and smoke generated in the combustion process is lower than SBL, which can significantly reduce the burning speed and improve carpet flame retardation. On the basis of maintaining the advantages of low VOC, low odor, flame retardation,WACKER VINNAPAS® VAE gives consideration to its application properties, such as pull strength, peel strength, dimensional stability, has become an alternative to traditional SBR system technology, to be theideal choice for the development of environmental and safe auto carpet.
(more infomation: daoshuang.qu@wacker.com)

Jacob Holm® SoftLite™

SOFT & LIGHT

Spunlace for Hygiene Products

- Baby care
- Feminine care
- Adult care

Jacob Holm, a world leader in spunlace technology, is continuously designing new and innovative fabrics for the hygiene market, The company offer a wide variety of premium hygiene products to meet the ever-changing needs of our customers, With basis weights as low as 15 gsm, The products are not only lighter, but they also provide the high performance and comfort you need. The core capabilities include softness, lightweight, fluid management and stretch and recovery.

Jacob Holm Advantages:

- Inherent stretch ability with high strength in machine directions and high elongation in cross direction
- Ultimate softness at required strength-smooth, fine, specially shaped fibers create balanced strength and softness
- Flexibility-choose from any type of staple fiber in any shape for specific product characteristics
- Lightweight capabilities as low as 15 gsm with optimized wicking and fluid distribution

Product Family	Product Name	Application	Basis Weight Range (gsm)	Fibers
Baby Care	SoftLite™ Elastics	Diaper Stretch Ears Diaper Side Panels	15-30	100% PP and blends PET/PP
	SoftLite™ Topsheet	Topsheet	15-45	PP/PET/Viscose/Lyocell/ Cotton
	SoftLite™ Backsheet	Backsheet	15-40	
Feminine Care	SoftLite™ Topsheet	Topsheet	15-45	PP/PET/Viscose/Lyocell/ Cotton
	Jacob Holm™ Integrated Coverstock	Integrated Coverstock	35-70	
	Jacob Holm™ ADL	Acquisition Distribution Layer	35-50	
Adult Care	SoftLite™ Elastics	Diaper Stretch Ears Diaper Side Panels Diaper Belt	15-30	100% PP and blends PET/PP
	SoftLite™ Topsheet	Topsheet	15-45	PP/PET/Viscose/Lyocell/ Cotton
	Jacob Holm Integrated Coverstock	Integrated Coverstock	35-70	
	Jacob Holm™ ADL	Acquisition Distribution Layer	35-50	

行业信息

聚丙烯短纤市场的增长

全球聚丙烯短纤非织造布市场将有望在2020年销售额达90.2亿美元。婴儿尿布及成人失禁用品逐渐增加的需求是推动全球聚丙烯短纤非织造布市场在未来六年市场发展的动力。聚丙烯短纤非织造布在汽车以及工业领域的渗透，也对其市场的发展产生积极的作用。在印度和中国等新兴市场的健康护理支出的增加，促使防护医疗服装需求的增加，这将在未来对其市场的增长产生影响。然而，聚丙烯价格的波动对市场参与者来讲，也是一个重要的挑战。

卫生产品是最大的市场组成成分，在2013年占市场份额的37.5%。特别是在美国、日本以及西欧等国家，由于老龄化人口的增加，也是卫生产品的一个主要的发展动力。北非以及中东国家的高出生率，以及东南亚国家逐渐增加的婴儿尿布使用量，也促进了这一份额的增长。从2014年到2020年，医疗市场将呈现7.7%最快的增长率。经济发达的美国、欧洲先进的医疗保健系统，南美洲和亚洲国家的医疗保健支出快速提高，促进这一份额的增长。
(资料来源: "IDEA16")

Optima公司提供最完整的包装系统

德国非织造包装公司Optima其在美国波士顿的非织造国际展览会（IDEA2016）上展出。公司展示一系列的非织造产品的包装机器，包括半自动与全自动化的设备以及生产线，这些为低速以及高速应用提供最精确的包装。Optima宣称其设备具有最大的灵活性以及理想的系统效率。补充说明它的可调节的压缩机组以及高精度的工艺，意味着设备不仅可以提供最合适的包装，而且可以提供包装标签的打码。

公司宣称很多新的选项都是可行的，包括在高速条件下，生产小尺寸的包装材料。这个仪器可以很快的适应很多规格的产品。美国国际非织造展览会的另外一个关注的领域是新型电子服务功能"TCAM"：全方位服务资产管理。TCAM的主要目的是在降低生产成本的同时，提高生产线的生产效率。TCAM包括一个电子信息工具和一个可选择的状态监控系统。

Optima称，有了TCAM以后，包装生产线可以完全电子化，可以与数字化CAD的画图媲美。维修人员可以通过平板或者台式电脑来调用这个虚拟的系统，例如，状态监控器可以通过传感器自动产生生产线的下一步生产需求，必要时可以提前发出警告。
(资料来源: "IDEA16")

Dilo公司设备升级

Dilo集团是短纤非织造布生产线的非织造解决方案的重要供应商，在IDEA2016展览会上透露了它的计划。新的设备由DiloGroup旗下的DiloTemafa，DiloSpinnbau以及DiloMachines公司共同完成并进行展示，以表示其对这个新设备的重视，该新设备将提高产品的质量及生产线的产能。

DiloTemafa公司推出了一系列的Baltromix开包机以及梳理机，这很适合长纤维在高速条件下的喂入。在设计上的改变，说明清理的间隔更长，清理的时间会更短。DON精密开松机作为纤维预处理和梳理喂入之间的一个中间装置，可以提供一个精密的开松阶段。

DiloSpinnbau公司已经有了一个新的"单向喂入"的梳理喂入装置，这个装置将"体积喂入"的原则和一个斜槽喂入装置的特点相结合，省去了传统的高位棉箱，可降低对厂房高度要求。纤维束通过真空运输网帘时被压缩，从而可获得比较均匀的质量分散。这个喂入装置可以适应中/细至粗和中等至长的短纤维。

最近刚开发的梳理机，VectorQuadro梳理机，包含了预梳理锡林和主梳理锡林之间的模块化输送组。罗拉部分的快速转变装置为梳理提供了很多选项。输送装置也很灵活，可形成平行铺放、随意铺放或凝聚的纤维网。这个梳理机的预梳理部分有四对工作/剥离辊，在主锡林上面有五对工作/剥离辊。这有望取得高的产量以及好的非织造纤网质量。

DiloMachines公司新的DLSC水平交叉铺网机，根据纤网规格的不同，可将纤网的喂入速度提高到200m/min。这样的喂入速度突破了整条生产线流通量的瓶颈。这个铺网装置与CV1A型纤网调节系统配合，可以提高纤网的均匀度并有效节约纤维。这样

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的高喂入速度是通过提高三帘铺网技术的传动力来实现。纤网引导装置“纤网扩张导引”，可以用来预防铺网反转地方的褶皱出现。

Dilo公司同样在针刺工艺进行改进，包括针刺模块技术，在这个技术中，为了刺进密度非常高的板中，刺针提前以22为一个单位放置。Dilo称刺针的刺入以及精度会提高，尤其是有可能运用到机器人技术。

Variopunch针刺技术可以通过改变针刺模块组中刺针的排列方式来消除坏点，从而获得一个比较均匀的针刺图案。技术成熟之后，Variopunch计划为提高纤网外观，制作一个更加均匀的刺针分布。

除了为土工布一类的企业提供的大批量宽幅的针刺生产设备以外，Dilo公司也提供一种用于加工小批量产品的紧凑型针刺生产线，例如可以用于医用产品或者用于由特种纤维制造的特殊的毡。

这种紧凑型生产线包括开松及混合，梳理喂入，梳理以及交叉铺网，针刺以及卷绕。紧凑型梳理机的工作幅宽是1.1m，铺网的宽度为2.2m。Dilo称第一次在2015年的意大利米兰ITMA展会上展示该生产线，其主要特点是紧凑的输出装置，可以快速适应生产条件以及经济运行模式。
(资料来源: “IDEA16”)

三井化学将增加其在日本产量

柔韧和可扩展的非织造布将有助于推动高级尿布市场的增长

三井化学将增加日本四日市Sunrex工厂6000吨的纺粘生产能力，以支持其产品在日本和整个亚洲地区婴儿尿布市场份额的增长。

新生产线将采用专利技术改进纺粘工艺，进而可生产具有出色的柔韧性和扩展性并伴有卓越舒适性的非织造布。这些优势将有助于三井提升其在高档尿裤市场的地位。

据三井高管称，其中期计划是将医疗保健业务定位为一个目标业务领域，而非织造布业务是该业务领域的一部分。在亚洲尿布市场中的扩张是该计划的一个重要部分。此次扩建预计将在2017年底完成。
(资料来源: “www.nonwovens-industry.com”)

王子制纸集团启动了马来西亚婴儿尿裤生产线

王子集团已于5月31日在马来西亚开启一个新的月产1000万件的婴儿尿裤生产线以满足当地的需求。王子集团还计划将一半以上的产品出口到如印度尼西亚和泰国这样的周边国家。

虽然王子集团制造商在印度尼西亚制造婴儿尿裤，并将暂时出口产自马来西亚的尿裤，但是他们有计划调整印度尼西亚的本地产量。
(资料来源: “www.nonwovens-industry.com”)

非织造投资目光移向南非

Pagas和Spunchen瞄准南非卫生用品市场的成长

对南非的兴趣在持续。在6月末，南非的Spunchem与捷克的Pegas两家公司同时表示，有兴趣为南非的卫生用品市场建立本土的货源。根据欧睿国际的信息，南非的卫生用品市场增长率为4%。两家公司在披露时都同时指出，当地卫生用品市场的光明前景及产能不足激发了投资兴趣。

事实上，欧睿国际预测2015-2020年南非的卫生用品市场将迎来6%的复合年增长率。南非的一次性卫生用品有超过4亿美元的未满足潜在市场，据估算，其中尿裤超过9亿片，卫生防护材料达到13亿片、成人失禁产品超过7千万片。

Western Hygiene公司在南非已经好多年了。2009年保洁公司开始在约翰内斯堡生产婴儿尿裤。2014年，宝洁公司在那里建立了大型生产中心，生产包括女性卫生用品和洗衣液。去年，宝洁以41%的市场占有率成为南非婴儿尿裤市场榜首。宝洁的竞争对手金佰利克拉克也一直从事于生产女性卫生用品和婴儿尿裤，除此之外，至少从2013年开始在Epping的工厂已经开始了，目前金佰利占据了南非婴儿纸裤市场第二位置。瑞典爱生雅和南非Nampack公司共同拥有的Cuddlers品牌占据了第三的位置。

非织造布行业顾问David Price专门研究纺

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粘和纺熔市场，他看到两家新的非织造供应商在南非卫生用品市场成长的空间，目前，这些纺粘和纺熔材料主要依赖从北非、南美以及亚洲进口，尽管在本土，一家名叫Cordustex生产商，在1995年已经运行了一条纺粘生产线。“这是一个标准化替代进口的角色，”Price补充道。“市场足够大，足以支持本地生产。”

Spunchem公司主要生产产业用非织造材料，宣称请教了一家顶级的尿裤生产商，尝试将它的新技术用于尿裤的生产。作为它首个以卫材为中心投资项目，今年夏天基本完成，公司已经宣布它将在2018年增加第二条生产线。Spunchem为产业用市场生产纺粘非织造材料已经有20年，目前运行着三条纺粘生产线。还没有提名担任新线的供应商。

与此同时，Pegas宣布上个月董事会已经投票决定在南非设立子公司，公司高管们感到将在南非购买土地及一条小型Reicofil 4纺熔生产线。此前Pegas已经在北非的埃及运营了。“新公司的成立意味着项目的开始，我坚信这将成为我们在捷克共和国境外的另一新工厂”，公司首席执行官Frantisek Rezac说，“伴随着公司的建立，我们正开始采取步骤，购买已确认的土地，预计整块土地的收购程序将在未来几个月内完成。”

根据Price所说，面对这一成长的市场，Pegas具有国际视野，富有经验及成本高效的Reicofil技术优势。而作为南非本土的Spunchem则具有南非市场的专业知识和文化认同的优势。“如果没有任何的调查和研究，这类公司不会决定启动这些运作，”他补充道。“他们正在谈判，正在寻找合作伙伴。这是一个明智的决策。”

首先，这些公司预期目标瞄准一次性尿裤市场，这是目前零售卫生产品销售的最大份额，得益于南非比例失调的大量青年人群和高出生率，这与尿裤市场发展息息相关。卫生防护产品是该领域的第二大品类，它的销售额在2015年达到了1.22亿美元。尽管成人失禁产品占据该领域的最小份额，但我们看到最近几年其增长速度最快，2015年增幅达到了8%。

(资料来源: “www.nonwovens-industry.com”)

第六届亚洲过滤与分离工业展览会暨第九届中国国际过滤与分离工业展览会展商预览

杰斯曼

杰斯曼公司是Berkshire Hathaway集团旗下的企业，是全球优质建筑保温、机械保温、商业屋面、屋面保温材料的领先制造商和销售商，也是商用/工业/住宅应用所需的纤维和无纺布制造商和销售商。杰斯曼所服务的市场包括航空航天、汽车、运输、空气处理、机械、空调暖通系统、管道、设备、过滤、防水、建筑、地板、内衬材料和风能领域。杰斯曼公司成立于1858年，总部位于美国丹佛市，年销售额约26亿美元，在其产品所涉及的主要市场中均处于领先地位。公司拥有约7,000名员工，在北美洲、欧洲和中国经营43家制造厂。

过滤业务隶属于杰斯曼三大战略事业部之一的工程产品事业部（Engineer Product Group, EPG）。从20世纪40年代开始，杰斯曼就致力于为全球市场提供高品质的过滤材料，并成为全球过滤材料种类覆盖最多的制造商之一。杰斯曼拥有众多的产品科技来服务过滤市场，既提供合成纤维产品，又提供玻璃纤维产品。其中，合成纤维产品包括聚酯纺粘（PET），丙纶熔喷（PP），聚酯熔喷(PBT)等。玻璃纤维产品涵盖玻纤空气滤料、玻纤纱和超细玻璃纤维。多样化的产品组合允许灵活的设计和定制解决方案，以满足现有市场和新兴市场的不同需求。更多详情请访问该公司网站：www.jm.com。

俊富集团

2000年3月，俊富集团与香港天乙实业有限公司合资兴办了山东俊富无纺布有限公司。经过16年的发展，目前该公司已从成立伊始的1条生产线发展为拥有7条熔喷生产线、4条纺粘生产线、1条SMS纺熔复合生产线、1条纺熔后整理生产线的专一无纺布研发、生产企业。该公司产品畅销海内外，被广泛应用于过滤材料、医疗、防护、农业、家纺、建筑业等领域，产品质量、企业信誉受到国内外用户的一致好评。

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再升科技

再升科技成立于2007年，是国家高新技术企业，2015年1月在上海证券交易所挂牌上市，股票代码603601，该公司专注于超细纤维的研究、制造和深度开发应用，已形成较完备的自主知识产权保护体系和独特的商业运营模式。在细分市场中取得领先地位和国际品牌知名度。

该公司致力于“高效节能”和“洁净空气”的双主业发展模式，同时兼顾外延式发展，确立百亿级产值体系目标。在“高效节能”方面，为高档住宅、冰箱冷库、冷链物流、汽车节能、飞机保温等产业链应用服务，开拓巨大的节能市场。在“洁净空气”方面，以提供洁净空气解决方案和配套高端装备为己任，以核心过滤吸附材料为依托，打造空气行业制高点，服务工业、军事、商用、医用和住宅的洁净空间。

石家庄辰泰

石家庄辰泰滤纸有限公司有20多年滤纸生产经验，现已发展成为集科研、生产、销售为一体的行业龙头企业。该公司产品包括空气滤纸、机油滤纸、燃油滤纸、空调滤纸、燃机滤纸、除尘滤纸等不同的应用领域。该公司一直在不断努力成为滤纸行业的专家，会一直保持高昂的激情发展成为先进的环保型企业。

温州新宇

温州新宇无纺布有限公司是专业从事化学（泡沫浸渍）粘合法，气流成网法及其无纺衬布的生产企业。目前年生产和销售各类无纺布及其制品6000吨以上，该公司主要产品有：过滤材料、电缆包布无纺布、卫生材料、绣花衬、印花抹布、撒粉衬、浆点衬、双点衬等。该公司具备一套完备的质量控制体系，并通过ISO9001:2000质量认证体系。

上海峰晟

上海峰晟机械设备有限公司成立于1994年5月，是专业生产滤清器制造设备、空气过滤器净化和测试设备的企业。该公司致力于过滤器设备的研发，除了国内有300多家用户之外，产品销往英、美、法、德、俄罗斯、日本等65个国家和地区，该公司生产的过滤器检测设备在国家和省级检测中心多次中标。

邯郸恒永

邯郸恒永防护洁净用品有限公司，始创于1989年，是一家集研发、生产、销售各种空气过滤材料、防护口罩和防护服于一体的综合性企业。该公司注册资金1亿元，占地266亩，员工800多人，产品销往全球40多个国家。

广州三立

广州三立无纺布有限公司专业生产汽车空气过滤材料、汽车空调（活性炭）空气过滤材料、内燃机燃油过滤材料、内燃机机油过滤材料、粉末涂装粉尘过滤材料、洁净室空气过滤材料等。公司规范的生产管理、自动化的生产设备，确保了产品质量的稳定一致。三立公司开发生产的产品，大多应用于国内外知名的、技术一流的汽车、工程机械及工业设备。作为技术驱动型企业，三立公司致力于通过不断创新的研发为客户提供最佳的问题解决方案。规范的生产管理、稳定的产品质量、完善的售后服务，为三立公司赢得了中外市场，赢得了社会各界人士的赞誉和信赖。

广东欣涛

广东欣涛新材料科技股份有限公司是具有20余年专业从事环保型热熔粘合剂（热熔胶）研发、生产和销售的国家高新技术企业。产品应用于汽车空气滤清器、高效空气过滤器（HEPA）、空气净化机及吸尘器等空气过滤器。产品具有无气味、耐高温、可发泡及360° 弯折等特性。

杭州菲特

杭州菲特设备制造有限公司位于杭州市下城区华丰路2号。有着二十余年滤芯折叠机械的制造经验，专业从事各种滤器折叠机械的研制和制造，

（>>>下转48页）

市场动态

安徽金春非织材料股份有限公司以创新驱动发展纪实

金秋时节，中国技术市场协会非织造材料专委会王延熹名誉会长、向阳会长及张波秘书长一行应邀访问了安徽金春无纺布股份有限公司。该公司的曹松亭总经理等领导接待并安排了参观并回答了协会领导关心的问题。金春无纺人以创新驱动发展、快速崛起、先进的设备与管理给人们留下了深刻的印象。下午协会代表团还参观了滁州琅琊经济开发区。滁州琅琊区领导会见了代表团一行，希望在琅琊区非织材料产业链建设中得到协会的大力支持。

安徽金春无纺布股份有限公司于2011年7月21日成立，注册资本6800万元，该公司位于安徽省滁州市琅琊经济开发区南京北218号，占地面积20万平方米，项目规划水刺生产线8条，目前已经投产4条生产线，并于2015年12月25日新三版挂牌上市（证券代码：835140），该公司主要致力于水刺和热风非织材料的生产、研发、销售及其制品的开发。

生产设备

水刺非织材料生产设备

目前已经先后建成4条水刺生产线，2011年7月正式投产第一条线，设备采购于郑州纺织机械股份有限公司，该生产线主要生产大珍珠纹型、高克重（55g-140g）、革基布等全交叉水刺非织材料、皮革、医疗材料、过滤材料、包装材料等。

第二条生产线投产于2012年3月，为半进口、半交叉生产线，规格以平纹、小珍珠、22目网孔为主，年产量达到3600吨。主要用于生产湿巾、衬布以及一些差异化产品为主。

2014年3月该公司投产了第三条生产线-全进口的半交叉水刺生产线，年产量将近4000吨，主要用于生产高档的卫生材料、革基布等所用水刺无纺材料。

第四条生产线投产于2014年9月，主要针对国内外卫生湿巾市场，该生产线是全欧洲进口双梳理、直铺高速水刺生产线，配套有意大利Autefa开清、高速梳理机、法国Andritz高速水刺、烘干机，意大利Acelli卷绕机，幅宽3.5米，生产速度可达300m/min，年产水刺非织材料1.5万吨。该线是技术配套先进、产能高的水刺直铺线，达到了高速高产、产品质量高的目标。

第5、6条生产线正在准备投产，预计2016年年底均可投入生产，第7、8条生产线的产品在2018之前也可以全部投入市场，届时该公司水刺非织材料产能将达到50000吨，项目总投资超过10亿人民币，将成为规模宏大且具有影响力的水刺非织材料专业生产基地。

水刺产品展示

水刺非织材料时尚环保、用途广泛、美观大方，图案和款式多样化，且质轻、可循环再用，被国际公认为保护地球生态的环保产品。

金春公司主要生产大圆点、小圆点、网孔、平纹四类30-200g/m^{2}之间的各种规格水刺产品。

擦拭巾

家庭擦拭巾（克重范围：40gsm-90gsm；纹路：平纹、网孔等纹路；原材料配比：涤纶和粘胶；性能和特性：一般多采用全涤纶加亲水剂规格的产品，具有良好的吸水性，同时性价比高，特别是网孔构造的产品，具有良好的吸尘力，是家庭擦拭巾的理想选材之一。）

面膜、湿巾

面膜（克重范围：40gsm-70gsm；纹路：平纹；原材料配比：涤纶和粘胶；性能和特性：粘胶配比一般高于40%以上，可吸收保存面膜精华液，布面平整柔软，与皮肤具有良好的吸附性和敷贴感。）

面膜

湿巾

湿巾（克重范围：30gsm-65gsm；纹路：平纹、小珍珠纹、大珍珠纹、网孔等纹路；原材料配比：涤纶和粘胶；性能和特性：手感舒适、吸液性能好、不含甲醛重金属等有害物质，产品的特别纹路又可增加产

品的美观性，对消费者有很强的吸引力。）

汽车内饰、过滤材料

过滤材料（克重范围：75gsm-120gsm；纹路：平纹；原材料配比：涤纶；性能和特性：采用主要原料有涤纶、树脂粘合剂、亲水剂等原料，主要应用于空气过滤材料，水过滤材料，此种非织材料具有很强的拉力，使用寿命长，空气阻力小，过滤效率高。）

汽车内饰（克重范围：40gsm-160gsm；纹路：平纹；原材料配比：涤纶；性能和特性：根据不同汽车内饰要求，对拉力进行合理调节，布面厚度也可以根据具体要求进行调节，不含任何甲醛，抗老化、抗日照，使用寿命跟汽车寿命相仿，还可以根据客户具体要求，添加拒水、拒油、防火等原料。）

汽车内饰

医疗卫生水刺非织产品

医用床单、手术服等（克重范围：40gsm-80gsm；原材料配比：涤纶和粘胶；性能和特性：质地均匀，透气性好，强力好，不容易形变，不含任何刺激性成分，微生物标准严格按照欧盟指标进行控制。）

医用床单、手术服

热风非织材料

金春公司2016年4月正式启动热风非织材料项目，专注于个人卫生护理用非织造材料的生产及开发，预计投资约3亿人民币，引进世界领先的专业热风非织材料生产设备，建设10条热风非织材料生产线基地，集研发、生产、销售为一体，年产值将达3.5亿人民币。该公司按照卫生材料生产要求，厂房按无尘车间标准建设，并通过ISO9001质量体系认证，以确保产品品质。生产线采用世界领先宽幅，双梳理热风非织材料生产线，双梳理生产线可采用不同纤维生产梯度面层非织材料，赋予热风非织材料更多的性能，给客户提供更多优质的产品。

热风非织造生产设备

目前已确定2条生产线于2016年6月开始安装，预计2017年年初可以投产，产品主要用于妇婴卫生用品（尿不湿、女性卫生用品）、手术衣帽、口罩、复合基布、服装材料等生活卫生用品。

热风非织材料应用：尿不湿、卫生巾

婴儿尿不湿和卫生巾（克重范围：18gsm-55gsm；纹路：平纹、珍珠、网孔；原材料配比：ES纤维；性能和特性：严格按照国家微生物检测指标进行生产，布面柔软，吸水性较好，不刺激婴儿皮肤，让消费者放心使用。）

检测设备及实验室

该公司不断加大对产品质量检测的投入，生产线安装有德国疵点检测和金属检测设备，并引进专业的灭蚊公司对生产现场和外围环境进行灭蚊虫，车间内部加装灭蚊装置，外部实施灭虫措施，杜绝产品蚊虫污染。

产品质量为立足之本，该公司先后通过ISO9001质量管理体系，除配置常规的质量检测设备，还建立了微生物生化检验室，对生产过程的水、原辅材料、人员、空气进行微生物检测与控制。产品严格执行国家和行业标准。

目前该公司的产品已销往国内各省市的知名客户，包括金红叶APP、恒安纸业、重庆珍爱等卫生用品公司，并远销韩国、日本、东南亚、巴西及欧美市场，优良的产品质量、优质的服务和良好的声誉，赢得国内外客户广泛赞誉，产品供不应求。

企业精神：“勇于开拓，尽心服务，追求卓越”。该公司引进国际先进技术设备、优化管理程序，坚持技术创新，引进国内优秀技术管理人才。

安徽金春无纺布股份有限公司一直致力于

市场动态

科技创新，在不断吸收国际先进技术的基础上对非织材料进行持续提升，并获得多项专利。研发出更优质的非织材料，为客户提供更完善的产品应用解决方案。

Reicofil高蓬松非织造技术

新技术提升了卫生材料的柔软度，在包装材料上具有潜能

非织造布机械专业制造商Reicofil已开发出新的非织造技术，改善了其在卫生材料领域的应用同时开拓进入新的市场领域。该公司开发的高蓬松纺粘非织造技术，提供了独特的用于制造厚且柔软非织造材料的可能性。根据Michael Maas，Reicofil业务的研发主管所说，这种厚且柔软的非织造材料可以为我们的客户开启新的应用领域。

卫生用品的市场，受青睐的“蓬松且柔软的非织造材料”需求上升，这一趋势由亚洲推动并且影响了欧洲和美国的尿裤市场，在中档产品被高端产品逐渐挤出的市场领域，这种柔软手感在应用中扮演着日益重要的角色，尤其是顶层和底层材料。Maas评论说：在未来，我们的客户必须为全球提供柔软的非织造材料。及早的开发和创新对企业的业务至关重要。在几年前我们已经开始研发基于柔软材料的新技术。今天，我们能够为不同需求的客户提供多种解决方案。

大多非织造材料通常由自身卷曲的纤维构成，然而，Reicofil技术采用两种不同材料的并列结构长丝，然后经过热风粘合或特殊的雕刻轧辊热轧粘合。高端尿裤的顶层和底层就可以使用这一优质的非织造材料。“我们的技术是可靠、高效的”Maas说，“它提供了生产成本和产品性能的完美平衡。”

3D非织造材料工艺开发正在“Reicofil技术中心”进行。“Reicofil技术中心”是世界上最大的纺粘非织造材料研发中心。在特罗斯多夫，Reicofil用三条高技术生产线开展研究并和客户、院校和其他合作伙伴展开密切的合作。

在其他地方如散装货物的包装，Reicofil看到了他们超柔软非织造材料潜在的应用领域。公司的“Rethinking Packaging”项目包括解决用非织造材料来包装货物。该研究团队已经开发出了非织造材料水泥袋样品。“想象一下，这个材料可以解决任何散装货物的包装，对于非织造材料在包装行业的应用将有多么巨大的潜力。”Maas补充说，“我们目前研究的产品具有优越的性能、质轻和无与伦比的价格优势，将完全取代纸袋和聚丙烯编织袋”。

(资料来源:“www.nonwovens-industry.com”)

兰精将提供回收棉花制成的纤维

成为这个星球上最生态的纤维素纤维

兰精公司正在推出一种新的天丝纤维，采用废弃的棉织物制成，以推动纺织工业“循环经济”的解决方案。新一代的莱赛尔纤维将是这个星球上最生态的纤维素纤维，它将棉花废料回收和兰精开创性的天丝纤维相结合并规模化生产。

通过开发利用废弃棉织物生产天丝纤维是兰精公司在纺织行业创新道路上实现的又一里程碑。兰精是全球第一个利用回收材料商业化生产纤维素纤维的制造商。天丝，作为环境友好型纤维已经取得市场的成功。现在，利用天然资源制造最可持续发展的纤维，获得了另一个重要的里程碑。利用废弃的棉织物制造天丝纤维将进一步塑造兰精公司环保技术领导者的形象，并为推动纺织工业朝着废弃物回收利用的循环经济方向发展提供了新的思路。

“对于兰精，服装行业发展循环经济模式确保了公司的业务发展，同时又避免了生态资源消耗的压力。它减少了从自然界提取原生资源的需求，减小了对生态环境的影响。”兰精公司的CCO Robert van de Kerkhof说。

兰精公司因为最环保的生产工艺（生产过程达到99.7%闭环循环和使用生物能源），已经被授予欧盟奖。来自可持续林业资源的可再生原材料—木头是天丝的另一个关键优势。最新一代的天丝纤维结合了最好的两个技术：循环利用废弃棉织物和最生态的天丝技术。这创造了这个星球上最生态的纤维素纤维。回收的废弃棉织物添加到天丝纤维中为服装行业提供了一种实用的解决方案。

(资料来源:“www.nonwovens-industry.com”)

市场动态

杜邦与陶氏化学合并获得核准

股东同意交易；将于2016年底完成

杜邦和陶氏化学公司股东们投票同意了所有必要的股东建议书，两家公司完成对等合并。这是一个重要的里程碑，随后将寻求分成三个高度集中、独立的子公司。在获得包括监管部门批准等惯例的成交条件后，该合并交易预期在2016下半年完成。

陶氏化学公司董事长兼首席执行官，Andrew N. Liveris说：“陶氏和杜邦股东们以压倒性的支持批准这一具有历史意义的合并交易是一个明证，证明了陶氏杜邦所代表的引人注目的价值定位和提高的股东利益，今天是这两个标志性企业合并的关键一步，随后拟分离成三个行业领先的，具有自主技术和以创新为基础的科技公司，这能够为所有的股东提供重大的利益。”

杜邦主席和首席执行官，Ed Breen补充说：“我们很高兴能获得股东的大力支持，这是我们两家公司合并及寻求分为三个独立分公司的一个重要里程碑。我们现在正专注于走向完成合并交易的下一个重要步骤，包括相关司法管辖区的监管者之间的工作。我们相信，这次合并将为股东创造长期的稳定的利益，为客户提供卓越的解决方案以及选择。”

杜邦和陶氏表示，公司合并后将进行整合，寻求拆分成专注于农业、材料、特种产品的三家独立的上市公司。这将要经过陶氏杜邦公司董事会的同意及相关监管部门的批准。这三家公司的成立有望在合并结束后18-24个月完成。

(资料来源: “www.nonwovens-industry.com”)

庄臣确定收购Babyganics

Babyganics公司致力于家用产品包括尿布和擦巾

VMG Partners是一家私募股权投资公司，专门从事投资和创建中低端市场的品牌消费品企业，公司将Babyganics出售给了庄臣，Babyganics是一个高速成长的儿童家庭用品及个人护理的品牌，Babyganics公司成立于2004年，是一个开创性生活方式的品牌，提供以家庭为中心的产品包括护肤、沐浴护理、防晒、驱虫、口腔护理、手部卫生、表面清洁剂、洗衣用品、餐具洗涤剂、尿布和擦拭巾。

VMG的总经理Kara Roell说，“Babyganics品牌已经成为一个真正的领军式的品牌，致力于当代父母和孩子提供独特的有创新性产品。VMG极为珍惜与Babyganics的领导人Kevin Schwartz和Keith Garber建立的合作关系，也非常珍惜Babyganics整个团队在重新定义什么才是真正对宝宝好的产品方面的合作，创新以及出色的表现。”

Babyganics的创始人和首席执行官，Schwartz先生评论，“VMG的伙伴关系为我们前进的每一步上都提供了正确的方式，使我们的品牌成长和兴旺，我们对我们之前实现的一切感到很高兴。我们展望未来，我们整个团队为Babyganics与庄臣的下一个阶段感到非常兴奋。”

(资料来源: “www.nonwovens-industry.com”)

Ahlstrom抓住建筑和风电业务

涉及欧文斯科宁的交易被德国监管部门否决

由于德国监管部门的否决，欧文斯科宁收购奥斯龙建筑和风电业务的合同已经解约。奥斯龙公司将继续像之前那样经营和发展建筑和风电业务，正如所报道的它将作为过滤和高性能产品部门的一部分。在2015年，建筑和风电业务的净销售额达到8350万欧元和调整后的营业利润为590万欧元。2016年一月到三月，净销售额达2350万欧元和调整后的营业利润为210万欧元。

奥斯龙总裁和首席执行官Marco Levi说，“在2015年，欧文斯科宁找到我们协商收购建筑和风电业务一块，我们也和他们进行了独家谈判。在遭德国竞争局意想不到的否决之后，经过慎重考虑，我们决定保留这块业务，作为奥斯龙公司完整的创新纤维基材料组合的一部分。建筑和风电业务一块的表现以及整个奥斯龙集团的表现，自谈判开始明显改善，这一部分业务是对我们公司今天的盈利能力和现金流作出了积极的贡献。我们全心致力于为我们的客户服务并增强这一部分的竞争地位。该业务将有助于我们调整后的营业利润率在2018年以前，超过8%以上和维持杠杆系数100%以下的战略目标。”

交易是在一月宣布；德国竞争局在四月初，对计划中的交易展开了第二阶段的调查。

(资料来源: “www.nonwovens-industry.com”)

总经理Johannes Haep (右) 和销售总裁Jean-Philippe Dumon先生

安德里茨 – 新技术、新纤维参数

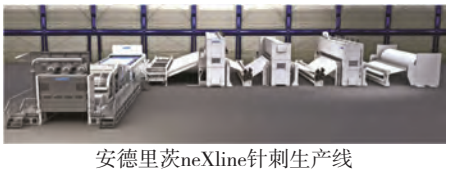
干法成网或湿法成网无纺布、纺粘、水刺或者针刺：安德里茨无纺布提供从毛网形成系统到后整理之综合解决方案

近日，在国际贸易展意大利米兰的ITMA2015和美国波士顿的IDEA都能看到这些专家们的身影。以下的报告，将带领我们读者到埃尔伯夫这一法国小镇—国际技术集团安德里茨子公司阿斯兰-蒂博公司的所在地看看。

Avr 问及了阿斯兰-蒂博总经理Johannnes Haep 和阿斯兰-蒂博销售总裁Jean Philippe 先生关于新技术、克重和纤维参数的问题。

贵公司在梳理、交叉铺网和针刺工艺的核心竞争力是什么?

Johannes Haep: 安德里茨无纺布遵循以各种生产工艺和开发综合了各种技术的解决方案为原则造福着他的客户。阿斯兰-蒂博是干法成网工艺的技术中心，它包括了梳理机、交叉铺网机和粘合技术特别是针刺技术的使用。基于多年来的经验和密集的市场研究，安德里茨设计的方案旨在和他的客户们紧密合作以进一步提高纤维均匀度，通过增加纤维性能或开发系统以优化生产率以及维护需求最小化带给无纺布纤网附加值。多年以来，它引导产生了许多杰出创新，在此仅举几例，比如eXcelle TT梳理机的设计、TCF-X 喂棉箱能高产生产长纤维、众所周知的ProDyn重量匀整系统以及Isolayer 牵伸控制。



安德里茨neXline针刺生产线

neXline 针刺技术是如何被整合到埃尔伯夫技术中心的?

Jean-Philippe Dumon: 此项技术配置于工业规模的neXline针刺eXcelle试产线。它结合了所有为针刺市场开发的最先进技术。我们的技术中心可用于试验、产品开发、市场测试和技术培训，同时也提供专家支持服务。对于无纺布生产商，这是个经历先进技术、目睹采用安德里茨生产线能达到的织物性能以评估投资和维修需求的绝好机会。我们主生产线的概念非常灵活因为它能结合不同类型的纤维原材料。在横向（CD）基重CV值达到≤3%的精度情况下，TCF-X喂棉箱能够处理短纤和长纤，喂入eXcelle双梳理机处理纤维的长度可达120毫米。可使用或者断开ProDyn和Isolayer技术连接以评估他们的输入，并且在粘合工艺中无纺布和纺织品可以在不同的步骤中被导入。针刺效果亦可以通过不同的工艺得以实现，双面针刺或者仅是单面针刺。多种多样的针刺图案和针刺类型适合于模拟工业条件。

依据抗张强度、延伸率等等，粘结工艺可以结合带毛网牵伸和/或毡牵伸的针刺修正织物的性能。我们实验室的测试设备缩短了设备调试时间。整条生产线配置了“智能” 工业4.0产品的SCADA系统。

位于安德里茨阿斯兰–蒂博技术中心的针刺试验生产线

这项新技术的主要技术以及工艺特点是什么?

Jean-Philippe Dumon: 下面我们将总结现代安德里茨neXline针刺生产线的关键部件：大于80%的最新安德里茨neXline 针刺生产线都包含了新的 TCF-X喂棉箱。它对于相关的纤维类型和长度范围都非常灵活并且产能高，通常2.5米工作门幅的生产线可达1200公斤/小时。eXcelle双梳理机能生产非常匀整的纤网。如今而言这是个相当重要的因素，因为大多数客户都在寻找生产最少交叉铺网折叠次数的轻质织物设备。

ProDyn重量检测系统对于新生产线而言仍旧是一个“必须拥有”的设备。它的能力已全世界闻名，因为它优化了重量分布并且节约了纤维。它是一个控制密闭环，控制着纤维送入梳理机入口的数量以及交叉铺网的速度，年复一年为生产商节约成本。

Isolayer的牵伸控制提高了生产线生产均匀织物的能力，即使是在采用两折交叉铺网时。它能消耗交叉铺网输送帘处的速度

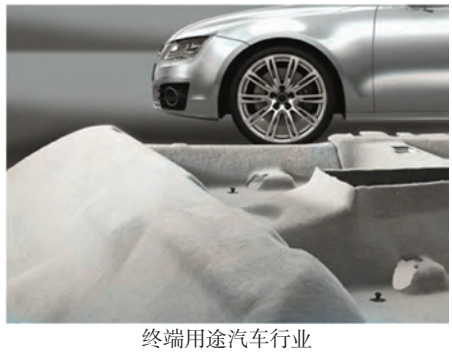
市场动态

差异，提高重叠程度，且运行速度更快。Isolayer 在整个横幅上产生了更多均衡的收缩效果，从而给最终产品带来了更多的附加值。

从A.30到A.50针刺机它包含了众多可选解决方案，比如各种符合市场需求的最大速度和植针密度。多年来，为了更高的生产量，市场需求已提高了植针要求，然而大多数的生产线针刺数量依旧相同。为具有更强的力度，我们的针刺机已重新设计而且他们的稳健度已稳稳获得市场认可。这些针刺机的设计使得不必要的牵伸和收缩达到了最小化；它允许高度倾斜而对纤网的匀整性几乎不产生任何影响，任意的针刺图案为无纺布生产商提供了高度的灵活性。

这项技术的主要产品领域是什么?

Johannes Haep: 以上所提的安德里茨解决方案几乎能普遍使用于所有干法成网产品。目前，汽车、土工布、滤材、工业和民用的最终应用特别活跃。人造革、寝具、抹布等也能够从这些技术中受益。



终端用途汽车行业

来自安德里茨阿斯兰–蒂博的工业针刺生产线

请为我们概述下aXcess和eXcelle生产线设备的主要参数。

Johannes Haep: neXline针刺aXcess 生产线完美适合那些产能高达4500吨/年的生产商进入无纺布市场。这里的aXcess产品是为中等产能设计的。工艺工程师根据他们生产线上的技术和产能选择和结合了相应单机。一种针对最前沿针刺产品的市场趋势是提供高产能生产线。在这个领域，我们通过结合梳理设备和高速交叉铺网机D.630能提供杰出解决方案。这种针刺生产线配置的产能可高达12600吨/年。

ProDyn系统在市场中处于怎样的地位?

Jean-Philippe Dumon: ProDyn系统是市场的领导者，因它确保了最终织物的匀整性。交叉铺网生产线提供了自动调节密闭系统，在生产线最末端安置了一个用于自我调节梳理机输出速度的重量控制检测装置。这个系统的好处在于产品克重的质量以及节省了纤维。

根据纤维参数和产品克重，纵向和横向区域克重可能的均匀度参数百分比是多少?

Jean-Philippe Dumon: ProDyn 纤网动态矫正效率基本上不依据纤维的类型、纤维的重量和生产速度。大多数客户想要拥有平衡的MD/CD 力度比。对于轻质到中等克重织物，在粘合过程中通常工艺总需要高百分比的牵伸。对于这种重量的变形，ProDyn 第一个做出响应。为了使织物畸形最小化粘合设备的设计也是重要的。方法上牵伸是关键点。你可以在织物中创建大的云状物或采用相同的整体整个拉伸百分比来获得漂亮的织物。毛网牵伸、预针刺喂入系统比如SFD、预针刺地带的设计、针刺机上喂入和输送重压以及毛毡牵伸装置的采用都是值得考虑的许多参数。

在生产线控制系统中客户能找到的新的解决方案是什么?

Johannes Haep: SCADA监测系统能通过产生显示所有参数的生产报告，帮助生产经理提高织物生产线的性能。这种情况下，菜单能够快速重复生产，同时操作者能获得相关的即时生产信息。

用工业4.0怎么才能够将设备系统整合入在线自动工厂?

Johannes Haep: 系统是为了整合入全自动工厂而根据工业4.0概念设计的。它持续控制着生产线参数并创建最佳的配置以提高生产。它保证了操作顺利、优化工艺和收益贡献最大化，提高了工厂利润。

自动设备是怎样监测、维护和提供服务的?

Johannes Haep: 安德里茨承诺确保我们的客户得到即时可靠的服务以保证设备性能处于巅峰状态。对于备品备件，销售团队会随时待命帮助生产商做出正确选择。和专业的供应链链接，它能确保快速和有效的响应您的需求。因为安德里茨希望给予他的客户全球全时段24/7（7天24小时）热线服务。

市场趋势

TFP公司推出新型Supacool产品

Supacool低温保冷薄毡为实现超级绝热提供了高性价比的选择

Technical Fibre Products（TFP）公司已宣布了两项新开发成果，Supacool系列轻质低温保冷薄毡；推出了一种新型产品，并成功地获得了关键行业标准的认证。TFP公司的Supacool新品是一个轻质超细玻纤薄毡贴合在铝箔上。这种材料是TFP公司开发的第一款贴合型Supacool产品，构成一种可嵌入的多层绝热或超级绝热基材，例如嵌入一个低温容器的内外壁之间。这种新的混合supacool新品（58111A）已开发成功，其优势在于减少包装时间，同时提高热性能。使用这款材料的优点包括：隔层与反射层形成一体，减少了在单个产品中由于反射铝箔与低导电率的间隔层交替结合产生的热短路，以及在真空中由于没有粘合剂而产生的最小出气。

沿袭Supacool M，新Supacool材料已经成功获得了关键行业的标准认证，确认其适合用于液态氧容器的生产。这个标准达到了液态氧冲击试验欧盟EN 1797标准和根据NF EN ISO 1114-3标准氧气自然试验，证明了使用这款材料，能节省大量的时间。

TFP公司的高性能和轻质Supacool低温保冷薄毡提供了一个实现超级绝热的高性价比材料。Supacool是范围广泛的先进技术非织造材料的一种，它能为一系列的具有挑战性的难题提供了解决方案，从航空航天和国防到汽车、能源、建筑和医疗，遍布各工业领域。TFP公司材料典型应用于辅助制造并提供高质量，功能复合材料的表面处理，以及提供防火方案，高温绝热和发电。

(资源来源: “www.nonwovens-industry.com”)

印度尿裤市场的最新研究

Research and Markets（著名市场调查公司）在他们提供的报告中增加了“印度尿裤市场概述”。在过去的五年，印度尿裤市场的复合年增长率为22.23%。

2014年，印度城市的婴儿尿裤市场复合年增长率为19.99%，而印度农村地区婴儿尿裤市场的复合年增长率远高于城镇地区。根据年龄，报告将印度尿裤市场分为婴儿尿裤市场和成人尿裤市场。婴儿尿裤是尿裤市场的主要组成类别。经预测，由于医疗标准的提高，印度成人尿裤市场有望显著的增长。然而，使用成人尿裤的社会、经济上的制约正阻碍着市场的成长。

宝洁公司的帮宝适系列在整个印度尿裤行业占主导地位，其次是好奇和妈咪宝贝。宝洁公司缺乏创新，追求更高的边际利润，采用比竞争对手更激进的策略来增加他们的市场份额的方式，预计在未来将会使该品牌的市场份额减少。约两年前，妈咪宝贝尿裤的生产商—日本尤妮佳公司，在婴儿尿裤领域超越了金佰利公司。在婴儿尿裤领域，帮宝适、妈咪宝贝和好奇占据85%以上的市场份额，而在成人尿裤领域，Nobel Hygiene和Actifit则占主导地位。尿裤大致分为两种类型，即一次性纸尿裤和布尿裤。一次性纸尿裤占据最大的市场份额，生产商在产品的研究和开发中正投入越来越多的资金。过去的几年里，由于一些家庭寻求自然时尚为宝宝换尿裤的方式，时尚布质尿裤在全球范围形成快速发展的趋势。2014年，布质尿裤的销量额为1400万卢比，由于环保效益，其销量额预计仍将处于上升阶段。其它类型的尿裤包括游泳裤和训练裤，都有印度细分市场的份额。

(资料来源: “www.nonwovens-industry.com”)

日本制纸进入中国市场

日本尿裤生产商在中国寻求市场增长

据日经亚洲观察发表的一份报告，日本制纸工业正计划进入中国尿裤市场。这家日本公司正与数家本地相关企业谈判，期望最早在2017年4月，以原始设备制造商的身份，从日本的扩建工厂开始向中国供应尿裤。

由于中国改变了生育政策，允许夫妻有两个孩子，使中国尿裤市场的热情与日俱增，这一转变提高了中国尿裤市场的前景，尤其是与日本市场相比，其低生育率迫使国内外尿裤制造商激烈争夺市场份额。

日本制纸新厂房建在其京都工厂位于福知山市，将生产婴儿尿裤和老年失禁产品。这些新生产线将于明年中完成，每年将能生产近1亿片产品。公司在该项目中投资约4200万美元，希望到2017年其医疗保健

市场趋势

部门的销售额翻番，达到200亿日元。

高品质，国外制造的尿裤在中国大受青睐

日本花王和尤妮佳以及总部位于美国的宝洁公司都获得了相当的成功。与此同时，投资不断。日本王子制纸集团也在准备扩大其市场存在，其建立了一个新的日本基地开始运作，预计将主要用于向中国出口，并且在未来两到三年内，花王计划花费300亿日元，用以提高其主打的花王妙而舒尿裤的产量。

（资料来源:“www.nonwovens-industry.com”）

克拉克集团收购滤袋和滤筒制造商

TDC制造公司销售收入为1700万美元

克拉克工业空气部门收购了TDC过滤器制造公司业务和相关资产，TDC是一家美国领先的打褶过滤袋、集尘滤筒和燃气轮机空气过滤器制造商和供应商，收购价格为1100万美元。2015年，TDC的销售额约为1700万美元。根据交易条款，克拉克工业空气公司将承担TDC未结的采购订单及将TDC的运营资产纳入密苏里州斯莱特工厂的费用。克拉克集团公司不会获得任何不动产，不承担与雇员相关的责任。该交易预期对克拉克集团公司2016年收益不会有重大增值或稀释。

克拉克集团公司董事长、总裁兼首席执行官克里斯托弗L•康威评论说：“TDC产品线在工业空气过滤领域得到广泛认可和尊重，特别是OEM客户，这对于我们现有的BHA业务将是一个强有力的补充。如此结合经营的协同效应，我们期望通过斯莱特工厂实现销量增长，使此次收购对于克拉克工业空气公司和克拉克集团公司都具有吸引力的。”克拉克工业空气公司负责人基思•怀特同意这种说法，并说：“我们很高兴看到此次收购，因为它扩展了目标市场的分销渠道，对接我们的BHA售后市场过滤业务，并建立在我们的制造实力和出色的技术上”。

总部设在田纳西州的富兰克林的克拉克集团公司是一个多元化营销和制造商，其产品包括：车用、工业用及环保行业的过滤产品。纽约证券交易所上市公司。

（资料来源:“www.nonwovens-industry.com”）

投资集团收购阿尔及利亚尿布生产商的股份

Abraaj集团投资尿裤及女性用品的制造商CEPRO

Abraaj集团是在全球成长市场领头的投资运营商，收购了阿尔及利亚地区婴儿尿布和女性卫生护垫的领先制造商和分销商Cellulose Processing（Cepro）公司的少数重要股权。此次是通过Abraaj的第二代北非基金进行收购的。

该基金始于2003年，由Mehri家族中的Djamel Mehri创立，该企业是一个杰出的多元化家族企业集团。从市场份额来看，CEPRO已经发展成为阿尔及利亚地区婴儿尿布市场上的第四大生产商。

Abraaj集团是Mehri家族的合作伙伴，通过一个新的品牌战略和扩大在阿尔及利亚和撒哈拉沙漠以南的非洲地区分销新渠道，该集团希望利用其重要的投资专长，提高生产能力和效率，使得Cepro产品多样化并且加强营销工作。

Abraaj集团合作伙伴和Mena区域负责人Ahmed Badreldin说：“对于我们来说，CEPRO是一位令人兴奋的投资伙伴。由于市场的刚性需求，人口的快速增长和中产阶级的崛起，可以让非洲的消费者直接受益。”同时他还补充，“我们将运用我们全球客户部门的经验，通过创造就业机会，发展工业与投资，知识转移等方式去创造本地价值。我们期待着与Mehri家族的密切合作，该家族是阿尔及利亚最成熟的创业团体之一，从而进一步加强CEPRO的市场地位和重点在非洲撒哈拉以南地区扩大市场。”

CEPRO创始人兼董事长Djamel Mehri补充说：“在过去的十年中，我们已经发展成为阿尔及利亚的一个本土尿布生产商，我们相信这次机会对于Cepro来说，是扩大在全国及地区的印记，为我们的客户提供最先进的产品。”

“我们的团队深知Abraaj集团在北非具有丰富的经验和其在全球增长的市场中发展快速消费品业务的成功轨迹。同时我们对于完成下一阶段的增长非常自信，并且期

市场趋势

待一次成功的合作。”Mehri说。
(资源来源: “www.nonwovens-industry.com”)

新型复合材料

非织造材料与其他材料组合提升其在各市场领域的优势

非织造材料在复合材料市场中扮演着一个怎样的角色，取决于其在市场上的最终用途。从汽车产品到屋顶材料再到成人失禁产品，非织造材料正与其他一系列材料复合形成一种具有柔韧性、低廉性以及质轻等优点的产品。非织造材料与其他技术或不同的非织造材料之间的组合不断拓宽着该行业的新领域。下面介绍非织造材料在复合材料市场的最新一轮的发展情况。

R3 Composites公司转入非织造材料生产

模压和复合产品生产商R3 Composites已经建立了一个非织造材料运营公司，这将很大程度上满足其自身复合材料的业务，该公司为汽车产品市场提供了注塑成型材料。

这家名为Carver Non-Woven Technologies的公司，总部设在印地安那州弗里蒙特的一个重新整修的工厂，于七月开始商业化生产。

“非织造工艺虽算不上是什么专属技术但也有其独特之处”，总裁马克•格利登说，他们的新公司将专注于研究五种材料共混的产品，他认为：“我们能够把不同的材料均匀地混合在一起，这将使我们与众不同。我们已经提出了一个天然纤维碳化系列的基材，提供质轻且具备良好机械性能的产品。这类产品每平方米克重较低，却有着同类共混物2至3倍的机械性能。”

这是R3公司首次将非织造材料应用于复合材料结构，公司决定制造属于他们自己的产品，这将有助于他们实现兼具柔韧性和轻量性产品，并能全程控制整个生产过程。

格利登对于从外部采购的非织造材料的质量存在一定的担忧，“你最终得到的产品重量可能与你要求的存在一定的差异”，他说：“±20%的差异在该行业是很常见的。而我们能够将该差异控制在±5%以内，这具有非常重大的意义。”当然，这增大了Carver公司的初始投资，但是格利登认为能够显著减轻产品的质量，增强产品的机械性能并能控制纤维开松工艺，数百万的投资是值得的。

“我们认为，我们的技术能够让人们更多地了解非织造材料，从而摒弃他们过去一直使用的传统材料”，格利登说：“在整个过程中，我们自始至终控制纤维的质量。我们知道非织造材料本质上是由纤维纠缠而成的，我们就确保这些纤维尽可能紧密地缠结在一起。”

门板是该项技术的一个关键性应用，这项技术使R3和Carver公司生产的产品只有600g/m^2，完全能够与上一代的1200g/m^{2}产品相匹敌。“从经济上考虑，非织造材料的普遍使用是一个非常聪明的举动”，非织材料咨询公司Indyco的总裁加里贝尔赛说，“灵活的构建纤维共混物及不同的基材叠合使其更具优势。”新的节能标准对汽车的设计提出了更高的要求，轻量化并具同样出色性能的产品研发显得极其关键。

“只有这些方法使客机的费用降低，要么从空气动力学的角度，要么从减轻质量的角度”，格利登说。R3和Carver公司的技术同样可应用于车上的其他地方，如车身底部的气动屏蔽装置。其他应用领域包括建筑、家具产品等。

Conwed Plastics提供各种塑料网产品

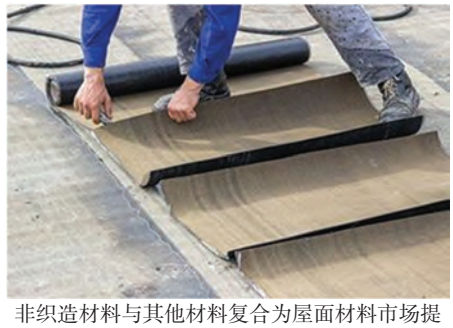
Conwed公司提供的挤塑网方便用户设计最先进的，最具柔韧性的高强复合材料。共挤复合网是一种多层挤塑网，不同的聚合物可以在同一网状结构中形成不同的层并具有一定的定向性。这是一种方形的网状结构，Conwed提供A/B，A/B/A，和A/B/C等多种层结构网。

Conwed的热熔增强网（Thermanet）将2个或多个基材合并在一起，改善了复合结构。增强网具有粘合性能可粘合、强化各种材料。为了达到严格的性能要求，该技术提供了广泛的产品配置，提供了功能化的设计需求，满足苛刻的性能要求并且可以复合各种材料。

市场趋势

Conwed的弹性网用于弹性非织造复合材料，生产成人失禁内衣裤的腰围和护围。根据产品的最终用途，非织造生产商，非织造制品生产商以及复合材料生产商可以生产带有胶膜、海绵、纸、薄膜、非织造材料、卫生纸及其他织物的复合产品，用于各类工业及消费领域。由于弹性网本身的多功能特点，使这些复合材料可提供良好的悬垂性、柔韧性、弹性以及弹性恢复等性能。

Chomarat和Norafin公司联合开发了新一代的屋面毡



非织造材料与其他材料复合为屋面材料市场提供解决方案

Chomarat与水刺生产商Norafin合作开发，推出一款新一代的增强屋面毡—Rotaflam Neo。Norafin号称是市场上唯一兼具玻璃纤维和聚酯优势的增强材料，并将网格布的性能（强度和尺寸稳定性）及非织造材料的性能（耐穿刺、防火和抗撕裂）结合为一体。

Rotaflam Neo组成是一层玻璃纤维纱和聚酯纤维纱交织的网格基布、非织造材料和玻璃纤维毡。非织造材料采用水刺工艺，保护了网格布的性能。得益于材料的本身性能，采用玻璃纤维和聚酯结合的网格布提供了两项优势，玻璃纤维增强了屋面毡在涂膜生产线上的稳定性，而聚酯保证其具有一定的伸长率和强度。

通过结合他们两家公司的技术优势，提高了增强材料性能的同时降低了涂膜的厚度，丝毫不惧防水材料市场的各种挑战。沥青重量的减少，大大降低了膜的生产成本。此外，生产Rotaflam Neo防水卷材通过了所有欧洲耐火测试（BROOF T1，T2，T3）。Rotaflam Neo提高了防水卷材的耐火性，也不需要添加化学添加剂，从而降低了对环境的影响。

杰斯曼公司复合材料业务瞄准许多应用领域

杰斯曼的复合板使用自己生产的非织造布，优化了产品的性能，提高了产品的质量和价值。材料的最外面是一层光洁的覆盖物，可涂上防护抵御各种元素，而较厚的非织造玻璃纤维毡作为次表面层覆盖蜂窝芯材。聚酯纺粘或玻璃纤维非织造材料也可作为被压缩的芯层，以最小的重量实现材料力学性能的增强。

该公司称，全球复合结构材料的需求正在迅速增长。杰斯曼公司正将这项技术用于风车叶片、汽车顶蓬、轻量化车身板材、成型部件和结构材料，卡车和拖车仪表板，办公场所的蜂窝隔音板以及船舶和铁路运输等方面。

Mogul Nonwovens公司

土耳其的Mogul Nonwovens公司为众多行业提供大量的复合材料产品。他们生产的宽度达160cm的PEVA（聚乙烯—醋酸乙烯酯）薄膜，可与非织造材料结合用于许多应用领域，如防尘盖、浴帘以及服装袋和医疗产品。

其医用涂层织物达到亲水、拒水和耐火水准。其PP / PE挤出涂层和叠层织物以Integrale品牌被市场化推广，其涵盖了纺粘/熔喷、夹心涂层、背面涂层以及与塑料、椰叶纤维和机织材料复合等多种技术。

最后要介绍的是Mogul的一种金属涂层的非织造布，Mogul在这一领域中提供PP和PET纺粘非织造材料以及SMS非织造材料。这些产品应用于包装、建筑业、农业产品以及绝缘材料。Allucoat材料有光反射特性，其最大宽度可以达到270cm，有各种克重可被选择。

（资料来源: “www.nonwovens-industry.com”）

台湾非织造材料工业

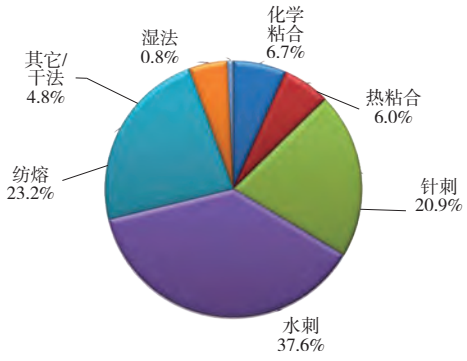
台湾非织造材料产量 (2008 – 2015)

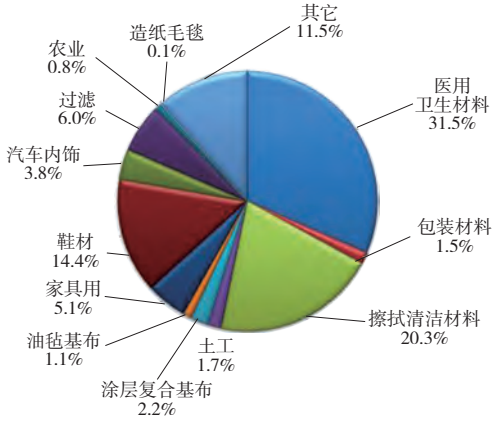
资料来源：台湾不织布工业同业公会

	2009	2010	2011	2012	2013	2014	2015
千吨	140.1	150.0	164.8	130.5	153.1	181.5	183.7
百万美元	550.8	614.1	765.1	591.8	667.2	833.4	739.3
美元/公斤	3.93	4.09	4.64	4.53	4.36	4.59	4.02

按工艺和应用分类的非织造材料产量 (2015) (183.7 千吨)

资料来源：台湾不织布工业同业公会





台湾非织造材料进出口情况（2010 – 2015）

资料来源：台湾不织布工业同业公会

		2010	2011	2012	2013	2014	2015
千吨	出口	73.6	71.6	74.0	82.3	93.4	94.0
	进口	27.1	31.4	27.8	26.6	26.7	24.7
千美元	出口	292.2	322.2	324.2	338.5	369.5	378.1
	进口	114.8	150.0	130.3	122.2	122.6	110.4
美元/公斤	出口	3.97	4.50	4.38	4.11	3.96	4.02
	进口	4.24	4.78	4.69	4.59	4.59	4.47

印度非织造材料工业

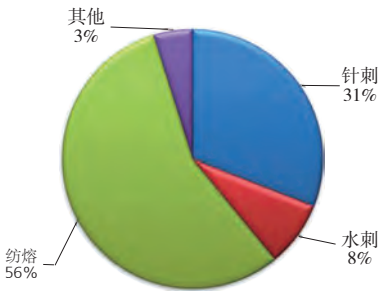
印度非织造材料产量 (2011－2015)

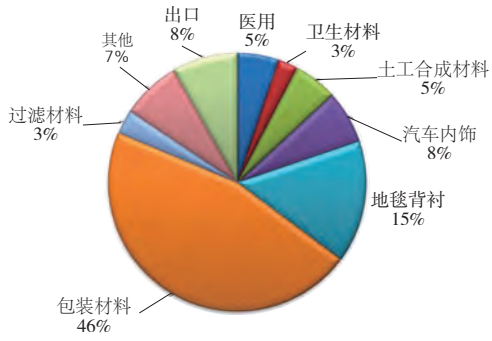
资料来源：BCH

	2011	2012	2013	2014	2015
针刺	59.6	75.0	85.3	90.5	96.5
水刺	13.0	19.6	19.7	25.0	25.5
纺熔	106.2	120.0	138.7	152.7	175.0
其他（化学粘合/热粘合/湿法等）	7.5	8.0	8.8	9.0	15.0
合计	186.3	222.6	252.5	277.1	312.0

按工艺和应用分类的非织造材料产量（2015）（312.0 千吨）

资料来源：BCH





印度非织造材料进出口情况（2010－2015）

资料来源：BCH

		2010	2011	2012	2013	2014	2015
千吨	出口	20.5	18.8	20.9	27.5	27.6	25.7
	进口	19.3	25.6	30.9	28.1	40.4	44.3
百万卢比	出口	2.5	2.8	3.2	4.5	4.6	4.00
	进口	3.2	4.5	6.4	7.5	10.3	10.40
卢比/公斤	出口	122	149	153	164	167	156
	进口	166	176	207	267	255	235

印度进出口量最大的5个国家和地区

资料来源：BCH

	2015	
出口	美国	1.3
	英国	0.4
	加拿大	0.2
	韩国	0.2
	阿联酋	0.2

	2015	
进口	中国大陆	3.4
	美国	1.2
	韩国	0.9
	日本	0.8
	泰国	0.7

非织造卫材的最新趋势

吉屋 光大
战略采购部，部门经理
尤妮佳全球研发中心采购部

内容

* 作者背景
* 公司介绍
* 卫材的发展趋势
* 非织造卫材的发展趋势
* 未来发展趋势

作者背景

1998年4月加入尤妮佳
1998年-2000年非织造研发部

用于清洁擦布的TOW纤维

用于立体护围的双组份纺粘非织造布

2001年至今 - 采购部
- 非织造布、膜、热熔胶、高吸水性树脂、木浆、弹性纤维、胶带

公司介绍

公司简介

成立时间	1961年2月10号
实收资本	159.92亿日元
实际股本总数	206944773
下属人数	1264（2014年3月的合并报表数据为12795）
证交所	东京股票交易第一分部
经营范围	销售婴儿、儿童护理产品，女性护理产品，保健产品，化妆品，家用产品，宠物用品，工业材料以及食品包装材料等。

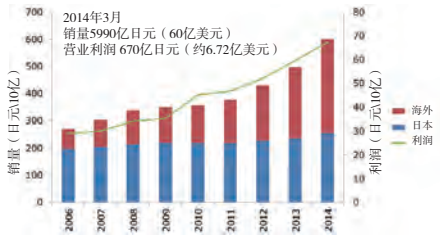
战略业务单元

全球生产地

15个国家以及23个生产点。

销量及营业利润变化

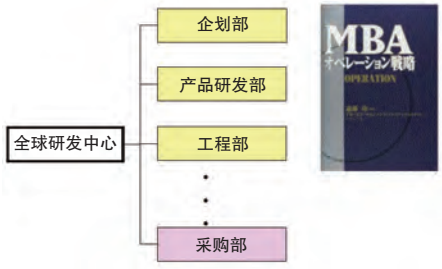
净销售额/营业利润



日本的销量略增加，海外销量迅猛增加。

全球研发组织

尤妮佳采购部属于全球研发中心。

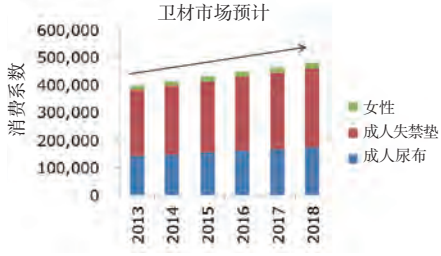


* 尤妮佳采购组织被列入MBA的教科书中。
* MBA运营管理（全球的）

采购职能

采购部的职能不仅是采购，同时还需要对原材料进行研发。（确定供应商，价格，质量，全球规则）

采购+研发
工程链：原材料研发→产品研发→采购→购买→生产→物流→销售



卫材市场每年将增长大约4%左右。

卫材的发展趋势

卫材产品市场

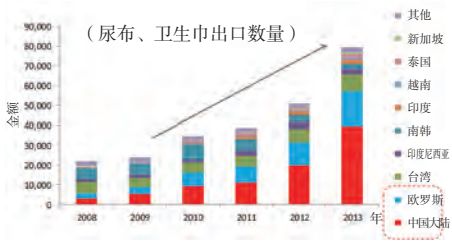
卫材市场的年增长率为4%，关键的驱动力是亚洲。

技术信息

每个区域的增长率

区域	2013–18 % CAGR
亚太地区	5.3%
欧洲，中东，北非	3.1%
拉丁美洲	2.7%
北美	1.2%
全球	4.2%

亚太地区是增长的关键驱动因素。
数据来源：UC internal analysis



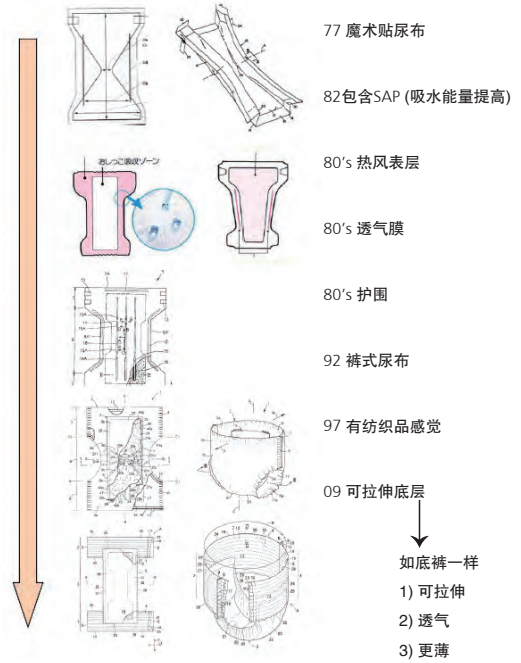
数据来源：日本贸易统计

日本婴儿数量在不断减少。为什么日本婴儿尿布的产量在增加?

日本出生率在不断减少

日本婴幼儿尿布的数量在不断增加。
数据来源：卫生部和劳动及社会保障部

尿布构造的变化



非织造布为尿裤的发展做出了贡献。

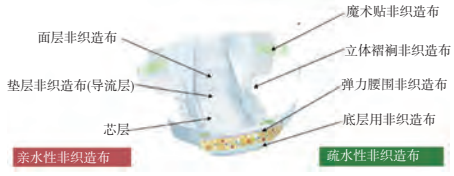
尿布、卫生巾的出口数量在不断增加，尤其是出口中国、俄罗斯的数量。

最新卫材产品的发展

卫材产品的发展趋势是舒适，合体，更薄，设计感，可持续以及更私密感。

用于卫材的非织造布的发展趋势

用于尿布的非织造布的性能



吸收特性（透气，渗透性，再润湿）
柔软感觉（光滑，柔软）

疏水性（防水）
柔软感觉（光滑，柔软）
强力（断裂强度）

用于女性卫生巾的非织造布的性能

吸收特性（透气，渗透性，再润湿）
柔软感觉（光滑，柔软）

疏水性（疏水性）
柔软感觉（光滑，柔软）
强力（断裂强度）
静音设计

最新卫材用非织造布的发展趋势

为了满足卫材产品的优势，开发出不同的非织造布。

技术信息

成形以及打孔的工艺（皮肤护理）

尤妮佳表层非织造布。公司首创的工艺改变了非织造布的表面形状使其接触皮肤时更加光滑干爽。

天然纤维或天然材料（天然）

尤妮佳韩国产品。采用的材料包括中国草药或韩国胡萝卜。

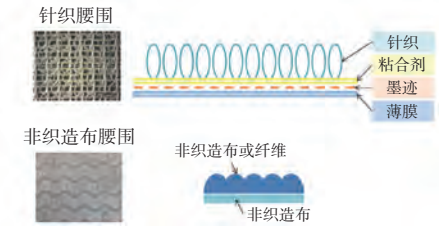
可拉伸材料（拉伸）

日本尤妮佳产品。通过使用拉伸非织造布，改善了贴合性以及柔软性。

多彩材料（印刷）

日本尤妮佳产品。通过使用多彩印刷非织造布，这种产品酷似泳衣。

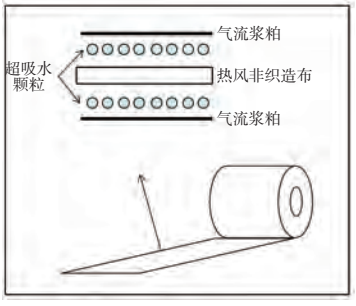
非织造布腰围（柔软非织造布）



将针织腰围改成非织造布腰围从而提高柔软性。

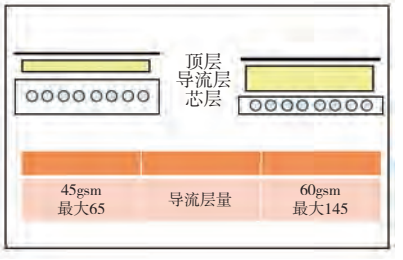
用于更薄产品的非织造布

气流浆粕+超吸水颗粒+热风芯层



5层（气流浆粕+超吸水颗粒+热风）

高克重导流层用于更薄的芯层



为了更强的渗透性，需要减少绒毛芯层，同时提高导流层克重。

未来趋势

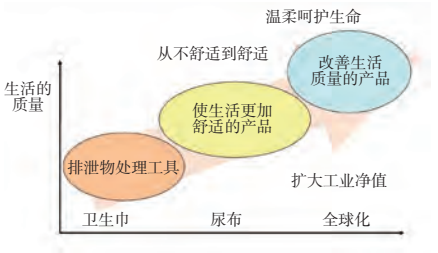
每个区域消费者的不同需求。

* 迫切需要发展卫材产品满足每个区域的需求。

- 拉拉裤是主流产品；
- 魔术贴尿布是世界的主流产品。

* 需要洞察力去平衡区域需求以及非织造布技术的发展。

卫材产品的原则



总结

√ 卫材市场将会以每年4%的速率增长。

√ 非织造布为尿布性能的进步作出贡献。

√ 产品趋势：舒适，合体，更薄，设计，更私密性，可持续性。

√ 非织造布趋势：柔软，弹性，气流浆粕，高克重，印花，天然，肌肤呵护。

√ 未来趋势：迎合每个区域的需求。

（本文已节选）

（<<<上接33页）

现生产滚筒式滤芯折叠机、擦板式滤芯折叠机、无隔板折叠机等产品。在滤清器折叠设备行业领先国内多数厂家，产品远销欧洲、北美洲、东南亚等地。该公司拥有完整、科学的质量管理体系，产品已通过CE认证。该公司的诚信、实力和产品质量获得业界的认可。可为不同客户提出的各种要求量身订制非标准化的机械设备，是国内外滤清器生产厂家首选产品。

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上海汉司实业有限公司/上海凝瑞化工有限公司是专门从事粘合剂产品研发、生产和销售的高科技公司，旗下品牌有MegaGlue®，YEBOND®，FILTER®等，粘合剂产品涉及行业包括高铁、汽车、建筑、过滤、电子等，是知名的粘合剂服务商。

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苏州普利森自动化设备有限公司是一家专业设计、制造各类过滤器生产设备的公司。目前产品主要有各类折纸机、贴边机，各种滤芯切割设备等，涵盖汽车座舱空气过滤、空气净化机、水处理等领域，得到了客户的广泛认可。

技术发展趋势

阿克伦大学的具有弹性、高湿强度纳米纤维的吸收性材料

吸收性一次性产品的吸收技术已经发展到使产品具有更薄，更舒适及其他好处，如包装等。如今的超薄纸尿裤，高容量和高吸收性树脂已经部分或全部代替木浆。然而，这种高吸收性树脂的使用给其他技术造成一定挑战，包括高吸收性树脂粒子的捕获性、流体分布、薄垫的刚度和粗糙的质感。为了获得高吸收性树脂的捕获性，通常将这些树脂粒夹在两层亲水非织造材料和/或粘胶之间。一些可拉伸的、不限制高吸收性树脂颗粒在润湿状态下膨胀的胶粘涂层也被开发出来。这些先进的吸收替代结构已经充分解决对薄型产品性能的挑战。

本专利由阿克伦大学申请，纳米纤维和熔喷非织造材料表现良好的湿态力学性能，高吸收性和弹性，适合应用于纸尿裤、纸巾和医用绷带。非织造材料结构含有细纤维或在物理性方面接近纳米纤维的亲水性弹性材料（HEFC）和吸收或高吸收性材料。在润湿HEFC纤维部分吸收然后流体通过芯层纤维连通高吸收性材料。由于纤维和高吸收性树脂的吸液率和吸液量的不同，液体会流向捕捉游离液的高吸收性树脂。纤维状HEFC纤网具有弹性且吸收过程中能够容纳吸水引起的膨胀。该结构可含有粘合剂，如在医用绷带的情况下，可以用这种结构贴在健康肌肤上。

本发明的一个重要创新是，这种HEFC纳米纤维是通过聚氨酯静电纺丝产生。高吸收性材料为聚丙烯酸钠，这种结构可以在5秒内吸收相当自身重量500-1250%的100%的人工尿液。该结构的湿强度是850-900%，应变断裂点0.25-3.0 MPa。在这里，定义作为吸收材料的超高吸收性树脂，至少能够吸收50倍重量的液体。

这种HFFP微米或纳米纤维是由具有亲水性的弹性材料纺成的芯层，这种芯层可以吸收液体并能承受因吸液而引起的尺寸变化。纤维可以通过混合物或弹性和吸收性固体颗粒制得。这种亲水性和弹性材料可以混合在一个溶液中作为一个统一的混合物，在固定阶段，通过相分离为固体和液体，在明显分离阶段为弹性和亲水性嵌段共聚物。

这种材料成为弹性和亲水性的嵌段，如无规共聚物等。具有亲水性和弹性的均聚物也很有用。例如HEFC纤维材料包括聚酯弹性体，玉米醇溶蛋白，二甲基硅油，有机硅弹性体、聚乙二醇丙烯酸酯弹性体、热塑性聚氨酯，聚醚共聚氨酯和聚氨酯。特别有利的材料是聚醚共聚氨酯和聚氨酯。

只要是在物理性质上接近，吸收或超吸收材料可以以任何方式与HEFC纤维结合。吸收材料可以是物理吸收、化学吸收、机械截留、纠缠或嵌入在HEFC纤维。所吸收的材料的形态是不规则的、无定形的、球形的、细长的、纤维状的、椭球形或球形，具有不同应力-应变特性。

非织造材料可以由熔喷法、气流成网和静电纺丝纳米纤维制得。静电纺丝技术在这一加工技术中具有独特的优势。本发明的纤维也可以通过相分离法、孔隙铸造法、裂膜法等制备。

合适的吸收材料包括聚酯、聚醚、聚酯聚醚、具有侧羟基酸或直羟基的聚合物、聚硅氧烷、聚丙烯酰胺、高岭土、蛇纹石、蒙脱石、蛭石、绿泥石、海绿石、凹凸棒石、水铝英石、铝，钠丙烯酸酯，和2-丙烯酸胺-2-丙烯酸钠。特别适合的吸收材料是丙烯酸酯和2-丙烯酸胺-2-丙烯酸钠。

该技术的应用包括医用敷料、尿布、卫生巾、毛巾或抹布、拖把、海绵，用于治疗和预防的经皮肤或口服给药系统，燃料电池中水的输送管理以及用于从凝聚过滤器收集和输送水或其他液体。

本发明公开了一种液体吸水装置，制备液体吸收装置的过程、吸收液体的方法、非织造材料纤维制备设备、生产非织造材料的方法、一种将非织造材料应用于病人的方法和用于纤维和非织造材料复合的装置。

欢迎投稿

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VAE 乳液–汽车地毯用胶粘剂的理想选择

传统汽车地毯用胶粘剂采用合成丁苯胶乳，丁苯胶乳其有害物质含量较高、气味重、阻燃特性差等缺点，由其制备的地毯在相对密闭的汽车空间内会不断释放出有害物质，如VOC（挥发性有机化合物），苯系物，醛酮等；对乘车人的身心健康造成持续的危害。

近年来，随着人们环保意识的不断增强，安全法规的日益完善，对于汽车内饰用材料的环保性、安全性提出更高的要求。针对这一新的市场需求，瓦克化学推出VINNAPAS® VAE汽车地毯胶粘剂。

VAE是基于乙烯与醋酸乙烯酯自由基乳液聚合技术制备而成。瓦克VINNAPAS®VAE乳液在生产过程中不添加有机溶剂、增塑剂和甲醛，特殊的工艺使其具有气味性小和低VOC特性，能够帮助客户满足严苛的汽车地毯环保认证。此外，由于VAE结构特性，在燃烧过程中产生的热量以及烟雾量明显偏低，可显著降低燃烧速度，提高汽车地毯的阻燃性。

瓦克VINNAPAS®VAE在保持低VOC、低气味、阻燃等优势的基础上，兼顾了汽车地毯对于绒头拔出力、剥离强力、尺寸稳定性等性能的要求，已经成为替代传统丁苯胶体系技术，开发环保安全汽车地毯的理想选择。详情联系：瓦克化学（中国）有限公司daoshuang.qu@wacker.com

柔软、轻便

用于卫生产品的水刺非织造材料

- 婴儿护理
- 女性护理
- 成人护理

用于卫生产品的水刺非织造材料

Jacob Holm拥有全球领先的水刺非织造技术，正不断的为卫生市场设计新型具有创新性的材料。该公司提供一系列优质的卫生产品满足客户不断变化的需求，产品克重可低至15gsm，该公司产品不仅更轻，同时能够提供客户需要的高品质以及舒适性。该公司的核心能力包括柔软性，轻量化，流体管理以及伸展和回复性。

Jacob Holm优势

- 内在的伸展性能，纵向具有高的强力，横向具有高的伸长率。
- 满足所需的强力，光滑，细腻的同时拥有极致的柔软性，特殊的异形纤维创造了强力与柔软性之间的平衡。
- 对于特定产品的特性可以灵活选择不同类型及形状的短纤维。
- 低至15gsm的轻量化能力的同时，具有优化的吸湿和流体分布性。

产品系列	产品名称	应用	克重范围(gsm)	纤维
婴儿护理	SoftLite™弹性	尿裤强力耳贴 尿裤护围	15–30	100%聚丙烯和聚酯和聚丙烯混合物
	SoftLite™ 表层	表层	15–45	聚丙烯/聚酯/粘胶/莱赛尔/棉
	SoftLite™ 底层	底层	15–40	
女性护理	SoftLite™ 表层	表层	15–45	聚丙烯/聚酯/粘胶/莱赛尔/棉
	Jacob Holm™ 整体包布	整体包布	35–70	
	Jacob Holm™ 导流层	导流层	35–50	
成人护理	SoftLite™ 弹性	尿裤强力耳贴 尿裤护围 尿裤腰带	15–30	100%聚丙烯及聚酯和聚丙烯混合物
	SoftLite™ 表层	表层	15–45	聚丙烯/聚酯/粘胶/莱赛尔/棉
	Jacob Holm 整体包布	整体包布	35–70	
	Jacob Holm™ 导流层	导流层	35–50	

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