

NonwovensAsia

Asia's Only Regional Bilingual Magazine for the Nonwovens Industry

亚洲非织造材料工业

ノンウオーブンス・アジア

부직포 아시아

节能、高效水刺非织造布生产线

Energy Saving and High Efficient
Spunlaced Nonwovens Production Line

适用: 医用卫生材料, 清洁、护肤、即弃材料, 合成皮革基布材料

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

FEILONG 飛龍

新型湿法成网水刺非织造布生产线

New Type Wetlaid Spunlaced Nonwovens Production Line



适用: 可冲散可降解的水刺非织造材料

Applications: Production of Flushable and Degradable Spunlaced Nonwovens



垂直式混开棉机组
Vertical mixing opener

ASBG003气压自动棉箱
ASBG003 Air auto hopper

ASBG091梳理机
ASBG091 Carding machine

ASBG215系列梳理机
ASBG215 Carding machine

ASBG401高速铺网机
ASBG401 High-speed cross lapper

ASBG939大仓混棉箱
ASBG939 Large bin hopper

直列式混开棉机组
In-line mixing opener

WF923边料开松机
WF923 Leftover material opener

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南六企业股份有限公司

Spunlace . WoodPulp/PET . Through-Air Bonded

Thermal Bonded . Wipes . Facial Masks



Spunlace Fabrics



Through-Air Nonwovens
Thermal Bonded Nonwovens



Pulp/PET Spunlace Fabrics



nanliu@nanliugroup.com

ANDRITZ

Nonwovens unlimited

Spot-on solutions from just one source



Needlepunch



Spunlace



Finishing for Spunbond



Wetlaid

Find out more at ANEX!
June 06-08, booth 2430

Multiple options – single source. With top-notch expertise and experience from ANDRITZ, you benefit from a virtually unlimited portfolio of nonwovens production technologies. Whether you

need wetlaid, finishing equipment for spunbond, spunlace, or needle-punch – we respond with spot-on solutions. From forming to finishing, we have the answer. Take advantage of the

ANDRITZ global presence and service centers for efficient support. Excellent service expertise ensures high uptime and productivity. Stay ahead. Team up with ANDRITZ.



www.andritz.com/nonwoven

nonwoven excellence

行业信息

安德里茨成功启动提供给法国AFITEX的neXline针刺生产线

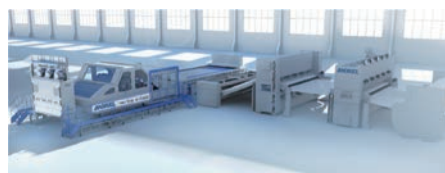
格拉茨 2018年1月30日讯。安德里茨在法国Champhol的AFITEX成功启动了一条完整的neXline针刺生产线。该生产线处理聚丙烯、再生长丝、初生长丝纤维等多种原料，生产用于土工布的针刺毛毡。

供货范围包括了从开松混合到具有分析功能的生产线末端所有设备单元。这条生产线使用的都是久经考验的安德里茨设备，例如：

- APC 1500开松混合单元
- 工作门幅2.5米aXcess梳理机
- Profile P325 交叉铺网机
- 带创新Zeta牵伸机的2台A50针刺机

该订单显示了安德里茨与AFITEX之间的强大合作关系。AFITEX在阿尔及利亚有一条安德里茨针刺生产线在运行，这条生产线使得AFITEX成为北非的领先土工布生产商。

AFITEX专业从事排水、挡土和池塘衬垫系统20多年，现在是这些土工合成材料领域的全球领导者之一。参照欧洲、非洲、中东和北美地区，AFITEX业务遍布广泛的应用领域，包括建筑、公共工程、垃圾填埋和采矿工程。



安德里茨用于土工布生产的 neXline 针刺生产线



Afitex 无纺土工布

安德里茨宣布提供给波兰Eco Technilin的neXline针刺生产线成功启动

2017年12月21日格拉茨讯。安德里茨无纺布，作为国际技术集团安德里茨的一部分，已成功启动了提供给波兰Eco Technilin

公司的一条完整、高产能针刺eXcelle生产线——从纤网形成到针刺加固。该生产线的产能约为1000公斤/小时，用于汽车行业生产用天然纤维、玻璃纤维以及聚丙烯制成的无纺布，克重从300克到2400克/平方米。

安德里茨已经交付了开松混合设备、门幅2.5米的eXcelle梳理机以及Profile交叉铺网机，并结合了针对厚重无纺布织物的安德里茨预针刺和针刺技术。

这个订单再次证明了安德里茨和Eco Technilin之间稳固而长期的合作伙伴关系，在法国Eco Technilin已经有两条安德里茨生产线在运行。

作为提供天然纤维解决方案的领先供应商，Eco Technilin目前每年能生产10,000多吨无纺布毡。它还开发了一系列用于交通运输（汽车、飞机、公共汽车、铁路等）、建筑、家具、土工布及很多领域的多种应用材料。新的生产线将在未来几个月大幅提高其产量。



安德里茨用于生产汽车行业用无纺布的eXcelle 针刺生产线

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安德里茨集团是水力发电、纸浆和造纸、金属制造、钢铁工业以及民用和产业用固液分离以及动物饲料和生物质制粒工厂、设备和服务的全球领先供应商。其他重要业务还包括自动化及其服务。

另外，国际集团也积极参与发电（蒸汽锅炉厂、生物质发电厂、回收锅炉和气化厂）和环境技术（烟气净化厂）以及提供

行业信息

无纺布、溶解纸浆和配电板和废品回收工厂的生产设备。上市国际技术集团总部位于奥地利格拉茨，拥有员工25700人。安德里茨旗下有250家公司遍布全球40多个国家。

针对严重大气污染的解决对策—帝人创新研发“NANOFRONT™ 过滤袋”

（东京讯）帝人富瑞特株式会社（本社：日本大阪市、社长：日光信二）近期宣布，采用纳米聚酯纤维“NANOFRONT®”成功研发出“NANOFRONT™ 过滤袋”。该过滤袋能够具体高效捕集粉尘粉体的同时，还具有节能环保，使用寿命长的特点。

研发背景

- 1) 随着中国大气污染的日益加重，在城市地区国家对于工厂的粉尘排放做出了更为严格的规定，粉尘排放量要求从原有的 $30\text{mg}/\text{m}^3$ 强化降低到新标准 $10\text{g}/\text{m}^3$ 。
- 2) 为了对应进一步强化提高的粉尘排放量要求，过滤袋过滤气孔的大小紧密度要求也随之提高。过滤袋过滤气孔越为紧密细小，其集尘效率也越高。一般情况下，过滤袋的反面会贴附一层全氟材料的多孔膜为达到其粉尘捕集率要求。但是同时容易发生多孔膜的过滤孔容易堵塞的问题，从而大大降低了过滤袋的透气度。
- 3) 此外，为了提高粉尘捕集率时会采用增加排气功效的方法，但是同时也导致过滤袋贴附的多孔膜发生破裂。提高排气功率功效时，也存在增加设备施工等一系列问题，直接导致过滤成本提高。
- 4) 针对以上所述的各项问题，帝人富瑞特研发最新的“NANOFRONT™ 过滤袋”，该产品具有“高效粉尘捕集率”，同时又保证过滤袋所需的“高透气度”性能。

“NANOFRONT™ 过滤袋”

“NANOFRONT™ 过滤袋”因采用纤维直径为700nm的纳米聚酯纤维而具备以下的特点。

1) 粉尘粉体的高效捕集率

过滤袋的背面过滤面贴附“NANOFRONT®”特殊非织造层，利用“NANOFRONT®”非织造层的孔径微小的特点提高粉尘捕集率。和全氟多孔膜所制的过滤袋相比，“NANOFRONT™ 过滤袋”

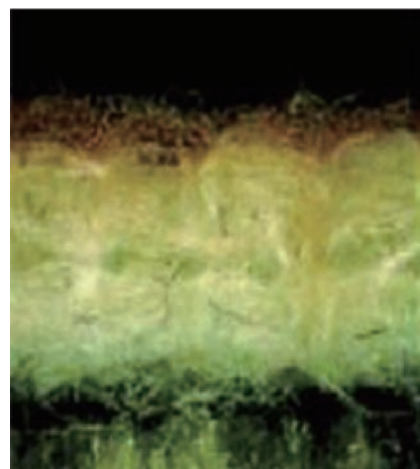
可减少一半以上细微粉尘的对外排放，预计达到粉尘排放量可控制在 $10\text{mg}/\text{m}^3$ 以下。

水泥制造厂实施的对比试验的结果

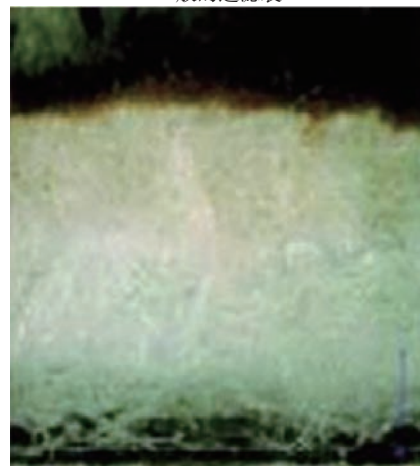
	全氟多孔膜过滤袋	NANOFRONT™ 过滤袋
排放浓度 (mg/m^3)	6	3

※ 此数据不作为产品品质保证的数据所使用

过滤袋使用后的状态



一般的过滤袋



NANOFRONT™ 过滤袋

2) 节能性能

和普通全氟多孔膜过滤袋相比“NANOFRONT™ 过滤袋”的透气度可提高50%以上。此外，滤袋表面附着的粉尘脉冲清洗间隔也可延长约1.4倍。为确保一定透气率所使用的耗电量和清洗次数都均有减少，实现节能环保。并且缩短滤袋清洗时间，改善粉尘捕集率“NANOFRONT™ 过滤袋”可有效提高10%以上的生产效率。由于“NANOFRONT®”特殊非织造

行业信息

层的厚度要高于普通全氟多孔膜，所以NANOFRONT™过滤袋”使用寿命长，使用中不容易发生破裂等问题。

水泥制造厂实施的对比试验结果

过滤袋种类	全氟多孔膜过滤袋	NANOFRONT过滤袋
压损(Pa) ^{(*)1}	1500	800
清洗周期(Sec) ^{(*)2}	270	375

※ 此数据不作为产品品质保证的数据所使用

*1) 压损：流体通过过滤袋时所损失的能量

*2) 清洗周期：清洗附着在过滤袋上的时间间隔

发展趋势

1) 帝人富瑞特将通过这款新型研发的“NANOFRONT™过滤袋”，进一步开拓日本国内和海外市场。特别是针对水泥生产、钢铁工业以及粉体制造厂商做积极提案，扩大销售。

2) 2020年度期待可达到10亿日元的销售额。

帝人集团

帝人 (Teijin) 成立于1918年，总部设立在日本东京和大阪。经过99年的发展，公司业务涉及芳纶纤维及碳纤维的高性能纤维·复合材料，医药医疗，电子材料·化工产品，纤维产品·流通和IT等领域，成为在全球20多个国家和地区拥有170家子公司，约19,000名员工的集团企业。帝人通过独有的见解和创新的技术针对社会所面临的问题，在“环境价值”“安心、安全、防灾”“少子老龄化、健康意向”这三个重点领域提供崭新的解决方案。在2016财年，公司实现了7,413亿日元的销售额，拥有9,641亿日元的总资产。

帝人集团在中国

帝人集团在华业务始于70年代对华出口涤纶生产设备，1994年在江苏省南通市进行了首次商业投资（南通帝人有限公司），从此开始了与中国社会和地区的共同发展。目前，帝人集团大多数业务公司已在中国各地开展了多元化业务，发展成为拥有约24家在华公司和总数约2,000名员工的企业集团。帝人集团以技术创新为核心，针对全球性课题提供崭新的解决方案，力求发展成为备受社会期待和信赖的企业集团。

(资料来源: “www2.teijin-frontier.com”)

迪罗集团非织造材料工程

从1986年开始，上海国际非织造材料展览会 (SINCE) 已成为亚洲最大、最重要的非织造材料展。

2017年，450多家参展商在超过3.4万平方米的展区展示，从非织造布的原材料、生产机器、配件到最终的成品，展会涵盖了完整的产业价值链。涉及的相关行业有卫生、过滤、面料和服装、医疗、汽车、擦拭巾、家居用品和室内装璜。

来自德国埃伯巴赫的迪罗集团，其子公司有DiloSystems、DiloMachines、DiloTemafa和DiloSpinnbau。从1986年以来，迪罗集团就一直参加这个重要的展览会。

迪罗集团作为非织造短纤维生产线的领先集团，展现了成套生产线及其有关所有组成部分的最新开发成功。短纤维生产线是从纤维准备开始的，从DiloTemafa的开松、混合机，到DiloSpinnbau的梳理喂入机和梳理机，最后到DiloMachines的交叉铺网机和针刺机。

迪罗集团的四个设备单元——开松、混合机、梳理机、交叉铺网机和针刺机的品质对顾客来说是非常重要的。迪罗的生产线代表最高的生产力和最佳的纤网质量。这与所提到的四项设备单元的高效率是密不可分的，他们由同一个驱动控制，该控制技术满足现代交联体系和智能生产的所有要求。

迪罗集团为满足客户的特殊用途和优势需求，设计、制造、交付并投入运营个性化定制的生产线。

迪罗高度实用的非织造生产线的服务及配件支持遍及全球。除了关于标准通用型生产线的信息外，我们还会告知迪罗设备的最新开发成果，其目的是通过自动化程度来提高效率和生产力以及最终产品质量。

创新成果之一——“Vector 200”，这是一台由DiloMachines开发的新型交叉铺网机。其突出特点是喂入速度超过200米/分钟。

行业信息



迪罗的Vector 200交叉铺网机

迪罗的设备可用于生产汽车用非织造材料，地毯，合皮革，土工布和过滤材料，这里仅列举出几个最重要的应用领域。

迪罗已经研发了一种新的特殊生产线配置，可以在线加入机织物生产增强的多层非织造材料，用于生产过滤介质、土工布、屋顶材料。有关这一特殊结构的信息将会提供。

特种纤维的可加工性已经取得了相当大的进展，如采用回收的碳纤维制造复合材料。目前已经有了利用可回收的碳纤维进行产品研究和开发的紧凑型专用生产线，而且还可以与感兴趣的客户进行讨论。

与刺针制造商格罗茨-贝克特的密切合作已取得成果，开发了刺针模块，用于轻定量产品的高密针刺。

此外，迪罗集团还将提供通用的针刺技术和宽幅梳理系统以及高网速水刺生产线。重要的是，在水刺非织造生产领域，迪罗一枝独秀，普通生产线的工作幅宽约为3.8米，纤网输出的中等速度约为200米/分钟。迪罗集团的产品系列包括更宽且纤网输出速度更高的梳理系统。DiloTemafa与DiloSpinnbau密切合作提供这些特殊的纤网成型系统，其工作幅宽超过5米，经水刺和烘干后的纤网输出的速度超过400米/分钟。

减少梳理机剥取系统和卷绕之间牵伸是实现纤网均匀度高且具理想的纵向强力比(MD:CD)的必要条件。DiloSpinnbau采用杂乱罗拉技术实现高水准的生产效率。通过低牵伸率获取最佳均匀度。迪罗集团在所

有非织造生产线上的纤维准备机及梳理系统都非常成功，实现了高效率，高质量的要求。

DiloTemafa公司的纤维准备采用了一些独特的装置成为其重要的特点，气流的控制，梳理吸风装置，过滤和加湿，使得生产线有较高的效率。

在SINCE2017展览会上，迪罗集团介绍了迪罗标准及特殊非织造生产线的特点并与来自全球的客商讨论。

(资料来源: "www.dilo.de")

Avgol推出护肤层

贴肤层材料使皮肤更加健康

在INDEX展上，Avgol公司为全球成人失禁市场推出了其具有护肤功能的贴肤层新材料。织物表面用氧化铜处理，刺激胶原蛋白和其他蛋白质的产生，使之可以稳定皮肤层，改善皮肤外观。结果是在产品的整个使用期间，皮肤得到保护和增强，改善气味控制和持久的效果。

Skinguard仅仅是Avgol公司在卫生市场的非织造创新范围的一部分，公司的主要领域包括婴儿尿片、成人失禁和女性卫生用品的产品。

“非织造材料是非常常见的材料，我们的非织造材料解决方案会根据不断变化的市场需求而设计和制造，”销售副总裁Gilad Frenkel说。

“Avgol将继续以客户为中心，为客户提供更好的创新、服务和品质。” Avgol成功的关键是其雄心勃勃的投资，包括最近在以色列Dimona建立了一个新的生产基地，这笔6000万美元的投资旨在扩大公司在欧洲、中东、非洲和南美洲的客户群。

(资料来源: "www.avgol.com")

Sustain Natural公司新推出全棉护理材料的生产线

新公司由Seventh Generation的联合创始人、前CEO和他的女儿一起成立

Sustain Natural公司推出一条新的生产线，它通过在线订阅服务推出了一系列有机生理期产品，女性可以非常方便定制自己的



迪罗用于碳纤维针刺的紧凑型生产线

行业信息

生理期的产品，每两个月交付一次。

Sustain Natural公司的生理期产品包括：

- 全棉导管式卫生棉条——用100%有机棉制成，与生物质塑料，植物性和可降解导管的组合（大多数卫生棉条中塑料导管不可降解，丢弃之后产生大量的废物）。吸收芯和保护外层由有机棉纤维制成，是敏感皮肤的理想选择。具有“量大”型和“普通”型两种尺寸。
- 带有“护翼”的全棉超薄垫，采用100%纯棉制成，同时配有护翼，保证安全防止侧漏。低致敏性和良好的透气性使得卫生巾可用于“日间和夜间”吸收。
- 棉超薄内衬，采用100%纯棉制成，内衬为低致敏性和透气性，并配有全衬里粘合剂，以确保没有松散的边缘。

为了庆祝推出新产品，Sustain公司正在与Period Equity联手，致力于在全国范围内取消对“导管式卫生棉条”和“卫生巾”的税费，这些被认为是“非必需品”的项目。月经是女性生活中正常健康的一部分，美国37个州，卫生棉条、卫生巾等月经产品销售税高达66美分/箱，但是令人震惊的是一些产品例如Rogaine、男士剃刀甚至水果卷，都经常被免税。

Sustain Natural联合创始人兼联合首席执行官Meika Hollender说：“关于平等和获取——税收不应该具有性别偏见。卫生棉条对妇女的整体健康和至关重要。对这些项目征税，是不承认这些产品是必需品，这是政策中出现的性别不平等的例子。关注女性的需要，却使女性的健康暴露在危险之中，是不能接受的。”

新公司成立于2014年，Jeffrey Hollender是联合创始人同时也是前Seventh Generation的CEO和他的女儿Meika，将Sustain这个品牌，自然而然的延伸到女性经期有机卫材领域，还有他的妻子Sheila Hollender，花了15年时间解决难题，在Seventh Generation推出了导管式卫生棉条和卫生巾。这个首次亮相品牌添加了的无毒性健康产品系列，因为所有的女性都应该知道她们阴道接触的是什么。这些材料是100%有机棉塞，垫片和衬里是人造丝且无添加任何香料，无氯漂白，无农药生长，可在sustainabilitynatural.com上订购。

通过Sustain的在线订购模式，女性现在可以根据自己的月经需要，定制自己的产品。许多女性在月经周期期间，可以使用产品组合，例如不同类型的垫材、卫生棉条或两者兼容，因此Sustain已经建立了一个在线的Mad Lib风格的“周期流程图”，女性可以标注她们使用的产品和使用的天数，从而更好的配置每隔一个月交付的个性化箱子。

在推出的前30天，Sustain将与这些产品的销售税相等的金额捐助给“女孩帮助女孩”（GHGP）这个组织，以此来帮助这个国家内那些低收入女性进入经期使用卫生产品。GHGP是致力于教育有这方面需求的人们，关于此类的需求，特别是一些没有上过学或没有工作的女孩和女性，她们无法支付这类（导管式卫生棉条和卫生巾）最基本的需求，从而使得她们的健康，生产力和自尊心都受到了损伤。

（资料来源：“www.nonwovens-industry.com”）

Akinal在爱沙尼亚投资

水刺企业在土耳其以外的地方建立了首条生产线

土耳其的非织造企业Akinal投资2,000万欧元用于爱沙尼亚的塔林（Tallin）现有的11,000平方米的厂房和24,000平方米的地皮。该工厂致力于制造水刺非织造卷材，用于婴儿、个人护理、医用湿巾和干擦拭布，年产能将超过18,000吨。

“虽然我们在现有的非织造布生产能力中排前20名，但Akinal的所有投资基本位于土耳其加济安泰普。”创始人兼董事长Saim Akinal表示，“这将是Akinal成为全球市场的第一步但不是最后一步。在我们未来的计划中，我们将在不同的国家甚至不同的大陆继续投资。Akinal不是偶然地投资塔林，看重的是战略性和精心选择的位置，在那里，可以为新的潜在市场和现有的Akinal的销售网络提供更好的物流条件。”

Akinal成立于1999年，是土耳其加济安泰普首个水刺非织造卷材制造商，Akinal公司经营所有现有工厂，总部位于土耳其加济安泰普。该项目占地45万平方米，建筑面积约20万平方米。因其产能和良好的状态，以创新的产品灵活应对市场不断增长

行业信息

的要求。

除了多种用于个人护理的湿巾之外，Akinal还生产水刺技术的基材用于合成革、屋顶和隔热材料、地毯背衬、工业擦拭巾、汽车、土工布、建筑、家具、服装和过滤材料等。

在其他消息方面，Akinal已成功在土耳其启动了安德里茨的NeXline湿法线。高度灵活的Wetlace技术，结合湿法成型和水刺，特别适用于生产可冲散的擦拭巾，并且可100%生物降解，无需任何化学粘合剂。

该生产线设计用于年产量高达15,000吨的高产量，整合库存制备、湿法成型、水刺和烘焙。根据最新的EDANA/INDA可冲散擦拭巾指南，Andritz Wetlace技术符合最终产品的最高环境标准及生产认证的非织造材料。Akinal Sentetik Tekstil即将推出名为“BioFlush”的新一代可冲散和可生物降解的材料，从而进入新市场。

(资料来源:“www.convertingguide.com”)

恒安集团收购马来西亚卫生公司股权

Wang-Zheng制造品牌尿片，女性卫生用品
据报道，中国最大的卫生巾、婴儿尿片和纸巾生产商恒安国际集团已收购Wang-Zheng的50.4%股份，并已出价收购马来西亚卫生公司剩余的股份。

Wang-Zheng生产和销售加工纸和一次性产品，如尿片和卫生巾，以自主品牌销售，包括Drypro、Dryplus、Carina和Carefeel。Wang-Zheng也是本地和国外各品牌的原始设备制造商。

在马来西亚交易所提交的文件中，Wang-Zheng表示，恒安的其全资子公司恒安投资有限公司与四方签订协议，Wang-Zheng Resources Sdn Bhd, Macro-Link Sdn Bhd, Charost Ltd.和Zhong Xin Ltd.，向王铮购买总共8000万股（占股份50.4%），总额为9120万令吉（折合1400万美元）。

(资料来源:“www.convertingguide.com”)

旭化成集团 (Asahi Kasei) 在泰国和日本投资

日本公司在泰国投资了4500万美元的纺熔

生产线

据报道，日本知名纤维和非织造生产商旭化成 (Asahi Kasei) 投资其泰国的新生产线50亿日元，约4500万美元，用于一次性尿裤市场。此举将使公司在泰国的产能提高50%。该公司成立于2012年，并于2015年底在泰国扩张，目前两条生产线，生产4万吨纺熔非织造材料，并已全面运行了一段时间。

另有消息称，该公司正在加大生产用于汽车座椅和气囊的高性能纤维，将资源集中在高附加值纤维上，这是公司战略的一部分，通过质量和规模经济来巩固公司在全球的竞争力。东京化工公司将在宫崎县工厂安装一条高强度、高阻燃尼龙纤维生产线，用作气囊和轮胎的增强材料，增产能力超过20%。这一举措是为了应对随着汽车安全标准加强的新兴国家气囊需求的增长。

旭化成还将在宫崎县的另一家工厂增加用于汽车座椅和天花板的聚酯纤维人造革50%的产量。该公司为所有欧洲汽车制造商提供高附加值人造革，且销售额一直在攀升。

(资料来源:“www.nonwovens-industry.com”)

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大多数用于洁净室的非织造产品的颗粒过滤效率在94-98%之间，这意味着除了潜在的血源性病原体，产品允许成千上万的颗粒被释放到洁净室环境中。PureArmor™设计的单片薄膜可以100%过滤颗粒物和潜在的血液传播病原体。

Ahlstrom-Munksjö公司高性能医疗平台的领导人Jason Beard说：“PureArmor™是Ahlstrom-Munksjö如何利用我们在制造高防护手术产品的经验中应用于需要高度保护的其他敏感环境产品的一个例子。”

Ahlstrom-Munksjö公司在医疗领域多样化的面料产品组合也包括在多种类型的防护服、外科手术洞巾、手术服和无菌屏障系统中的应用，以满足高性能的要求。

(资料来源:“www.ahlstrom-munksjo.com”)

市场动态

发展中的Essentia Shield

时尚界企业家就女性时尚难题提出了解决方案

经过多年在时尚圈的工作，以及看到诸多女性为追求时尚而穿着不舒服服装的现象，Elena Zaltsberg努力寻求解决方法，即寻找可以放置在女性服装和娇嫩肌肤间的产品。但并未找到这样的产品，故她自行开发。她设计了一个符合人体解剖学，支持各种形状的插入物，适合女性的裤子或内衣等，她称之为Essentia Shield。

Zaltsberg说：“市场上并未出现这样的产品。而且，这是符合女性需求的产品。虽没有多少女性谈论到这方面的不适，但是一旦该产品发布，显而易见，大家都将知道它是关于解决哪方面的问题。”

Essentia Shield主要的一个专利是支持各式各样的衣物，可以防止女性穿着丁字裤，内裤，牛仔裤等紧身衣而显示不必要的凸起或内裤线。

Essentia被描述为非月经期间使用，但能够吸收一些水分，由有机棉和其他环保材料制成，并将全天保持相应形状，保持穿着者清新、活力和舒适的感觉。

Zaltsberg作为主要从事贸易的时尚主管，在解决这个问题时，对于非织造布或一次性产品并不是很了解，所以当时她使用了棉织物设计原型，但是对于下一代产品，她一直在研究一次性和非织造布技术。

“目前，该产品的原料是可重复使用的棉花，但利用率不高，”她说，“我们想设计一次性产品，这样做的意义更大。”

为了更好地了解非织造布，Zaltsberg最近参加了德克萨斯州Austin的Hygienix会议，并开始寻求合作伙伴。Zaltsberg说：“我们对这项业务了解不多，但是我们已经知道，只需要调整一些小型的机器就可以进行设计。”

Zaltsberg说，目前设计的原型已经得到数百名女性正面的反馈。

她补充道：“将Essentia衬垫推向市场时机非常恰当。对于诸多需要这种创新和颠覆性产品的女性来说，这将会改善她们的健康状况，并带来更健康的生活。由于该行业对创新卫生用品需求之大，它的收益将是显著的，同时为忙碌和有着积极生活方式的女性创造新的行业细分市场。”

(资料来源:“www.nonwovens-industry.com”)

Brückner设立新生产基地

德国供应商认为非织造布市场需求强劲

德国技术供应商Brückner公司在距离它上一个工厂几公里处建造了一个新的生产基地，该工厂位于Tittmoning (Bavaria)。

2016年9月破土动工，接着是为期一年的施工期。2017年11月，Brückner开始逐步将生产重心转移到新的生产基地。2018年春，将停止转移。

新厂房占地面积2.5万平方米，配备最新生产技术。由于这是一座全新的建筑，因此可以对有关材料的流动和工作场所的设计进行优化。在设计大厅高度和安装起重系统类型时，考虑了机器部件的尺寸和重量的增加。因此，最终用于组装的起重系统可吊装重达20吨的重物以及高度为12米的起重机吊钩。

过去几年销售额的增长以及 Brückner的非织造行业系统性的扩张，对决定建立这一新厂址产生了重大影响。2017年，Brückner出售了多条Techno-Line非织造系列产品生产线，包括用于生产土工布、医疗用化学粘合法轻质非织造布、家具行业填充用热粘合非织造布以及ADL用热粘合非织造布、卫生用表层和底层非织造布的生产线。

特别是在卫生用非织造布领域，Brückner的目标为生产质量更优，手感更平滑，质地更均匀的产品。随着新一代气流烘箱的发展，Brückner为世界各地的客户提供这些高质量终端产品的生产技术，创造了先决条件。Brückner已经向全球知名的非织造生产商出售了几款新一代烘箱Supra-Flow BA。对未加固纤维网的温和输送，穿过纤维网均匀的气流以及整个工作宽度区温度的恒定都给予了特别的关注。Brückner产品线不同热处理系统的重要发现可以整合到整个施工设计中。

市场动态

新型烘箱具有以下几个建设性特点:

- 温和的纤网输送
- 最低热能需求
- 极均匀的气流
- 整个工作宽度区温度恒定
- 烘箱的极易接近性
- 易于维护
- 流量优化的空气循环系统
- 使用具有良好分离特性的特殊涂层皮带
- 标准设计中工作宽度可达4200毫米
- 生产速度可达200米/分钟

人们对此种新型烘箱需求数量的不断增加,表明广泛努力的开发是合理的,而且新型皮带烘箱符合市场需求。

(资料来源:“www.convertingguide.com”)

W + D收购Bicma

合作将推动日益增长的卫生市场增长

Winkler + Dünnebier (W + D) - Barry-Wehmiller的一个分部,为面巾纸和卫生行业提供综合系统解决方案的领先供应商,已经收购了BICMA卫生技术股份有限公司。BICMA总部位于德国Mayen,主要是设计制造用于生产个人护理产品的设备。

BICMA将完善W + D卫生业务部门,该部门制造用于生产面巾纸和卫生用品的设备。这一合作将推动这两个实体在快速扩张的卫生市场中取得增长。

“它将让我们充满自豪地续写于1995年成立的BICMA的成功故事,” W + D的总经理Frank Eichhorn解释道,“我们希望继续巩固公司在市场上的坚实基础,并向BICMA团队成员学习丰富的技术知识。”

BICMA将继续以Mayen为基地,由总经理Thomas Spurzem与Eichhorn合作领导。前任技术总经理兼股东Lothar Geiger,协助创办了该公司,将于72岁退休,但将继续以顾问的身份支持BICMA。

“我们选择与W + D公司合作,因为两家公司都遵循相同的原则,” Spurzem说。

“很高兴了解到BICMA将保持我们的可靠性和创新文化,并且我们将继续专注于增强客户的信任,并为他们提供示范性服务。”

“热烈欢迎Bicma团队成员加入W + D以及Barry-Wehmiller以人为本的文化,” Barry-Wehmiller首席执行官Bob Chapman说,“合作使我们加强对卫生行业的服务,同时对BICMA在市场上取得20多年的成功感到骄傲。”

(资料来源:“www.convertingguide.com”)

婴儿尿片市场跟踪报告

报告称消费者正倾向于使用天然和有机产品

ResearchAndMarkets.com网站新发布了“全球婴儿尿片市场2018-2022”的报告。预计全球婴儿尿片市场在2018-2022年期间的复合年增长率为4.94%。

全球婴儿尿片市场2018-2022年的报告,是基于市场深入分析和行业专家的意见编写而成。报告涵盖了未来几年的市场格局和增长前景,还包括市场运营中主要供应商的讨论。为了计算市场规模,还参考了不同类型婴儿尿片的销售额。

据报道,该市场主要驱动力之一是消费者对天然和有机产品追求的转变。目前,父母越来越关注婴儿的健康,与四岁及以上的儿童相比,新生儿的皮肤更加脆弱,极易产生皮疹和皮肤刺激。因此,家长们更喜欢天然或有机的婴儿尿片、香皂、洗发水、乳液和其他产品,以确保肌肤健康。这些产品含有较少或可忽略的合成添加剂、色素、香精和人造防腐剂,有助于舒缓和恢复皮肤健康,并让宝宝保持全天清爽。

市场的重要趋势之一是主要竞争企业在研发上增加投入。研发投入的增加旨在进一步提高婴儿护理产品的研发效率和使用安全性。全球婴儿尿片市场正迎来诸多创新,主要竞争企业正在研发适合不同肤质和年龄的婴儿尿片。

(资料来源:“www.convertingguide.com”)

SCHOTT & MEISSNER提供另一种ADL-SPEEDLINER技术

我们的长期业务合作伙伴Merkas A.S.是土耳其较大的Hassan集团的一部分,他能再次信任我们,使用我们久经考验的Schott & Meissner Air-Trough-Technology技术来支持他们生产卫生用品,令我们很自豪。

Merkas副总经理Hakan Sisman先生旨在通

市场动态

过这一新的技术增强他们在卫生行业的研究支持能力知名度，并拓宽产品范围。

ADL-Speedliner的生产速度和温度精度高，这确保了卫生产品的经济高效生产工艺。这种Single-Belt-Oven也采用可靠成熟的Schott & Meissner Air-Trough-Technology技术来实现柔和的产品处理，从而为表层和导流层等提供高质量的应用。

ADL-Speedliner的优势之一就是众所周知的Schott & Meissner模块化设计，可灵活有效地设置预期的生产工艺。另外一个优点是便于清洁维护，一般在Schott & Meissner机器内提供。

(资料来源: "www.schott-meissner.de")

Tredeggar个人护理在北美扩大推广弹性织物产品

Tredeggar Corporation (纽约证券交易所股票代码: TG) 的运营部门Tredeggar 个人护理部门近期宣布，计划扩大其在北美的用于个人护理应用的弹性织物的生产量。为了应对成人失禁和婴儿护理应用中增加舒适度和舒适度产品的需求，公司计划在其印第安纳州Terre Haute工厂投资约2500万美元用于新技术和产能，以便生产其FlexAire™弹性织物产品。公司目前正在寻求本地扩建的批准，并且待税务减免批准后，预计这一新增产能将于2019年第四季度全面投入运营。

个人护理总裁Steve Prince说：“我们的客户对我们在FlexAire™品牌下推出的新产品非常乐观。这些新产品具有创新功能，能够满足消费者对更高柔软度，更好的贴合性，舒适性和透气性日益增长的需求”。“Tredeggar Personal Care在为个人护理产品提供创新高品质材料方面拥有40年的经验，我们的新型弹性薄膜和层压材料继续保持这一传统，为我们的客户和最终消费者创造更高的价值。”

(资料来源: "www.tredeggar.com")

2017年IRANTEX展的羊毛纺纱和新型非织造气流成网技术

Cormatex，一家纺织机械及生产线制造商，2017年在IRANTEX展会展出。

Cormatex2017年已经在Index-Geneve，

Techtextil-Frankfurt，Techtextil NA-Chicago等展会上均有展出，引起了极大的兴趣，取得了很大的成功。

Cormatex成立于1938年，在纺织品方面有着悠久的传统，为羊毛纺纱传统行业提供机械和转交关键生产线，拥有独特的纤维制备机械（羊毛去毛刺和脱毛生产线），以及更创新的非织造布部门，拥有梳理和交叉铺网以及气流成网系统。

进一步深化其新的气流成网技术—“Lap Formair”，Cormatex可以使用原纤维，工业后和消费后的废料制造非织造产品。

Lap Formair分为两种：Lap Formair V使纤维垂直取向，提供优异的弹性，热和隔音性能；而Lap Formair H产生纤维的水平分层，从而提高机械性能—拉伸强度，保持柔和的纤维触感。Lap Formair H的特点是可以处理各种类型的粉末，如粉末树脂，而不是低熔点的纤维。

这个过程有助于增加废料生产的产品数量，减少垃圾填埋场的废弃物，从而节约能耗及生产成本。

Lap Formair生产的非织造布因为其隔热、隔音性能和机械阻力，可以应用于各个领域，包括建筑，汽车，家具，床垫产品，服装和鞋类，皮革制品，复合材料和土工合成材料等。

加工材料可以包括天然纤维和合成纤维，以及玻璃纤维、碳纤维、玄武岩纤维，皮革、服装和床垫废物等废弃物，还有来自回收轮胎的废物和再生纸、纸板。

Cormatex 厂内提供一条气流成网试验线，用于与客户进行研究和开发项目。

(资料来源: "www.kohantextilejournal.com")

生物科技公司推出清洁湿巾

Ode to Clean湿巾是由生物过氧化物制备的，100%源于植物，是纯度最高的过氧化氢形式之一

生物科技公司Solugen推出了其首条消费品Ode to Clean湿巾生产线。其中的生物过氧化物100%源于植物，具有纯度最高的过

市场动态

氧化氢形式之一，并通过使用Solugen的专有技术，Ode to Clean为消费者提供了安全、有效和便捷的清洁方式，无需依赖于苛刻的石油基化学品。

2016年Solugen公司由CEO Gaurab Chakrabarti博士、CTO Sean Hunt博士创办，Chakrabarti在Texas Southwestern大学攻读肿瘤学硕士与博士期间，发现了一种独特的酶，使用该酶可以高效极纯地从糖原中提取过氧化氢。Hunt在麻省理工学院（MIT）获得博士学位，并且研究的是过氧化氢合成纳米颗粒。

Hunt与Chakrabarti合作，将他们的研究应用于过氧化氢生产领域，该领域通常具有能源密集和危险的操作过程，主要依赖于石油等不可再生资源，并且会产生危险的副产品。

Chakrabarti说道：“在世界范围内过氧化氢被认为是一种安全有效的清洁成分，但是它的制备和运输是非常危险和耗能的。Sean和我不仅要开发一项可以减少制备过程中产生废物和污染的生产技术，还要制备纯度更高的产品，从而与家人一起获得更加清洁和安全的体验。

Hunt和Chakrabarti通过研究开发了一款专有的微型制造机，它将先进的酶技术（CRISPR / Cas9）与反应器相结合，通过100%植物淀粉制成过氧化氢。

Hunt说：“我们的愿景是减少过氧化氢生产、运输和储存过程中产生的危险和污染。无论何时何地需要，微型制造机都可以轻松地生产生物过氧化物，减少过氧化氢储存和运输的长期风险。”

该团队目标是向主要的化学公司授权其专有的微型制造技术，使用他们的过氧化氢制备技术或者作为最终用户，从而减少通过化学方法制备时产生的环境污染。利用新兴的酶生产技术和基因编辑技术CRISPR / Cas9制备的生物过氧化物是首个通过绿色化学重新构造的化学物质，具有更加清洁、有效和环保的制造工艺。

Ode to clean是Solugen首条具有生物过氧化

物清洁能力的生产线。Ode to Clean湿巾目前可在www.odetoclean.com上购买。光洁低调的包装外加一个补充装仅售\$ 18。

Ode to Clean湿巾使用生物过氧化物，100%提取自植物淀粉。因为只使用了植物淀粉和水，所以它们是市场上唯一不排放有毒烟雾或在表面留下有毒残留物的清洁湿巾，可以在家中任何地方安全使用。100%可生物降解，减少了一次性擦拭物对环境的影响。

Hunt说道：“湿巾的能耗非常大，产生了大量的废物，但使用方便。事实上，我们可以从地球到月球来回18000次开采石油来制造美国人每年使用的湿巾。我们希望首次制备便捷有效，并使消费者获得感觉良好的湿巾以解决这个能源问题。”

（资料来源：“www.nonwovens-industry.com”）

Rusvata增加了水刺功能

棉花制造商提前整合到非织造布生产中

Rusvata在俄罗斯Rjasan的总部完成了一条新的Truetzschler水刺线。Rusvata自1896年开始生产第一卷棉花；今天唯一一家整合棉絮和纱布完整的棉花加工产业链公司。Rusvata的最新投资是现代且高度灵活的水刺线，每月可生产超过700吨的非织造材料。

新的生产线包括纤维开松，混合，梳理，水刺，干燥和卷绕。商业机构Derux Group参与了该项目，他在俄罗斯市场拥有超过十年的经验。

Rusvata将主要用自家漂白剂漂白的棉花来生产非织造布。既可以控制纤维质量，也灵活地根据客户的需求做出响应。水刺非织造布将用于棉垫，湿巾和其他清洁擦拭物以及医疗用纺织品。这条线因应用广泛在俄罗斯变得独特。新的水刺线可为该地区新增150个工作岗位。

新投资将使Spas-Klepiki's公司最重要的雇主Rusvata在生产操作中新增150个工作岗位。公司为全国各地的医疗机构和药房生产棉絮，绷带，纱布等医疗产品。新投资是长期扩大棉签、棉花垫和非织造布等产品范围的现代化战略的一部分。

（资料来源：“www.nonwovens-industry.com”）

市场趋势

EcoWipes投资Trützschler和Voith的技术

EcoWipes是一家年轻的创新型公司，已经成为一家拥有水刺非织造部门自营品牌产品领先的生产商和经销商。公司于2009年成立，位于波兰首都华沙，目前已安装第三条非织造布生产线。

EcoWipes强烈重视创新和可持续性发展以及密切关注着当地和全球市场趋势。考虑到消费者对可降解生物材料的兴趣，EcoWipes选择了Trützschler和Voith来安装新的生产线。两个公司为生产湿法水刺非织造布提出了先进可持续的WLS（湿法水刺）概念，适用于EcoWipes产品系列。它不仅适合生产可冲洗的湿巾，还适用循环再生和生物降解产品。这些材料满足了在产品周期结束时消费者对更好的可持续性发展的偏好。

第五个WLS 设备的销售证明了Trützschler和Voith作为湿法水刺非织造材料领域技术领先者的成功合作。EcoWipes的新生产线是一个柔性非织造设备。Voith提供新生产线主要元件之一的液压成形器。此概念是Voith在造纸和纸浆工业的长期经验之上建立。借助于HydroFormer技术，该悬浮液被高度稀释，所以非织造布可以完全由可再生且具有成本效益的纤维素原料进行生产。Trützschler不仅负责水刺、干燥和卷绕成形，还会提供最新的高速梳理机。这种灵活的配置使得EcoWipes拥有较宽的湿- /水刺或梳理/水刺非织造布生产范围。

(资料来源: "www.voith.de")

Suominen介绍新的可持续发展议程和可持续非织造布的新方法

Suominen 近期宣布其新的可持续发展议程来支持公司业务战略的实施。可持续发展议程通过三个重点领域定义了Suominen对可持续性发展的立场，并将公司的活动与联合国可持续发展目标联系起来。此外，议程还包括与环境和社会责任有关的具体的长期目标。

可持续发展议程涵盖了2018 - 2021年，包括三个重点领域：

一个有爱心的公司

Suominen旨在改善员工的生活质量，并在

商业上不受社会风险的影响。该公司专注于供应链中的职业安全，员工福利和社会责任。经修订的“供应商行为准则”将于2018年推出，Suominen将在2021年前对所有原材料供应商进行审核。在职业安全领域Suominen坚持零事故目标。

环保制造

Suominen想要尽可能少消耗生产资源和对环境的影响小的非织造材料。特别值得一提的是，该公司专注于提高能源和水的使用效率，减少二氧化碳排放，增加可再生能源在能源消耗中的比重。到2021年，生产中的垃圾填埋量将减少到零。

最具有可持续性的非织造材料

Suominen努力在市场上提供最具有可持续性的非织造布。Suominen已有的产品中已经包括一些可完全生物降解的产品。现在，Suominen将创建一种新的测量工具，用于评估和开发产品范围整体和产品级别的可持续性。有了这个工具，就像考虑Suominen的非织造产品时的任何其他产品特征一样，Suominen的客户也可以轻松地可将可持续性考虑在内。

“可持续发展议程与我们的Changemaker战略一起，是Suominen对当前大趋势和地球状况的回应，例如气候变化，水资源短缺和人权问题。我们希望成为解决方案的一部分，而不是产生问题。可持续发展议程为我们提供了一个坚实的基础，能够优先考虑并执行我们认为最重要的措施。”公司总裁兼首席执行官Nina Kopola说。

(资料来源: "www.suominen.fi")

comfortemp®走可持续发展之路

Freudenberg高性能材料服装(Freudenberg)已经成功实现了使用再生纤维技术的可行性。作为可持续bluesign系统的一个新合作伙伴，Freudenberg在2018年1月28日至31日的慕尼黑体育用品展博览会向大家展示热绝缘系列comfortemp®下具有绒毛感的HO19xPS和comfortemp®环保纤维球HO29xR。

2018年1月26日，在Weinheim。有史以来第一次，Freudenberg展示出comfortemp®纤维球，这是世界上第一个由纤维球制成的填充物。comfortemp®的环保纤维球由

市场趋势

80%的再生纤维制成，是一种可持续的、高性能的填充物，是运动装的理想选择。剩下20%的填充物是由粘合剂组成，这些组件对于形成一个连贯的结构，如填料，是必不可少的。高性能材料服装总经理弗洛伊登伯格Ulrich Scherbel说到：“作为第一个由纤维球制成的可持续性填充材料，comfortemp® 环保纤维球结合了填充和柔软的优点。”

comfortemp® 环保纤维球的优势：

- 由80%的再生纤维和20%的粘结剂组成；
- 不使用化学制品；
- 最高级的可持续性保温；
- 适用于运动服装，但也适用于时尚服装行业；
- 最佳的透气性；
- 超级柔软，毛茸茸的；
- 没有纤维迁移：填充物在衣服上保持它的位置，不会结块；
- 非常好的弹性恢复：可以很容易地压缩并迅速恢复到正常的体积。

Freudenberg已经重新设计了comfortemp® 柔软填充物HO19xPS系列。它已经由高比例的再生纤维组成。现在，在这个新产品系列中，Freudenberg已经取得了显著提高再生纤维比例的技术专长。

comfortemp® 的柔软感

- 由85%的再生纤维和15%的粘结剂组成；
- 不使用化学制品；
- 具有保温性能的可持续性填充物：适用于运动和时尚服装；
- 质量轻，卷曲多；
- 极佳的柔软感；
- 由于多层结构，能够防止纤维的迁移；
- 是轻便光滑尼龙外套的理想材料。

PYUA：2018年慕尼黑体育用品展独家合作伙伴

PYUA是可持续外套方面的专家，是Freudenberg在2018年慕尼黑国际体育用品博览会上的独家合作伙伴。两家公司都希望将技术含量高和生态清洁的产品推向市场。PYUA创始人TimoPerschke对与Freudenberg的合作评论说到：“我们非常高兴能在我们的整个系列中使用comfortemp®的环保纤维球作为填充物，并在2018年慕尼黑国际体育用品博览会上

独家展示它。”

Freudenberg是bluesign®系统的一个新合作伙伴

2017年底以来，Freudenberg一直是bluesign技术的官方合作伙伴，这是一个全球网络，旨在系统地减轻纺织工业对人类和环境的负担。可持续发展深深植根于Freudenberg的公司原则之中。bluesign代表着整个供应链的透明度和合作，是一个促进纺织行业可持续商业实践的著名网络。这使得该系统与bluesign的合作，作为保温和衬里材料可靠且负责任的供应商，完美地适合于Freudenberg。在这种合作的背景下，与可持续产品本身一样，Freudenberg的客户收到了有效的通讯资料，直达销售点。

(资料来源：“www.freudenberg-pm.com”)

Ahlstrom-Munksjö公司的PureArmor™ 具优异透气与防渗性的非织造产品

Ahlstrom-Munksjö，作为一家纤维材料的全球领导者，宣布要发布一种具有透气防渗性能的产品，该产品可用于防护血液传播中的病原体以及用作洁净室的防护服。

Ahlstrom-Munksjö公司的医学副主席Lionel Bonte说：“PureArmor™消除了舒适性在防护性之间做出选择的需要。它为敏感的环境提供了最高的保护，而不需要牺牲穿着者的舒适感受，这与在洁净室服装中经常使用的面料相比，是独一无二的。”

新一代的PureArmor™产品是下一代的三层层压非织造布，具有极低的棉绒，使其适合应用于在颗粒污染敏感的产品上。我们的产品开发工程师通过利用尚在申请中的专利技术，获得了PureArmor™极低水平的棉绒。尚在申请中的专利里的生产工艺将双组分的纤维粘接在一起，使产品在不牺牲柔软性的前提下，不容易脱落。

三层层压产品中心的屏障层是一种膜，它具有一种非多孔的整体结构，提供了一个不透水的屏障，从而阻断了病毒、细菌、液体和粒子的通道。这种薄膜的结构允许水蒸气通过，使得在给穿着者提供最高等级保护的同时能保持舒适性。

(>>> 下转34页)

中东报告

该地区非织造布生产商在医疗卫生市场取得巨大进展

中东非织造布行业规模日益增长。坐落在欧洲、亚洲和北非间的中东企业受益于当地的原料供应和低的制造成本。为了适应该地区日益激烈的市场竞争，非织造布行业在过去几年投入了大量资金，与当地主要的非织造布生产商合作。

土耳其

土耳其跨越东欧和西亚，拥有得天独厚的地理位置，使其成为包括中东、北非地区和西欧在内的主要出口市场枢纽。近期，土耳其即将投产几条新线，其在非织造布行业中仍是一个重要的参与者。

土耳其Mogul公司在Gaziantep新增了三条新线，最近举行了两个新厂的开业仪式，并庆祝其第一个在国外（美国）的投资以及在土耳其Luleburgaz的另一家新厂的开业。

纺粘、熔喷和水刺非织造布生产为位于美国Grey Court, SC的Mogul的南卡罗来纳州非织造公司投资了1800万美金并进行了揭幕仪式。该基地拥有幅宽为3.2米的高速平行铺网水刺生产线，年产量达15000吨。该投资旨在满足湿巾、卫生、过滤和汽车市场的需求。Mogul公司表示通过该基地，将能够更好地为现有客户提供服务，并充分满足南、北美洲和亚太地区对高品质非织造布的需求。作为在20英亩土地上拥有90,000平方英尺的全新制造基地，Mogul的新公司为美国带来了70多个就业机会，这些员工会加到目前隶属于Mogul非织造集团的500名员工上。

Mogul公司首席执行官SerkanGogus说：

“Mogul一直在全球发展，大部分产品销售出口到50多个国家，但要发展成国际公司，还需要在全球进行生产。美国是我们最大的单一出口市场，也是世界上最大的和可持续的经济体之一。”

同时，位于Istanbul之外的Luleburgaz新厂现已全面投入运行，这是Mogul在土耳其的第三家工厂。Mogul在Gaziantep已经开设了两家工厂。AndritzneXline水刺生产线已经安装完毕并设计为交叉铺网，以适应各种产品应用，如汽车行业、人造革、干

纸巾或屋顶基材。Mogul还投资了Andritz Spunjet生产线，生产可分裂型双组分非织造布。

新产品开发也是Mogul增长战略的一部分。“多元化首先使我们有机会区分产品组合，而不是把所有的鸡蛋放在一个篮子里，这样就可以降低风险，然后成为一体式供应商，满足客户的不同需求。多元化使我们能够为不同的产品应用和客户提供服务。”Gogus说。

Mogul近期推出Madaline，称其为类似传统织物的非织造布，具有相似的触感和悬垂性，并且能够缝合而不会磨损。

Madaline采用最先进的专利—bico技术生产独特的长丝，然后在高压水射流作用下同时发生剪切、原纤化和缠结，并将微丝固结到织物上。该微丝细度可比人的头发细100倍。织物的致密结构提供了良好的屏障和过滤性能，微丝具有良好的导湿能力，吸湿性好、快干且透气。Madaline用途广泛：从服装到家用纺织品，从医用擦拭巾到墙纸等。

Mogul近期推出Durell水刺线，并在Luleburgaz工厂投产。交叉铺网技术弥补了Mogul现有Aqualace平行铺网水刺线的不足。据Gogus介绍，交叉铺网与平行铺网不同之处在于，前者将经过梳理的纤维与生产线方向呈90度角进行铺网。而在平行铺网中，经过梳理的纤维平行于生产线方向铺设。通过纤维的交叠，所得到的纤维网在机器方向（MD）和横向（CD）上具有相似的拉伸强度。其应用领域包括汽车、建筑材料、过滤、家用纺织品、擦拭巾、医疗、层压板、个人护理、人造皮革、印刷媒体和一次性床单。

在土耳其Kahramanmaras，一家熔喷和纺粘非织造布生产商Teknomelt在该市开设工厂。Teknomelt出口经理M.SamiOner说，许多工业和制造工厂都把这个城市称为家乡，其中大部分为纺织工业，而Teknomelt是唯一的非织造布生产商。他说：“其中的一个优势在于该城市离主要港口近。”

在产品上，Teknomelt的主要市场是医疗卫

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生产品，其次是吸收性产品和湿巾。根据Oner的说法，卫生市场每年都在增加新的投资，但他认为了解产生这一增长的缘由是很重要的。他解释说：“一些卷材制造商正在建工厂，尽管增长记录显示尿片生产商和非织造布生产商的新投资和增长没有联系。但如果你仔细观察，就会发现，其中一些公司与生产原材料(非织造布)及卫生产品的公司是有关联的。”

随着新产品的引进和需求的不断增长，以及卫生法规对高品质产品的要求，医疗市场也呈现增长态势。Oner解释说：“不光做好生产和销售就够了，提供售后支持也是非常重要的。新产品通常是通过买方集团和供应商之间的合作引入市场的，以便于能够了解市场情况并提供合适的材料。”

在2009年成立的Teknomelt，每年都试图升级和增加新投资，或者增加新产品。2014年，该公司开始生产“鱼尾纹”图案的熔喷湿巾。2017年，该公司推出了三种新产品——磨砂湿巾、多层结构的耐久增强型熔喷湿巾，以及用于汽车隔音熔喷超厚材料。

Oner说：“我们仍是土耳其最年轻但增长最快的非织造布生产商之一。我们每两年参加一次由政府机构组织的关于公司发展进度的竞赛，2014年我们拿到了第31名，而在2016年，我们在土耳其前100名中排名52。这鼓励着我们，而且使我们明白合作，才能通过以客户为导向的方式来关注质量和生产力。我们试图保持我们的名次，并争取每年都做得更好。”

与此同时，在土耳其Gaziantep的两家工厂中，General非织造布公司生产聚丙烯（PP）、聚酯（PET）、聚乳酸（PLA）纺粘非织造布，纺粘-熔喷-纺粘（SMS）非织造布以及热风粘合非织造布（ADL和ATB）。

General非织造布公司旗下有包括HyGen在内的几个品牌，HyGen主要是卫生材料如面层、底层、ADL、腿箍、前耳和吸收芯的包覆。该生产商还提供了一种非常柔和的热风来粘合纤网以满足客户对于高端一次性产品要求达到的柔软触感。其他品牌包括用于过滤行业的FilterGen，用于涂层、层压织物以及家用纺织品的TexGen，

用于汽车行业的AutoGen和用于工业和产业用纺织品应用的IndiGen。

General非织造布公司的新产品是可生物降解的PLA纺粘布，由可再生原料如玉米淀粉或甘蔗制成。根据General非织造布公司业务发展总监AlicanYilankirkan的介绍，原料为100% PLA的纺粘布是可降解的环境友好型产品。且产品是热粘合的，所以它们没有任何化学粘合剂。

最近HyGen还推出了超柔软高性能热风粘合产品，它们既被用于与婴儿皮肤接触的面层材料，也被用于超柔软透气织物底层的一部分。

Yilankirkan说，公司50%的产品出口到欧洲和美国，而在中东市场份额较少。其另一半产品供应本地。

Yilankirkan说：“土耳其的非织造布产业正在高速增长，因此竞争越来越激烈。但General非织造布公司作为一家不仅涉及非织造布行业，还涉及不同贸易和工业领域的公司，已做好充分的准备，以其高素质的团队来支持强大的产品线。”

他补充说道，尤其是在过去的十年里，土耳其已经成为非织造布行业的中心。“几乎所有类型的非织造布产品在土耳其都随处可见。不仅包括普通的商品，还包括专业用产品。土耳其拥有受过高等教育和技术熟练的劳动力以及良好的基础设施，形成其良好的战略位置。这些因素以及企业的创业愿景，使得土耳其成为非织造行业中心。”

最近，Gaziantep另一家非织造布生产商Gulsan集团引进了新的Reifenhäuser Reicofil 5系列产品。Reicofil 5取代了Reicofil 4+技术，并为纺粘和复合非织造布设立了新标准。这条位于土耳其Gaziantep的新生产线设有六根横轴，幅宽5.2米，将增加3.5万吨的产量，同时将服务于卫生市场。

在此之前，Gulsan于2017年2月宣布，它将在埃及的Cairo添加一条“Reicofil 4+”生产线，该线于2018年开始运行。

地区报告

这两项最新的投资将使Gulsan在土耳其的年总产能达到12万吨，在埃及的年总产能将达到4万吨。

据该公司介绍，在土耳其和埃及的新投资可以支持Gulsan公司在该行业 and 该地区的未来发展，为其商业合作伙伴提供高度先进和最新的生产技术，拥有年总产能16万吨的纺熔材料，成为行业领先的制造商，巩固了公司在EMEA（欧洲、中东和非洲）地区的地位。

沙特阿拉伯

在沙特阿拉伯，沙特阿拉伯先进织物（SAAF）在两个地方设厂，一个在靠近Dammam的东海岸，另一个在靠近Jeddah的西海岸。作为纺熔生产商，SAAF的核心市场是医疗和卫生用品。

“KSA（沙特阿拉伯王国）优越的地理位置对SAAF来说是非常有战略意义的，因为它是通往中东地区以及亚洲、非洲、欧洲和美国的门户，同时也是世界上最大的能源（油）供应国。”SAAF卫生部销售总监Darren Stein解释说，“当地原料供应、加工和供应链的全面效益使得KSA成为生产非织造布的绝佳位置。”

在医疗市场上，SAAF生产SMS非织造布用于手术服和手术洞巾以及CSR消毒包装材料，其具有高的拉伸强度和伸长率以及良好的透气性，使其更好的应用于该领域。据该公司介绍，为外科医生和其他手术室工作人员生产的SAAF Medalon产品能够为患者和医务人员提供一定程度的保护，这些是传统产品不存在的。Medalon产品内部经过处理后，提供了一个高品质的防流体渗透能力，超过市场上大多数产品，具有良好的抗静电性和防酒精渗透能力。

在卫生领域，SAAF是纸尿裤和女性卫生用品主要供应商，他们正在寻找具有成本效益的亲水性（用于顶层）或疏水性（BLC/用于底层）的产品以及芯层强吸水性产品。

“SAAF不断寻求扩张的机会，”Stein说。“我们的重点是新产品和设备的升级，通过将产品和性能提升到更高水平，为SAAF获得更大的竞争优势。”

在沙特阿拉伯的Dammam和Rabigh，Saudi German非织造公司（SGN）采用Reifenhäuser技术生产纺粘和纺熔SMS材料。该制造商在比利时的Antwerp还设有一个配送中心，为其欧洲的业务提供服务。SGN销售经理Nigel Gautry称这家公司服务于卫生、工业和农业市场已有21年历史，目前正要进军医疗市场，生产用于手术衣、手术帘及无菌屏障系统的非织造布。

Gautry解释说：“我们决定进军医疗市场，因为这是一个可以改善健康和幸福的核心战略市场。医疗预防越来越受到重视，对一次性医用产品的需求也越来越大，特别是靠近我们海岸的发展中的市场。”

SGN推出的新产品包括一系列用于吸收层的吸收材料，以及高蓬松性、低绒毛和高吸水性的类似织物手感的消毒擦拭材料。SGN UltraSoft具有高蓬松性，可用于婴儿和女性护理产品面层的柔性材料，而SGN UltraSilk也具有高蓬松性、具有如丝般的柔软感，可用于婴儿和女性护理用品的底层或面层。

Gautry说，沙特阿拉伯王国拥有生产非织造布的优越地理位置，因为它是聚合物生产中心，制造成本低，可与其他地区竞争。他补充说：“地理位置上处于中心，可以方便的运输到各大洲。”

以色列

总部位于以色列Tel Aviv的Avgol公司专注于全球卫生市场，提供了婴儿尿片、成人失禁和女性卫生用等一系列产品。其在以色列Tel Aviv、美国北卡罗来纳州Mocksville、中国湖北和俄罗斯Tula的纺熔非织造布公司通过现有的生产基地向32个国家供应产品。该公司最近向Tel Aviv 证券交易所签署了一份协议，以5250万以色列镑（1500万美元）出售其位于以色列Barkan工厂的使用权。但不包括工厂的六条生产线，这仍由Avgol所有。

协议还包括续租协议，根据该协议，Avgol将以468万以色列镑（130万美元）租赁物业和建筑物两年，并可选择延长三次租期，每期两年。Avgol称假设交易完成，它将获得1000万美元的一次性税前资本收益。

(>>> 下转48页)

个人和保健非织造产品的管理及引领作用——EDANA以卅年来的经验支持中东、非洲和欧洲的非织造工业

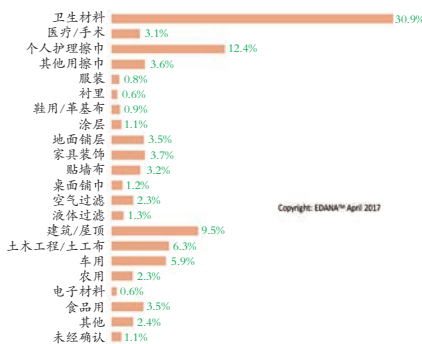
Pierre Wiertz, 总经理
EDANA

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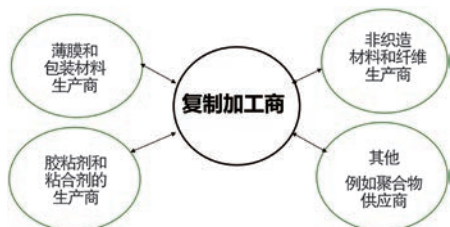
- EDANA 简介
- 产品管理定义
- 是什么驱动了我们的产品？
- 统一测试方法
- 可持续发展措施
- 法规要求和自我管理
- 可冲散案例
- 结论

EDANA 简介

- 服务于非织造材料及相关行业的国际协会
- 代表大欧洲，240万吨非织造材料的工业，其中大约50%用于卫生、医疗和清洁一次性产品市场。
- 全世界：1000万吨非织造材料。



EDANA结构体系



产品管理及引领的定义

“产品管理及引导是将健康、安全 and 环境保护作为产品生命周期不可分割的一部分。它是生产者、供应商和他们的客户之

间的共同责任，建立在供应链上的密切、持续的对话和工作关系基础上，以帮助企业和他们的合作伙伴满足日益增长的对安全和环境可持续产品需求。”
- 改编自美国化学委员会定义

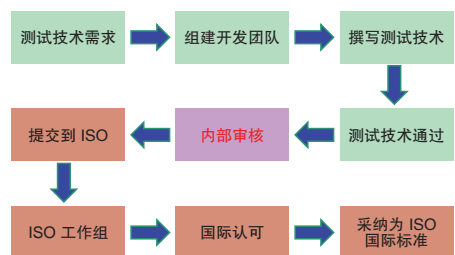
是什么驱动了我们的产品？



非织造材料行业标准制订程序

- EDANA和INDA共同发布为非织造材料及相关产业提供统一测试方法。
- 主要是为非织造产业发布标准
- 加上有限数量成品
- 非织造材料的全球性测试方法 NWSP 2015版

测试方法开发



需要一种方法

- 填补技术上的空白
- 例如，如何测量吸水性、耐磨性、透气性、抗拉强度等。
- 处理安全和管理问题
- 例如，如何测试污染物痕量。
- 改进或替换现有的方法
- 例如：最近用以测量成人失禁产品渗漏前吸收量的“人体模型”测试。

内部审核

- 内部实验室测试（公司或测试机构）。
- 统计专家统计数据相关性。
- 向内部利益相关者介绍
- EDANA内部委员会由不同专业背景的技术专家组成。

技术信息

* 内部审核结束之前不允许使用于其他产业。

提交到 ISO

- 对于对其他产业有用的方法，不适应我们的产业。
- 必要的时候出具此方法的可信度。
- 赋予该技术最先进的国际地位。
- 可能由多个来源供资，进程深入至少需要2年时间。

现有的EDANA / INDA标准

- 20种非织造材料测试方法均通过ISO认证国际标准
- ISO 9073-1 到 ISO 9073-20
- 11种超吸收型聚丙烯酸酯的测试方法是国际标准
- 大约130个其他标准是该行业的内部技术
- 当我们正在讨论时，更多的正在被开发。

EDANA的可持续发展模式

- * 在不损害子孙后代和满足其需求能力的情况下，努力整合和平衡当代人潜在的相互竞争的期望。
- * 可持续发展的三大支柱：
- 环境
- 经济
- 社会

环境可持续性

- 致力于生产制造、供应链和产品开发方面的环保工作。
- 成员国实施计划，以提高能源效率，减少浪费和温室气体排放，保护和保存自然资源。
- 在过去的20年里，纸尿裤生产商专注于减少重量和改进材料，现在他们参与了新的试验回收技术。

行业倡议：环境

- 生命周期评估方法
- 2009年12月的可持续发展宪章
- 2015，2011，2007和2005出版的关于吸收性卫生产品和非织造材料的可持续性报告
- 即将发表的2018可持续发展报告
- 信息图表

行业倡议：废物管理

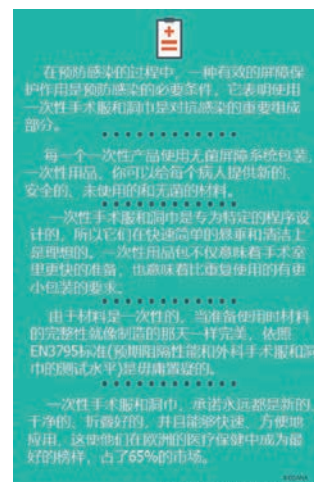
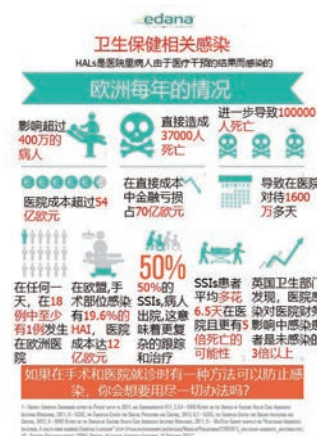
- 废物管理的遵守情况和产品行为的主动评估
- (非织造材料的生产和消费后的废物)
- 巴西、印度和南非用过的AHP在废物管理方面的最佳做法和试点项目说明

经济可持续性

- 在欧洲，EDANA成员国雇佣了大约10万名员工生产吸收式卫生产品。
- 欧洲联盟新成员国的巨大增长和市场渗透潜力。
- 2020年的远景战略和发展大趋势。

社会可持续性

- 个人和医疗保健部门提供的产品现在成为现代生活不可缺少的特征，它提供：
- 生活方式和便利设施
- 有益于皮肤健康
- 预防感染
- 对企业社会责任和权利的承诺
- www.right4hygiene.com



技术信息

欧洲监管环境

在欧盟，非织造的个人护理产品通常不直接受到监管

有两点值得注意的例外：

- 成人失禁产品：根据《医疗器械条例》第2017/745条，被规定为第1类（即低风险、非侵入性）医疗器械。
- 个人护理擦巾：根据《美容产品规例》第1223 / 2009号规定的洗液媒介。
 - 行业必须遵守所有适用的欧盟立法，国家规定，技术标准和安全准则。
 - 遵守的责任在于产品制造商(将产品投放市场的实体)，但需要与整个供应链进行深入探讨，以取得成功。

通用产品安全指令

- 建立必要的要求，以确保消费者产品的安全不受特定部门立法的影响。
- 如果没有具体的国家规定，产品安全按以下方式进行评估：
 - 欧洲标准
 - 欧洲共同体技术规范
 - 良好的实践准则
 - 技术现状和消费者需求

行业自律

- * EDANA为婴儿尿布产业领导了暴露风险评估的道路。
- 风险= (危险x暴露)
- * 自愿性卫生行为守则
- * 协调统一行业立场文件
- * 可冲散性案例
- * 深入的供应链对话

吸收类卫生产品供应链信息



EDANA的“优先规则”

- 通用产品安全指令

* REACH

- * 分类、标签和包装监管
- * 化妆品监管
- * 杀生的产品监管528/2012
- * 欧盟对“纳米材料”的定义
- * 食品接触的指导方针
- * 医疗器械法规和EN 13 795标准

非织造手术服和洞巾

- EN 795和ANSI / AAMI PB70:2012类似的引用，在全球范围内用于外科手术服和洞巾的性能和分类
- ISO 22 610成为耐湿细菌渗透的全球参考

欧盟化学品法规

- REACH（注册、评估、授权和限制的化学物质）自2007年开始实施（并且激发了在土耳其，中国，日本，美国，加拿大和澳大利亚类似的法案）
- 物品制造商的规定
- CLP实施联合国全球协调系统

案例：德国

- BfR (联邦风险评估研究所)个人卫生产品的标准：
 - 列出用于生产的大类材料：非织造材料有PP、粘胶、PE、PET与纺丝油剂的核心吸收剂——纤维素、聚丙烯酸酯等。
 - 特定的标准。例如：纤维素卫生棉条是依照德国的药典10；femcare的纺丝油剂是依照美国的CFR；香薰油是依照国际香水协会(IFRA)的业务守则。

结果

- * 虽然慢但肯定的是会有更多的监管和更多来自公众、环境等的压力
- * 但通过全球协调，产业所有权不断增加
- * 结果：更好的产品和供应链更好的商业环境
- * 持续的监测、识别和应对威胁，以避免不受欢迎的监管
- * 越来越多的媒体压力需要共同的沟通努力

个人护理擦巾的产品管理

- * 一个很好的案例研究：在任何国家都没有规定
- * 通过EDANA / INDA指南和消费信息的15年行业倡议

技术信息

- * 比利时，世界上第一个采用了行业指南 (GD3)规范的国家
- * 废水协会认识到，教育是唯一的解决办法

对擦巾的看法和存在的问题

- 有很少或几乎没有公众理解为什么一些纸巾易冲散，而有一些并不是
- 污水处理厂面临真正的问题：擦巾不可冲散是由于在纤网中有动物脂肪和植物油脂及其他物品
- 有一个习惯和准则就是在盥洗室里用潮湿的擦巾，也没有适当的产品选择和处理的习惯
- 污水处理厂在许多国家面临问题
- 这些问题在媒体上报道，指责某些擦巾以及有时特别标明是可冲散的擦巾堵塞下水道
- 很少或者几乎没有公众理解
 - 使用的制造技术（及其对擦巾性能的影响）
 - 可用的各种擦巾
 - 为什么一些擦巾好冲散，而一些擦巾就应该被丢进垃圾箱里

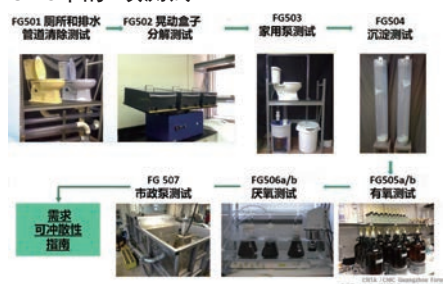
通过EDANA和INDA，擦巾行业15年的行动

- 第一个可冲散性指导（GD）：2008年6月
- GD2 在2009年3月发布
- 包含一个标记来识别产品，不可冲散（美国和欧洲不同的符号）
- GD3在2013年8月发布
 - 简化和简化评估测试
 - 一个全球“不可冲散”的标志
 - 免费公开www.edana.org 和 www.inda.org
 - 修改后的检查2017年1月-4月



评估可冲散性指南的主要特征

GD3中的7项测试



2017修改后的标签实践代码

- 从两方面改变了眼界
 - 设计擦巾的旨在接触人类排泄物/或相关细菌，在盥洗室，擦巾被认为是通过厕所处理（与2012年的UKWIR报告一致）
 - 婴儿擦巾不应作为“可冲散”，即使它能够通过可冲散评估测试
- 决策树反映了新位置，并包含了示例
- 标志的位置部分也被改变了：
 - 要求在擦巾的提取处附近有可见的DNF标志
 - 要求DNF标志在产品上架前的包装上是“显著可见”的
 - 婴儿擦巾，DNF标志要求放置在产品上架前的包装上
 - 关于大小更精确的方向，以及对压花符号的评论

我们全球工业的经验教训

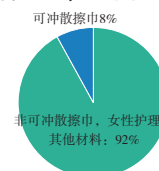
- 堵塞是一个很大的新闻报道题材
- 事实是，设计成可冲散擦巾是不会造成堵塞的！
- 新闻报道不会停留在一个市场上。欧洲发生的事情很快就会传播到美洲或亚洲（反之亦然）
- “非织造材料”与“擦巾”之间没有任何联系
- 公众不了解各类擦巾的区别
- 阐明我们的努力合作至关重要，并建立一道防线
- 当谈到交流我们的信息时，我们需要努力去让它被看到和听到



初步结论：对可冲散问题的积极看法

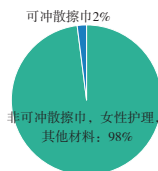
- 正如预期，在EMEA和北美实施 GD3导致：
- 加速可冲散产品基材设计的创新；
 - 重新评估并重新标注产品或引入新的基材；
 - 收集研究发现可冲散擦巾在不断减少；
- 最新的英国堵塞评估结果表明目前所设计的可冲散的擦巾固体碎片在1%以下。

堵塞评估：缅因州，美国 2011

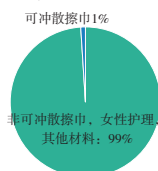


技术信息

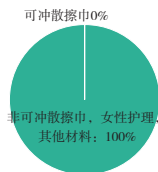
堵塞评估：纽约 美国 2016



堵塞评估：英国，2017年



堵塞评估，德国（2016年），
+私人观测，荷兰（2016年）



初步结论：积极方面（ctd）

修订（2017）业务守则（过渡期后）：

- 提高DNF标志的可视性
- 进一步减少婴儿擦巾的混杂，应该全部被标记为DNF
- 让利益相关者集中精力于教育项目

产品管理总结

- 随着全球监管框架的日益复杂化以及媒体关注度的提高，需要行业协会更加主动
- 自愿准则和供应链对话是有效的

（资料来源：“2017全国大健康，大医疗与非织造产品高端论文集，本文已节选”）

的一部分。去年在俄罗斯的工厂安装了第二条生产线，第五条生产线在北卡罗来纳州Mocksville的工厂进行调试。

Vincent说：“为了进一步发展我们的跨国公司，这就需要拥有世界一流的业务，使得我们公司能够在世界各地始终如一地向客户提供他们所要求的高品质新产品。”

在新品方面，Avgol在INDEX展会上为全球成人失禁市场推出了Skinguard面层材料。非织造布经氧化铜处理，可以促进胶原蛋白等主要蛋白质的生成，从而稳定皮肤层，改善皮肤外观。其结果是增加了对皮肤的保护和改善了气味的散发，在产品的整个使用周期中具有持久的效果。

与此同时，以色列Shalag非织造布公司Kibbutz Shamir的主要业务是在提供热粘合和热轧粘合技术，同时子公司Noam Urim可以小批量的生产缝编和针刺非织造布，该公司还在美国北卡罗来纳州牛津市投入了热粘合和热风粘合技术。Shalag主要关注卫生市场，包括婴儿尿片、女性卫生用品和成人失禁用品。

Shalag公司销售和市场总监Gabi Gal表示，公司目前正在将其在以色列的旧热轧粘合生产线之一升级为新的热风粘合生产线，这将使得其在以色列的热风粘合生产能力增加50%。Gal说Shalag认为热风粘合非织造布的应用高于热轧粘合非织造布，该生产线预计于2018年4月完工。

（资料来源：“www.nonwovens-industry.com”）

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Barkan工厂的出售符合Avgol董事会的决定，最终其在以色列的生产力集中到Dimona的新厂。位于Dimona产值为6000万美元的生产基地是Avgol致力于在欧洲、中东、非洲和南美扩大客户基础的一部分。据Avgol公司全球销售副总裁Shane Vincent介绍，3月份在现场已投放了一台配有SSMMS和双热轧辊配置的新型Reicofil 4生产线，目前正在进行商业化生产。

位于Negev沙漠的以色列新址的开设是Avgol公司数百万美元巨额投资和扩张项目

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旨在应用于不同的工业上去净化空气。在该平台上，一系列产品将随着时间的推移而建立起来，所有这些产品都可以在工业过滤的不同市场部门提供EPA效率并确定客户收益。过滤性能的执行副总裁Fulvio Capussotti评论道：“我们的产品平台Trinitex® Advance是Ahlstrom-Munksjo如何利用其在制造高性能过滤产品方面的经验，为工业过滤应用提供新解决方案的一个例子。”他补充道：“我们期待着与客户讨论Trinitex® Advance W3000的细节，与他们探索其他潜在的新需求。”

（资料来源：“www.ahlstrom-munksjo.com”）

技术发展趋势

印度-卫生产品的未来重要时期

低渗透和收入增长意味着发展即将到来，但挑战依然存在

许多卫生保健公司将印度视为下一个(可能是最后一个)销售增长的大前沿。可支配收入增加以及使用普及率较低，预示着一次性的市场将会增长，但专家们对这一增长何时会开始有不同意见。

纸尿裤行业的专家Pricie Hanna说道：“不管是在未来五年还是五年之后，人们都在争论”。“但它无疑被视为中国之后经济增长的最大机遇。”

根据Euromonitor的数据，印度尿片市场价值约110亿美元，卫生防护市场价值50亿美元，成人尿失禁价值10亿美元。然而，这一差距正在缩小，因为消费者在婴儿护理产品上的花费也越来越多，而且纸尿裤的销售也在增加。但是，与发达国家和甚至许多发展中国家相比，印度人均使用尿片/纸尿裤量仍然较低，因为使用它们的禁忌仍然存在。

Investkonsult的Johan Berlin说道：“当地有言论说婴儿纸尿裤会导致皮疹，产品也不是天然成分，当然，处理这么多的产品本身也是一种浪费和对生态的威胁，所以在印度需要面对多个挑战，比如销售，特别是教育全体居民”。“这当然也是女性卫生产品的一个问题，即它们不是‘安全的’或是‘有毒的’。这是由于缺乏教育、没有足够的可支配收入来有勇气尝试、有关月经的禁忌，尽管在一些运动中，这一情况稍微改善了一些。”

目前，婴儿纸尿裤的使用主要集中在印度的中心城市，而农村地区的儿童纸尿裤则是有限的。这其实限制了经济增长。此外，印度农村的消费者把纸尿裤视为一种昂贵的产品，为了节省成本，他们倾向于使用可重复使用的布式尿片/纸尿裤。

Berlin说道：“印度有一种‘非一次性’的文化，这种文化在他们的思想中是很重要的，这使得打入市场变得更加困难。此外，祖父母照顾孩子的趋势还没有被日托中心或幼儿园所取代”。“当这种情况发生时，我们可能会看到轻微的变化。虽然

我们这一代的母亲有工作，但仍有一代的祖父母在照顾孩子。再加上印度的气候不需要过多穿衣，这个等式就很简单了。”

2016年，在零到三岁的儿童中，纸尿裤的人均消耗量仍然非常低，只有39.3个单位，而北美和西欧分别为1211.5个单位和981.7个单位。印度的消费者只在旅行时使用纸尿裤，这是人均纸尿裤消费低的原因。

与此同时，在女性卫生用品市场，具有最高的一次性使用率，宝洁、强生和金佰里克拉克等领先的卫生防护用品制造商为教育消费者，增加了广告和促销活动，从而增加了卫生保护产品的使用。但是，2016年12-54岁这个年龄层次中，这些产品的人均消费量仍然非常低，只有13个单位，而北美和西欧的人均消费为244个单位和255个单位。

“增长主要是受教育和提高意识来推动的”，H.B. Fuller的EMEA卫生市场经理Lynn Purvis说道。“传统媒体，如电视频道、报纸、地方非政府组织、社交媒体和互联网，也是用来克服禁忌的工具，让女性更愿意谈论她们的女性需求。学校和大学里提供了工具箱和自动售货机，政府提供免费或补贴的物品，并致力于解决与基本卫生需求有关的问题。女权组织也在努力传播更多的知识，建立一个健康的信息共享环境。”

印度的卫生保护是由国际运动员来主导的。而且为了让消费者买得起，大多数产品的定价都在中低水平。由于价格问题，许多消费者仍然不使用卫生防护产品，因此非政府组织和消费者一直要求政府能够免除卫生防护产品的税金。

同时阻碍经济增长的另一个正相关因素是支付能力。“越来越多的富裕消费者要求更多样化的产品，比如选择更薄更天然的产品，因此消费者需要知道，为什么更薄的产品也可以吸收，”Purvis说道。“通常的看法是，较高的绒毛含量意味着在吸收能力方面表现更好。尤其是在女性健康产品上。”

(资料来源:“www.nonwovens-industry.com”)

产品集锦

Airtech推出Combo-Tech (技术组合) 产品

Combo-Tech产品线将各种真空袋装材料组合在一起

Airtech先进材料集团是真空袋装和复合模具材料的生产商，最近推出了新的Combo-Tech产品组合。Combo-Tech是公司的扩展产品线，其将各种真空袋装材料进行组合生产，从而形成完善的产品整体，减少“劳动力”，提高生产力的同时节省人工时间。

据了解，其中的优点还包括：可以省去切割和定位材料的时间；简化生产流程，提高零件质量；利用更平整的材料来改善表面光洁度；并通过减少废料和返工来降低成本。

组合包括：2层或3层技术组合的材料，最大宽度为2.2米（7.2英尺），用于预浸料，灌注和粘接。Airtech Europe Sarl于1991年在卢森堡成立，是Airtech先进材料集团的一个分公司。Airtech先进材料集团是全球最大的真空袋装和复合模具材料生产商，工艺包含预浸料/高压釜、树脂灌注和高达426°C湿法成网。

“我们的产品线包括：真空包装膜、离型膜、压敏胶带、液体释放、剥离层、呼吸器和泄放器、密封胶带，真空袋连接器和软管、橡胶、压力垫、切割工具、真空检漏仪、胶带、PTFE涂层玻璃纤维、模具预浸料和树脂，以及碳和玻璃纤维增强材料。”该公司表示，“业务重点领域包括航空航天、风能、船舶、汽车、印刷电路板、太阳能和常规玻纤增强复合材料。”

公司在全球拥有六个分支机构：美国加利福尼亚州Huntington海滩；美国加利福尼亚州Chino市；美国田纳西州Springfield；卢森堡Differdange；英格兰Chadderton和中国天津。Airtech Europe Sarl分公司已通过EN 9100:2009和ISO 9001:2008认证。

(资料来源:“www.convertingguide.com”)

NuTrend推出吸湿地垫

TaskBrand SureGrip地垫有助于防止滑倒、摔倒和跌倒

NuTrend是一家吸附剂制造商，其推出了TaskBrand SureGrip吸湿地垫，这个地垫采

用的是新一代吸附剂技术，可防止滑倒、摔倒和跌倒。SureGrip由厚重的聚酯/聚丙烯针刺非织造布制成，提供了超高的吸收性和不透水的粘合剂背衬。易于干且不会滑脱，并有50英尺或100英尺的卷筒，可自行裁剪，以满足特定区域的尺寸。材料达到ASTM 726阻燃性标准。

SureGrip的使用减少了由于滑倒而摔伤的事故。由滑倒引起的跌倒占总跌倒事故的12%，目前已有超过100万由于滑倒而挂急诊的人数。滑倒造成的跌倒是导致丧失劳动力的主要原因，对于年龄在55岁以上的人，这是造成其工伤和职业伤害的主要原因。

性能优越的万能吸附材料可以吸收多余的水分、油、油脂、凝结物和溢出物。SureGrip还提供了有效的屏障保护，可以阻挡灰尘、污垢和碎片进入办公室或商店。

无论步行及推车、叉车等仓库运输设备的情况如何，先进的胶粘背衬均可保持垫子在固定位置。为了便于拆卸，垫子边缘附近降低了粘性。

(资料来源:“www.nonwovens-industry.com”)

Ahlstrom-Munksjö为高效燃气轮机过滤发明了Trinitex® Advance W3000

Ahlstrom-Munksjö，一家纤维基材料的全球领先者，宣布推出Ahlstrom-Munksjö Trinitex® Advance W3000。这是一种专门为脉冲喷射式燃气轮机应用所设计的独特过滤介质。

Ahlstrom-Munksjö的产品经理Cedric Vallet说：“Trinitex® Advance W3000能够结合EPA（高效微粒空气）效率，同时在全要求的条件下，特别是潮湿或工业环境中对燃气轮机提供最高保护。”他补充道：“Trinitex® Advance W3000具有很高的颗粒去除效率，减少腐蚀和污染，从而减少维护和意外停机。它还能在较低的压降下提供更高的效率，有助于减少能源消耗。Trinitex® Advance W3000可以在所有具有挑战性的环境中实现更高的性能，从而延长过滤器的使用寿命并降低过滤器更换的频率。

W3000是Trinitex®平台上的第一款产品，
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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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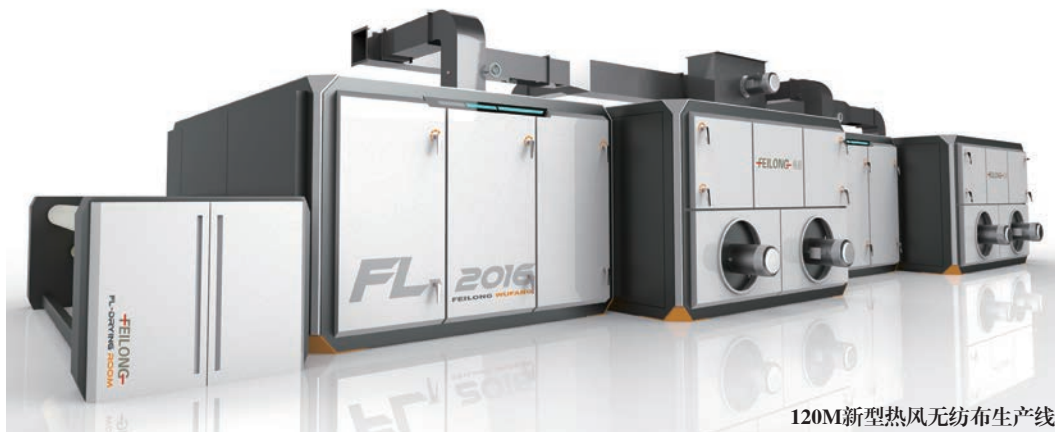
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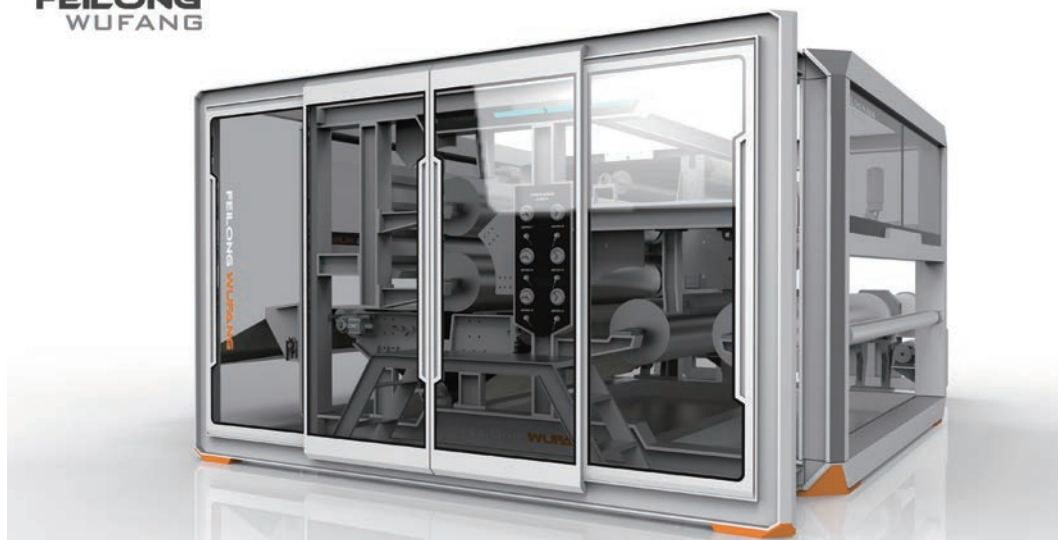
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Machine width: 2.5M, 3.2M
有效烘区: 3M × n单元
Drying zone: 3M × n unit
生产速度: 可达150M/min
Production speed: up to 150M/min

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

120M新型热风无纺布生产线

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Production speed: up to 180M/min

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



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机器宽幅: 2.5-9M
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Needle structure: single board, double boards, four boards

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Needling frequency: 1200n/min, 1600n/min

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Application:

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NT2400透气涂布复合设备

NT2400 Breathable Coating Lamination Machine

NT2100透气涂布复合设备

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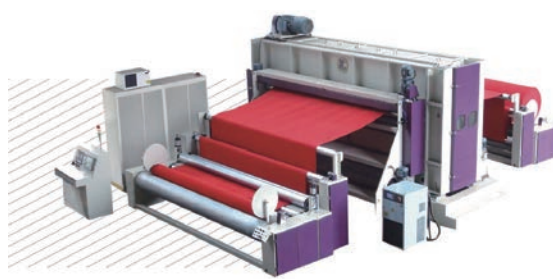
公司坚持“工艺主导、联通产研，科技创新、引领行业”的研发方针，承担多项国家、省、市科研项目，获得国家、省、市科技进步一、二、三等奖，拥有如“宽幅高频起绒针刺机”等一批具有自主知识产权的高新技术产品，多项技术填补国内行业空白，处于国内领先国际先进水平。自主研制的针刺法非织造机械有八大类50多个品种，主销国内高端市场，并已出口欧亚等地，可提供产品定位、工艺制定、设备选型、安装调试、人员培训、设备保养等交钥匙工程。

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植针密度 (Needle Population): 2000 ~ 8000ns/m



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植针密度 (Needle Population): 2 × (5000 ~ 8000)ns/m

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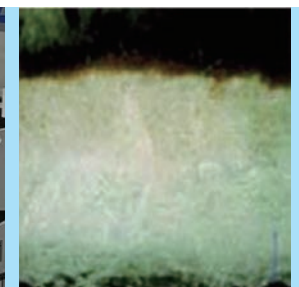
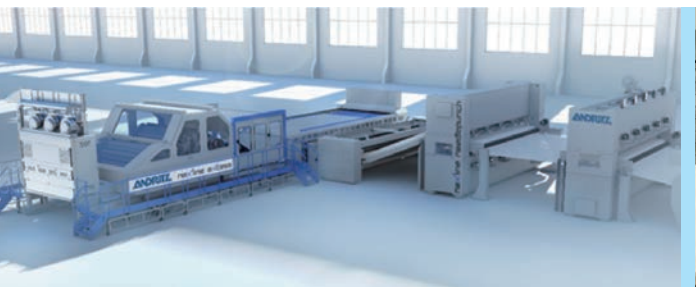
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Nonwovens Asia is published by UBM Asia Ltd., 17/F China Resources Building, 26 Harbour Road, Wanchai, Hong Kong

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Business News

ANDRITZ successfully starts up neXline needlepunch line supplied to AFITEX, France

GRAZ, JANUARY 30; 2018. ANDRITZ has successfully started up a complete neXline needlepunch line at AFITEX, Champhol, France. The line processes several types of raw materials, such as polypropylene, recycled bulk continuous filament, and virgin bulk continuous filament, and produces needlepunched felts for geotextiles.

The scope of supply included all of the machines from opening and blending to end-of-line with profiling capabilities. This line uses proven ANDRITZ equipment such as:

- an opening and blending unit APC 1500
- an aXcess carding machine with a width of 2.5 m
- a crosslapper Profile P325
- two A50 needlelooms with the innovative Zeta drafter

This order demonstrates the strong partnership between ANDRITZ and AFITEX. AFITEX operates an ANDRITZ needlepunch line in Algeria, which enabled them to become the leading geotextiles producer in North Africa.

AFITEX has specialized in drainage, earth retaining, and lining systems for more than 20 years and is now one of the global leaders in these geosynthetic activities. With references in Europe, Africa, the Middle East, and North America, AFITEX covers a wide area of applications, including construction, public works, landfill, and mining engineering.



ANDRITZ neXline needlepunch line for production of geotextiles



Afitex nonwoven geotextile

ANDRITZ announces successful start-up of the neXline needlepunch line supplied to Eco Technilin, Poland

Graz, December 21, 2017. ANDRITZ Nonwoven, part of international technology Group ANDRITZ, has successfully started up a complete, high-capacity needlepunch eXcelle line – from webforming to needlepunching – supplied to Eco Technilin, Poland. The line has a production capacity of about 1,000 kg/h and produces nonwovens made of natural fibers, glass fibers and polypropylene from 300 to 2,400 gsm for the automotive industry.

ANDRITZ has delivered the opening and blending equipment, an eXcelle card for a width of 2.5 m, and a profile crosslapper in combination with ANDRITZ technology for pre-needling and needling of heavyweight nonwovens.

This order once again demonstrates the strong and long-term partnership between ANDRITZ and Eco Technilin, which is already operating two ANDRITZ lines in France.

As a leading provider of natural fiber solutions, Eco Technilin is currently able to produce over 10,000 tons of nonwoven mats per year. The company has developed a range of materials for many applications in the transport industry (automotive, aircraft, buses, railway, etc.), the construction industry, furniture, geotextiles, and many more. It will substantially increase its production in the coming months.



ANDRITZ needlepunch eXcelle line for production of nonwovens for the automotive industry

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The ANDRITZ GROUP

ANDRITZ is a globally leading supplier of plants, equipment, and services for hydropower stations, the pulp and paper industry, the metalworking and steel industries, and for solid/liquid separation in the municipal and industrial sectors as well as for animal feed and biomass pelleting. Other important business segments include automation and service business. In addition, the international Group is also active in the power generating sector (steam boiler plants, biomass boilers, recovery boilers, and gasification plants) and in environmental technology (flue gas cleaning plants) and offers equipment for the production of nonwovens, dissolving pulp, and panelboard as well as recycling plants. The publicly listed technology Group is headquartered in Graz, Austria, and has a staff of approximately 25,700 employees. ANDRITZ operates more than 250 sites in over 40 countries.

Teijin's new Nanofront® Bag Filter offers efficient solution for industrial air pollution

Teijin Frontier Co., Ltd., the Teijin group's fiber-product converting company, announced today that it has developed a new bag-type filter using Nanofront® high-strength ultra-fine polyester fiber that realizes high-efficiency dust collection, energy savings and long life.

Teijin Frontier will market the Nanofront® Bag Filter mainly to manufacturers of cement, steel and powder, targeting sales of JPY one billion by 2020.

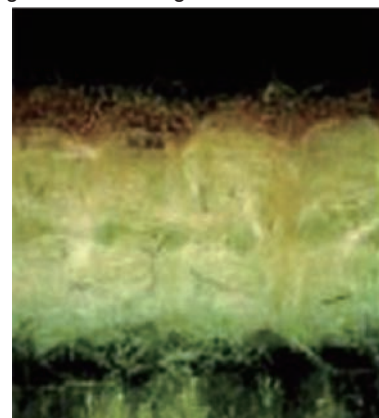
The bag's inside is lined with ultra-fine Nanofront® fibers, which have a diameter of just 700 nm, creating a finely porous structure for the extra-efficient collection of dust and powder. The Nanofront® Bag Filter can reduce fine powder dust emissions by nearly half compared with existing fluorinated-resin membrane bags. The Nanofront® Bag Filter is expected to satisfy Chinese regulations for powder dust emissions of less than 10mg/m³ in urban areas.

Results of demonstration at cement manufacturing facility

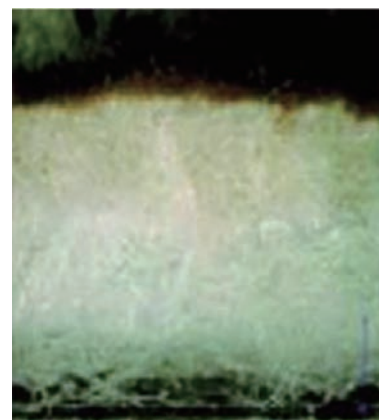
	Fluorinated-resin membrane based bag filters	Nanofront® Bag Filter
Emissions	6mg/m ³	3mg/m ³

Note: The above performance is not guaranteed.

Bag filters after usage



Conventional bag filter



Nanofront® Bag Filter

The Nanofront® Bag Filter also improves ventilation volume by nearly 50% compared with fluorinated-resin membrane bags, and the interval between cleanings to remove dust and powder is prolonged by about 40%. The Nanofront® Bag Filter is also expected to improve productivity by more than 10% by and reducing the cleaning duration. Furthermore, the Nanofront® Bag Filter is expected to last longer thanks to its thick fiber layers.

Results of demonstration at cement manufacturing facility

	Fluorinated-resin membrane bag filters	Nanofront® Bag Filter
Pressure loss ¹	1,500 Pa	800 Pa
Cleaning cycle ²	270 sec	375 sec

Note: The above performance is not guaranteed.

1) Pressure loss: Energy loss per unit volume when fluid passes through bag filter

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2) Cleaning cycle: Intervals to remove dust and powder from bag filters

Demands to reduce powder dust emissions are increasing, especially in China. Regulations now effective in urban China have reduced such of emissions from 30mg/m³ to 10mg/m³. Fluorinated-resin membranes are used for conventional bag filters to reduce emissions by thinning the filtering area and increasing the dust-collection amount, but thinner bag filters clog and decrease ventilation volume. Also, such membranes sometimes rupture when exhaust energy is increased and they must be used in a series, which adds additional costs. Teijin Frontier's Nanofront® Bag Filter overcomes such problems while achieving highly efficient dust collection and ventilation volume.

(Source from: "www2.teijin-frontier.com")

Dilo Group engineering for nonwovens

Starting in 1986, the Shanghai International Nonwovens Conference & Exhibition (SINCE) has become the largest and most important nonwovens exhibition in Asia.

This year, more than 450 exhibitors will present on a floor space exceeding 34 000m² the complete industry value chain from nonwovens raw materials, production machines and accessories to the endproduct. The related industries covered include hygiene, filtration, fabrics and apparel, medical, automotive, wipes, home furnishings and upholstery.

DiloGroup from Eberbach, Germany, with its units DiloSystems, DiloMachines, DiloTemafa and DiloSpinnbau has traditionally taken part in this important exhibition since 1986.

As the leading group in the field of staple fibre nonwoven production lines DiloGroup will inform about complete lines presenting the latest developments in all components. Staple fibre production lines start with fibre preparation – opening and blending – from DiloTemafa, card feeding and cards from DiloSpinnbau and end with crosslappers and needlelooms from DiloMachines.

The quality of DiloGroup's four equipment components, opening and blending, carding,

crosslapping and needling, is important to customers. A DILO line stands for highest productivity with best web quality. This goes hand in hand with a high efficiency as the mentioned four machine groups are controlled by a single drive and control technique and fulfill all requirements for modern crosslinking and smart production.

Individual lines are engineered, manufactured, delivered and put into operation by DiloGroup for the customer's specific purpose and benefit.

Service and spare parts supply to support the high availability of DILO nonwoven production lines is available worldwide. In addition to information about standard universal lines, we will inform about the latest developments in DILO machines which aim to increase efficiency, productivity and improve end product quality by the degree of automation.

An example of such an innovation is the "Vector 200", a new crosslapper by DiloMachines which is unique with an infeed speed of more than 200 m/min.



DILO's crosslapper Vector 200

DILO machines may be used for the production of nonwovens used in automobiles, as floor coverings, synthetic leather, geotextiles and for filtration, just to name the most important fields of application.

A new special line configuration using an online scrim fabric machine for the reinforcement of multi-layered nonwovens has been developed for the production of filter media, geotextiles and roofing material. Information about this special configuration will be available.

Considerable progress has been achieved in

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the processability of special fibres like carbon using recycled fibres to make composite materials. Compact special lines for product research and development with recycled carbon fibres are available and can be discussed with interested visitors.



Dilo compact line for needling Carbon Fibres

A close cooperation with needle manufacturer Groz-Beckert has advanced the development of the needle module technique and the intense needling of light weight nonwovens.

Furthermore, DiloGroup will inform about universal needling technology and carding systems of wide working width and high web speed for water entanglement lines. For this important, special branch of nonwoven production normal lines have a working width of about 3.8 m and medium web speeds of around 200 m/min, DiloGroup's portfolio includes carding systems of wider working width and higher web speeds. DiloTemafa offers in close cooperation with DiloSpinnbau these special web formation systems with working widths exceeding 5 m and resultant web speeds of more than 400 m/min after water entanglement and drying.

Reduced draft between card doffing system and winding are essential to achieve a high web uniformity and an acceptable strength ratio in machine direction to cross direction (MD:CD). DiloSpinnbau sets the standard for high productivity with random roll technology and for best felt homogeneity by low draft. DiloGroup is very successful with these fibre preparation and carding systems in all nonwoven production lines with high productivity and quality requirements.

Further important features of these special installations are the fibre preparation from DiloTemafa, the air handling for card suction, filtration and moistening which result in high line efficiency.

At SINCE 2017 DiloGroup would explain the characteristics of DILO standard and special nonwoven production lines in discussions with international customers. (Source from: "www.dilo.de")

Avgol introduces skinguard

Topsheet material promotes skin health

At INDEX, Avgol introduced its new Skinguard topsheet material for the global adult incontinence market. The fabric is treated with copper oxide to stimulate the production of collagen and other key proteins, stabilize skin layers and improve the look of skin. The result is advanced skin protection and enhancement, improved odor control and long lasting effect throughout the life of the product.

Skinguard is just a part of Avgol's innovative range of nonwovens for the hygiene market including products for baby diapers, adult incontinence and feminine hygiene products.

"Nonwovens are extraordinarily versatile materials and our nonwoven fabric solutions are designed and manufactured according to changing market demands," says vice president of sales Gilad Frenkel. "Avgol continues delivering added values to our customers in its innovation, service and qualities as our customers are our focus."

Key to Avgol's success is its ambitious investment record, which most recently has included the creation of a new manufacturing site in Dimona, Israel, a \$60 million investment designed to grow the company's customer base in Europe, the Middle East, Africa and South America. (Source from: "www.avgol.com")

Sustain natural launches organic cotton femcare line

New company started up by former co-founder/CEO of Seventh Generation and his daughter

Sustain Natural has launched a new line of organic period products via an online subscription service where women can customize their own period kits, conveniently delivered bi-monthly.

Sustain Natural's Period Products include:

- Organic Cotton Tampons - made with

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100% organic cotton with a compact bioplastic, plant-based and biodegradable applicator (most plastic applicators are not biodegradable and create massive amounts of waste). The absorbent core and protective outer layer is made with organic cotton fibers that are ideal for sensitive skin. Available in sizes 'super' or 'regular'.

- Cotton Ultra Thin Pads with Wings - made with 100% cotton with protective wings for a secure fit. Hypoallergenic and breathable, the pads are available in 'day' and 'night' absorbencies.
- Cotton Ultra Thin Liners - made with 100% cotton, the liners are hypoallergenic and breathable, and have a full liner adhesive to guarantee no loose edges.

To celebrate its launch, Sustain is joining forces with Period Equity to rally behind the nationwide movement to remove taxes on tampons and pads which have been deemed 'nonessential' items. While menstruation is a normal and healthy part of women's lives, in 37 states across the U.S., tampons, sanitary napkins and other menstrual hygiene products are subject to sales tax, upwards of 66 cents per box, while shockingly, products such as Rogaine, men's razors and even Fruit Roll-Ups are frequently sales-tax free.

"It's about equity and access – there's no other tax that's this gender biased," says Meika Hollender, co-founder and co-CEO of Sustain Natural. "Tampons are critical to women's overall health and wellness. To tax these items and not acknowledge or exempt them as essential products is another example of gender inequality playing out in policy. Overseeing women's needs, and in turn putting women's health at risk, is unacceptable."

Founded in 2014 by Jeffrey Hollender, the co-founder and former CEO of Seventh Generation, and his daughter Meika, Sustain's expansion into organic menstrual hygiene is a natural next-step for their brand, a product category Jeffrey and his wife Sheila Hollender tackled 15 years ago when they launched organic tampons and pads at Seventh Generation. This debut adds to the brand's existing line of non-toxic sexual wellness products – because all women deserve to know what they're putting inside their vaginas. Its new 100% organic cotton tampons, pads and liners are rayon- and fragrance-free, non-chlorine bleached, and

grown without pesticides – and can be ordered at sustainnatural.com.

With Sustain's online subscription model, women will now be able to customize their own period kits based on their personal menstrual needs. Many women use a combination of products during their menstrual cycle - different types of pads, tampons or both - and so Sustain has built an online Mad Lib style 'Period Flow-Chart', where women can indicate which combination of products they use and for how many days, to configure personalized boxes delivered every other month.

For the first 30 days of the launch, Sustain will match the dollars it collects in sales tax on these products with a donation to the organization Girls Helping Girls. Period. (GHGP) which helps low-income women in this country access menstrual hygiene products. GHGP is dedicated to educating people about this need, particularly among girls and women who may miss school and work because they can't afford basic necessities like tampons and pads, compromising their health, productivity and dignity. (Source from: "www.nonwovens-industry.com")

Akinal invests in Estonia

Spunlace manufacturer to establish first operation outside of Turkey

Turkish nonwovens producer Akinal is investing €20 million in a 24,000 square meter land parcel with existing 11,000 square meter building in Tallin, Estonia. This plant will be dedicated to manufacture spunlace nonwoven roll goods for baby, personal care and medical wet and dry wipes with over 18,000 tons annual capacity.

"Although we may rank in top 20 with our existing nonwoven production capacities, all Akinal investments have been located in Gaziantep, Turkey up to now. This will be the first but not the last step for Akinal to become a global player in the global markets since," says Saim Akinal, founder and chairman. "In our future plans we will continue our investments in different countries and even in different continents. It is not by chance that Akinal is investing strategically and carefully selected location in Tallinn where to serve new potential markets and existing Akinal's sales network with better logistics conditions."

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Founded in 1999 as the first spunlace nonwoven roll goods manufacturer in Gaziantep, Turkey, Akinal currently operates all existing plants and its headquarters in Gaziantep, Turkey. This operation includes 450,000 square meters of land with around 200,000 square meters of building space. Due to its capability and readiness to react flexibly and with innovative products to the continuously increasing requirements of the market.

In addition to wet wipes for a number of personal care applications, Akinal also makes spunlace-based technical substrates for synthetic leather, roofing and isolation, carpet backing, industrial wipes, shoes, automotive, geotextiles, construction, furniture, clothing and filtration.

In other news, Akinal has successfully started up an Andritz Nonwoven neXline wetlace line in Turkey. The highly flexible Wetlace technology, which combines wet forming and hydroentanglement, is especially suited for the production of flushable wipes that are dispersible and 100% biodegradable without any chemical binders.

The line is designed for high production capacities of up to 15,000 tons per year and integrates stock preparation, wet forming, hydroentanglement and drying. The Andritz Wetlace technology fulfills the highest environmental standards for end products and produces certified nonwovens, according to the latest EDANA/INDA guidelines for flushable wipes. Akinal Sentetik Tekstil is about to launch a new generation of flushable fabrics named BioFlush, which are dispersible and biodegradable, and is thus accessing new markets.

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

Hengan acquires stake in Malaysian Hygiene Company

Wang-Zheng makes branded diapers, feminine hygiene products

China's largest producer of sanitary napkins, baby diapers and tissue papers, Hengan International Group, has reportedly acquired a 50.4% stake in Wang-Zheng and has made an offer to takeover the remaining shares in the Malaysian hygiene company.

Wang-Zheng manufactures and distributes processed paper and disposable products like diapers and sanitary napkins, sold under

its own brands, including Drypro, Dryplus, Carina and Carefeel. Wang-Zheng is also an original equipment manufacturer for various local and foreign brands.

In a filing with Bursa Malaysia, Wang-Zheng said Hengan launched the takeover after its indirect wholly-owned subsidiary, Hengan Investments Co Ltd, inked agreements with four parties - Wang-Zheng Resources Sdn Bhd, Macro-Link Sdn Bhd, Charost Ltd and Zhong Xin Ltd - to buy their collective 80 million shares (representing 50.4% of shares) in Wang-Zheng for a total of RM91.2 million (\$14 million).

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

Asahi Kasei to invest in Thailand, Japan

Japanese company to invest \$45 million in Thai spunmelt operation

Japanese fiber and nonwovens producer Asahi Kasei is reportedly spending ¥5 billion or \$45 million on new production lines in Thailand targeting the disposable diaper market. The move will increase the company's capacity in Thailand by 50%. The Thai site, which was established in 2012 and expanded in late 2015, currently makes 40,000 tons of spunmelt nonwovens on two lines and has been operating at full capacity for some time, according to the company.

In other news, the company is ramping up production of high-performance fibers used in automobile seats and air bags as part of a strategy to focus resources on high-value-added fibers and solidify global competitiveness through quality and economies of scale. The Tokyo-based chemical company will install a new production line for high-strength, highly flame-retardant nylon fibers used as reinforcing material for air bags and tires at a plant in Miyazaki Prefecture, boosting capacity more than 20%. The move comes in response to growing air bag demand in emerging countries accompanying stronger vehicle safety standards.

Asahi Kasei will also increase output of artificial leather made of polyester fiber, which is used in car seats and ceilings, by 50% at another plant in Miyazaki Prefecture. The company supplies virtually all European automakers with high-value-added artificial leathers, and sales have been climbing.

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

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In development: Essentia Shield

Fashion entrepreneur creates solutions to female fashion woes

Years of working in fashion and seeing the sacrifices some women make and the discomfort they feel to look good sent Elena Zaltsberg looking for a solution—a product that could be used as a barrier between a women's clothing and her most delicate area. When she couldn't find such a product, she went about developing one on her own. The result is an anatomically-correct, supportive-shaped insert that fits in a woman's pant or underwear or, as she calls it, Essentia Shield.

"There was just nothing like this on the market," Zaltsberg says. "And, it was something that women wanted. Not many people talk about the discomfort but once they open up, it is clear what a problem it can be."

The Essentia Shield features a patented supportive shape that prevents irritation when a women is wearing thongs, g-strings, jeans and other tight fitting cloths without showing an unnecessary bulge or panty line.

Described as non-menstrual but capable of absorbing some moisture, Essentia is made of organic cotton and other Earth-friendly materials and will retain its supportive shape throughout the day and keep its wear feeling fresh, rejuvenated and comfortable.

A fashion executive by trade, Zaltsberg knew little about nonwovens or disposable products as she approached this problem so she created the original prototype out of cotton fabric, but she has been studying disposables and nonwovens technology for the next generation of the product.

"Right now, the product is a reusable cotton product but it is not efficient," she says. "We really want to make a disposable version. It makes more sense."

To better understand nonwovens, Zaltsberg recently attended the Hygienix conference in Austin, TX where she started seeking partnerships. "We don't know much about this business but we have learned that it would only take a small machine adjustment to make our design."

The current prototype has been tested by hundreds of real women with positive feedback, Zaltsberg says.

"The timing is perfect to bring the Essentia panty liner to the marketplace," she adds. "It will improve women's well-being and will lead to a healthier life for many, many women who sorely need this innovative and disruptive product. Because of this and great need for innovative hygienic products by the industry, its financial return will be significant while creating a new industry segment for women with busy and active lifestyles." (Source from: "www.nonwovens-industry.com")

Brückner sets up new production site

German supplier sees strong demand for nonwovens

German technology supplier Brückner has built a new production site a few kilometers from its previous site in Tittmoning (Bavaria). The ground breaking in September 2016 was followed by a one-year construction period. In November 2017 Brückner began step by step to move the production to the new production site. In spring 2018 the moving will be terminated.

The new plant comprises 25,000 square meters of construction hall area and is provided with the latest production technology. Since this is a completely new building, all optimization potentials regarding material flow and work place design could be used. The increasing sizes and weights of the machinery components were considered in the selection of the height of the hall and the type of the installed crane systems. Thus, crane systems for the lifting of weights up to 20 tons and crane hooks in a height of 12 m are available for the final assembly.

The increasing sales success during the last years and the systematic expansion of Brückner's nonwovens sector had a significant influence on the decision to build this new site. In 2017, Brückner sold in the Techno-Line Nonwovens product line several lines for the production of geo-nonwovens, light nonwovens consolidated with bonding agents for the medical sector, voluminous thermo-fused filler nonwovens for the furniture industry and thermo-fusion ovens for ADL, topsheet and backsheet for the

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hygienics industry.

Particularly in the field of hygienic nonwovens, Brückner sees a trend towards products of a better quality with a smoother hand and of more uniform texture. With the development of a new generation of air-through oven, Brückner created the preconditions to provide customers all over the world with the technology to produce these high quality end products. Brückner has sold several of the new oven generation Supra-Flow BA to renowned nonwovens producers all over the world. Particular attention was given to a gentle transport of the not yet bonded web, a particularly uniform air flow through the web as well as a constant temperature distribution across the complete working width. Important findings from very different thermal treatment systems of related Brückner product lines could be integrated into the construction design.

The new oven type is characterized by the following constructive features:

- Gentle fabric transport
- Minimum thermal energy required
- High flow uniformity
- Constant temperature distribution across the working width
- Best possible accessibility of the oven chambers
- Easy to maintain
- Flow-optimized air circulation
- Use of belts with special coating with good detaching characteristics
- Working widths of up to 4200 mm in the standard design
- Production speeds up to 200 m/min

The continuously increasing number of inquiries for this new type of oven shows that the extensive development efforts were definitely justified and that the new belt oven corresponds to the market requirements. (Source from: "www.convertingguide.com")

W+D acquires Bicma

Collaboration will fuel growth in the growing hygiene market

Winkler+Dünnebier (W+D)—a division of Barry-Wehmiller and a leading provider of integrated system solutions for the mail and hygiene industries—has acquired BICMA Hygiene Technologie GmbH. Based in Mayen, Germany, BICMA designs and manufactures machinery for the production of hygiene

products in the personal care sector.

BICMA will complement W+D's Hygiene Solutions business unit, which manufactures machines that produce facial tissue and hygiene products. The collaboration will drive growth for both entities in the rapidly expanding hygiene market.

"It fills us with pride to continue the success story of BICMA, which was founded in 1995," explains Frank Eichhorn, managing director of W+D. "We want to continue to build on the company's solid foundation in the market and learn from the BICMA team members' great technological know-how."

BICMA will continue to be based in Mayen and led by managing director Thomas Spurzem, in collaboration with Eichhorn. Former technical managing director and joint shareholder Lothar Geiger, who helped establish the company, is retiring at the age of 72 but will continue supporting BICMA in an advisory capacity.

"We chose to partner with W+D because both companies are guided by the same principles," says Spurzem. "It is reassuring to know that BICMA will retain our culture of reliability and innovation, and that we can continue to focus on fostering our customers' trust and providing them with exemplary service."

"I am excited to welcome the Bicma team members to W+D and Barry-Wehmiller's people-centric culture," says Bob Chapman, Barry-Wehmiller CEO. "Together, we can enhance our offerings for the hygiene industry, while honoring BICMA's 20-plus years of success in the market." (Source from: "www.convertingguide.com")

Report tracks baby diaper market

Report says consumers are gravitating toward natural and organic products

The "Global Baby Diapers Market 2018-2022" report has been added to ResearchAndMarkets.com's offering. The global baby diapers market is expected to grow at a CAGR of 4.94% during the period 2018-2022.

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Global Baby Diapers Market 2018-2022, has been prepared based on an in-depth market analysis with inputs from industry experts. The report covers the market landscape and its growth prospects over the coming years. The report also includes a discussion of the key vendors operating in this market. To calculate the market size, the report considers the revenue generated through the retail sales of different types of baby diapers.

According to the report, one of the major drivers for this market is consumers' shift toward natural and organic products. At present, parents are increasingly concerned about the health and well-being of their babies because the skin of newborns is relatively delicate and more prone to skin irritation and rashes compared to children of four years and above. Subsequently, parents prefer natural and organic baby diapers, baby soaps, shampoos, lotions, and others to ensure the safety of their babies' skin. These products contain less or negligible synthetic additives, colors, perfume, and artificial preservatives, which helps soothe and restore health to the skin and keep the baby feeling fresh throughout the day.

One of the significant trends in the market is the increased R&D investments by key competitors. The increasing R&D investments by competitors are aimed to further improve the efficiency of the baby care products and their safety for use. The global baby diaper market is witnessing numerous innovations as key competitors are coming up with a variety of baby diapers that would cater to different skin types and ages.

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

SCHOTT & MEISSNER delivers another ADL-speedliner

We are proud that our longtime business partner Merkas A.S., which is part of the larger Hassan Group in Turkey, has placed his trust in us again to support them with our proven Schott & Meissner Air-Through-Technology to produce hygiene products.

Mr. Hakan Sisman, Deputy General Manager of Merkas, aims to increase their well-known R&D support abilities to the Hygiene Industry and widen their product range through this new state of the art line.

Our ADL-Speedliner provides a high production speed and temperature accuracy which ensures an economical efficient manufacturing process of hygiene products. This Single-Belt-Oven also uses the reliable and established Schott & Meissner Air-Trough-Technology to achieve a gentle product treatment and therefore a high-quality result for applications such as ADL & Topsheet.

One of the benefits of our ADL-Speedliner is the well-known Schott & Meissner modular design that allows for a flexible and efficient set-up of the intended production process. An additional advantage is the easy maintenance access for cleaning purposes, which is generally provided within Schott & Meissner machines.

(Source from: "www.schott-meissner.de")

Tredegear Personal Care to expand elastics capacity in North America

Tredegear Personal Care, an operating division of Tredegear Corporation (NYSE:TG), recently announced that it plans to expand its North American manufacturing capacity for elastic fabrics for personal care applications. In response to increased demand for fit and comfort enhancing products for adult incontinence and baby care applications, the Company plans to invest approximately \$25 million in new technology and capacity in its Terre Haute, Indiana plant to enable production of its FlexAire™ elastic fabric products. The Company is currently seeking local approval of the expansion, and, pending approval of tax abatements, expects this additional capacity to be fully operational by the fourth quarter of 2019.

"Our customers have been overwhelmingly positive about our new product launches under the FlexAire™ brand. These new products offer innovative features that respond to growing consumer demand for higher softness, better fit, comfort and breathability," said Steve Prince, President of Personal Care. "Tredegear Personal Care has a 40-year track record of supplying innovative high-quality materials for personal care products, and our new elastic films and laminates continue in this tradition, creating increased value for both our customers and the end consumer."

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

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Wollen spinning and new nonwoven airlay technology at IRANTEX 2017

Textile machinery and Lines manufacturer Cormatex would exhibit at IRANTEX 2017.

Cormatex already exhibit in year 2017 at Index-Geneve, Techtextil-Franfurt, Techtextil NA-Chicago, arising great interest and obtaining great success of visits.

Strong of a long tradition in textile, founded in 1938, Cormatex offers machinery and turn-key lines for the traditional sectors of Woollen Spinning, with unique fiber preparation machineries (wool deburring and dehairing lines), as well as for the more innovative Nonwoven sector, with Carding&CrossLapping as well as with Airlaying systems.

Deeping in its new airlaying technology – called “Lap Formair” – Cormatex can manufacture nonwoven products using virgin fibres, post-industrial and post-consumer waste materials.

This is available in 2 versions: Lap Formair V creates vertical orientation of the fibres, providing excellent resiliency, thermal and acoustic insulation properties; while Lap Formair H creates a horizontal stratification of the fibres, thus improving mechanical properties - tensile strenght, maintaining a gentle fibres handling. Special feature of Lap Formair H is the possibility of processing various types of powder, such as powder resins instead of low melting fibers.

The process works to increase the number of products manufactured from waste materials, reducing waste disposed of in landfills, in-turn providing economical advantages in terms of energy consumption and production costs.

The nonwoven fabrics produced by Lap Formair can be applied to a variety of sectors the company notes, including building construction, automotive, furniture, mattress production, clothing and footwear, leather goods, composites materials and geotextiles, thanks to their thermal and acoustic insulative properties and mechanical resistance.

Processed materials can include natural and synthetic fibres, as well as glass, carbon, basalt fibres, waste materials such as leather, garment and mattress waste, waste from tyre recycling and recycled paper and cardboard.

An airlay pilot line is available at Cormatex premises for research and development projects with customers.

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

Biotech Company launches cleaning wipes

Ode to Clean wipes are made with Bioperoxide, one of the purest forms of hydrogen peroxide made 100% from plants. Biotechnology company Solugen has launched of its first consumer product line, Ode to Clean wipes. Powered by Bioperoxide, one of the purest forms of hydrogen peroxide made 100% from plants and created using Solugen's proprietary technology, Ode to Clean offers consumers a safe, powerful, and convenient way to clean without relying on harsh, petroleum-based chemicals.

Solugen was founded in 2016 by CEO Gaurab Chakrabarti, M.D., Ph.D., and CTO Sean Hunt, Ph.D. Dr. Chakrabarti discovered a unique enzyme that produced hydrogen peroxide using an extremely efficient and ultra-pure method from sugar sources during his M.D. and Ph.D. training in oncology at the University of Texas Southwestern. Dr. Hunt was completing his Ph.D on nanoparticle synthesis for hydrogen peroxide production at the Massachusetts Institute of Technology (MIT).

Through their combined expertise, Drs. Hunt and Chakrabarti saw an opportunity to apply their work to the field of hydrogen peroxide manufacturing, a typically energy-intensive and dangerous process that relies on non-renewable resources like petroleum and produces hazardous by products.

"Hydrogen peroxide is recognized worldwide as a safe and effective cleaning ingredient, but is incredibly dangerous and energy-intensive to create and transport," says Dr. Chakrabarti. "Sean and I wanted to not only develop a technology that reduces the waste and pollution in the production process, but also create a purer product that would be clean and safe to use in our homes with our

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own families."

Through their combined research, Dr. Hunt and Dr. Chakrabarti developed a proprietary micromanufacturing platform, which combines cutting-edge enzymatic technology (via CRISPR/Cas9) with a reactor to create Bioperoxide, a form of hydrogen peroxide made from 100% plant starch.

"Our vision is to reduce the danger and pollution that is associated with the production, transportation and storage of hydrogen peroxide," says Dr. Hunt. "Our micromanufacturing units make it easy to scalably produce Bioperoxide when and where it is needed, reducing the long-term risks associated with storing and transporting hydrogen peroxide."

The team aims to license their proprietary micromanufacturing technology to major chemical companies to use in their own hydrogen peroxide manufacturing or as an end user, helping to reduce the broader environmental impact that chemical manufacturing has on the environment. Capitalizing on the emerging field of enzymatics and the gene editing technology CRISPR/Cas9, Bioperoxide is the first of many chemicals that can be re-imagined through green chemistry, creating cleaner, more efficient and environmentally friendly manufacturing processes.

Solugen's first product line featuring the cleaning power of Bioperoxide is Ode to Clean. Ode to Clean wipes are currently available at www.odetoclean.com. A sleek, low-profile filled dispenser plus one refill pack will be available for \$18.

Ode to Clean's wipes use Bioperoxide and are made from 100% plant starch. Because they are made with only plant starch and water, they are the only cleaning wipes on the market that do not emit toxic fumes or leave behind a toxic residue on surfaces, making them safe to use anywhere in the home. The wipes are 100% biodegradable and compostable, reducing the impact that disposable wipes have on the environment.

"Wipes are incredibly energy intensive to produce and create a lot of waste, but are also incredibly convenient to use," says Dr.

Hunt. "In fact, we could drive from the Earth to the moon and back 18,000 times with the petroleum used to make the cleaning wipes Americans use every year. It made sense that we'd want to tackle this category first, creating wipes that are not only convenient and effective, but that consumers can feel good about using." (Source from: "www.nonwovens-industry.com")

Rusvata adds spunlace capabilities Cotton maker forward integrates into nonwovens production

Rusvata has completed a new Truetzschler hydroentangling line at its headquarters in Rjasan, Russia. Rusvata has been in business since 1896 when it produced the first roll of cotton; today it is the only company which has integrated the complete chain of cotton processing for cotton wool and gauze. Rusvata's latest investment, a modern and highly flexible spunlacing line, will allow it to make more than 700 tons of nonwoven material per month.

The new production line includes fiber opening and blending, carding, hydroentangling, drying and winding capabilities. Derux Group, a commercial agency, with more than a decade of experience in the Russian market, was involved in the project as commercial agency.

Rusvata will mainly use cotton, sourced from its own bleachery, to make nonwovens. This ensures that Rusvata can control the fiber quality and react flexibly to changing customer requirements. The hydroentangled nonwovens will be used in cotton pads, wet wipes and other cleaning wipes as well as textiles for medical applications. The wide range of applications makes this line unique in Russia. The new capabilities will add 150 new jobs to the region.

The new investment will allow Rusvata, Spas-Klepiki's most important employer, to add 150 new jobs to its operation. The company makes medical products such as cotton wool, bandages and gauze for medical institutions and pharmacies all over the country. The new investment is part of a long-term modernization strategy to expand the scope of products such as cotton buds, cotton pads and nonwoven towels. (Source from: "www.nonwovens-industry.com")

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EcoWipes invests in technology from Trützschler and Voith

EcoWipes is a young, innovative company that has become a leading manufacturer and converter of private label products for the hydroentangled nonwoven segment. The firm, which is located to the north of Warsaw, Poland was established in 2009 and has now already ordered its third nonwovens production line.

EcoWipes has a strong focus on innovation and sustainability and intensively monitors local and global market trends. In view of the rising consumer interest in biodegradable materials, EcoWipes opt for partners Trützschler Nonwovens and Voith to supply the new production line. The progressive and sustainable WLS (wet-laid spunlacing) concept developed by the two companies for manufacturing wet-laid hydroentangled nonwovens is a perfect fit for the EcoWipes product range. It is ideally suited for producing flushable wipes but also recyclable and biodegradable products. These materials meet consumer preferences for greater sustainability at the end of the product cycle.

The sale of this fifth WLS facility is testimony to the successful collaboration between Trützschler Nonwovens and Voith as established technology leaders in the wet-laid hydroentangled nonwoven segment.

The new production line at EcoWipes is a flexible wet-dry nonwoven facility. Voith is supplying the HydroFormer, one of the main components of the new line. The HydroFormer concept builds on Voith's long experience in the paper and pulp industry. With HydroFormer technology the suspension is highly diluted, so nonwovens can be produced entirely from cellulose, a renewable and cost-effective raw material.

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

(Source from: "www.voith.de")

Suominen introduces new

sustainability agenda and a novel approach to sustainable nonwovens

Suominen had announced its new Sustainability Agenda to support the implementation of the company's business strategy. The Sustainability Agenda defines Suominen's stance on sustainability through its three focus areas and connects the company's activities to the United Nations Sustainable Development Goals. Moreover, the agenda includes concrete longer-term goals related to environmental and social responsibility.

The Sustainability Agenda covers the years 2018-2021 and includes three focus areas:

A caring company

Suominen aims to improve the quality of life of its employees and aims at business free of social risks. The company focuses particularly on occupational safety, employee wellbeing and social responsibility in the supply chain. The revised Code of Conduct for Suppliers will be introduced in 2018 and Suominen will audit its implementation for all raw material suppliers by 2021. In the field of occupational safety, Suominen sticks to the target of having zero accidents leading to absence.

Low-impact manufacturing

Suominen wants to produce nonwovens with the smallest possible resource consumption and impact on the environment. In particular, the company focuses on improving its efficiency in the use of both energy and water, reducing its carbon dioxide emissions and increasing the share of renewable energy in its energy consumption. The amount of landfill waste from production is to be decreased to zero by 2021.

The most sustainable nonwovens

Suominen strives to offer the most sustainable nonwovens in the market. Suominen's product offering already includes some fully biodegradable products. Now Suominen will create a new kind of measurement tool for evaluating and developing the sustainability of its product range as a whole and on product level. With the tool, it is also easy for Suominen's customers to take sustainability into account just like any other product feature when considering Suominen's nonwovens for their products.

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"The Sustainability Agenda is, together with our Changemaker strategy, Suominen's answer to the prevailing megatrends and the state of our planet, for example climate change, water scarcity and human rights issues. We want to be part of the solution, not the problem. The Sustainability Agenda provides us with us a solid basis to prioritize and conduct the measures we have evaluated to be of greatest importance," says Nina Kopola, President & CEO of Suominen Corporation.

(Source from: "www.suominen.fi")

comfortemp® goes sustainable

Freudenberg Performance Materials Apparel (Freudenberg) has succeeded in achieving the technical feasibility of using recycled fibers in padding. As a new partner of the sustainable bluesign® system, Freudenberg would be presenting the thermo-insulation series comfortemp® down feel HO19xPS and comfortemp® fiberball eco HO29xR at ISPO Munich 2018 from January 28-31.

Weinheim, January 26, 2018. For the first time ever, Freudenberg would be presenting the Eco version of the comfortemp® fiberball padding, the world's first padding made from fiber balls. Made from 80 percent recycled fibers, comfortemp® fiberball eco is a sustainable, high-performance padding and is ideal for sportswear. The remaining 20 percent of the padding is made up of binder components that are essential for making a coherent structure such as padding. "As the first sustainable padding made from fiberballs, comfortemp® fiberball eco combines the benefits of padding and down", explained Ulrich Scherbel, General Manager Freudenberg Performance Materials Apparel.

The benefits of comfortemp® fiberball eco

- Consists of 80 percent recycled fibers and 20 percent binder components
- Manufactured without the use of chemicals
- Sustainable thermal insulation of the highest class
- Ideal for use in sports garments but also suitable for the fashion sector
- Optimal breathability
- Super soft and fluffy
- No fiber migration: the padding maintains its position in the garment and does not clump
- Very good elastic recovery: can be easily

compressed and quickly returns to its normal volume.

Freudenberg has re-engineered the padding of the comfortemp® down feel HO19xPS series. It had already consisted of a high proportion of recycled fibers. Now, with this new product series, Freudenberg has achieved the technical feat of significantly increasing the proportion of recycled fibers.

comfortemp® down feel

- Consists of 85 percent recycled fiber and 15 percent binder components
- Manufactured without the use of chemicals
- Sustainable padding with insulating properties: suitable for use in sports and fashion garments
- Light and voluminous
- Extremely soft feel
- Resistant to fiber migration due to the multi-layered structure
- Ideal for lightweight, smooth nylon outerwear

PYUA: exclusive partner at ISPO Munich 2018

PYUA is a specialist in sustainable outerwear and is the exclusive partner of Freudenberg at ISPO Munich 2018. Both companies aspire to bring technologically top quality and ecologically clean products onto the market. "We are very happy that we can use comfortemp® fiberball eco as padding in our entire collection and present it exclusively at ISPO Munich 2018", commented PYUA founder Timo Perschke about the collaboration with Freudenberg.

Freudenberg is a new bluesign® system partner

Since the end of 2017, Freudenberg has been an official system partner of bluesign technologies, a global network that aims to systematically reduce the burden on humans and the environment caused by the textile industry. Sustainability is deeply rooted in Freudenberg's corporate principles. bluesign stands for transparency and cooperation throughout the supply chain and is a renowned network that promotes sustainable business practices in the textile industry. This makes the system partnership with bluesign a perfect fit for Freudenberg as a reliable and responsible supplier of thermal insulation materials and interlinings. In the context of this collaboration, alongside the sustainable

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products themselves, Freudenberg customers receive effective communication materials, right through to point of sale.

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

Ahlstrom-Munksjö PureArmor™ breathable impervious nonwoven fabric combines superior protection with great comfort

Ahlstrom-Munksjö, a global leader in fiber-based materials, announces the launch of Ahlstrom-Munksjö PureArmor™, a breathable impervious fabric for blood borne pathogen and cleanroom apparel protection.

"PureArmor™ eliminates the need to choose between comfort and protection. It offers the highest possible level of protection for sensitive environments without sacrificing the wearer's comfort, which is unique when compared to fabrics frequently used in cleanroom apparel," said Lionel Bonte, Vice President, Medical, Ahlstrom-Munksjö.

The new PureArmor™ fabric is a next generation tri-laminate nonwoven that has extremely low lint, making it suitable for applications that are sensitive to particle contamination. By leveraging patent pending Ahlstrom-Munksjö technology, our product development engineers achieved PureArmor's™ extremely low levels of lint. The patent pending manufacturing process welds bicomponent spunbond fibers together which makes the fabric less prone to shedding without sacrificing softness.

The barrier film layer at the center of the tri-laminate fabric is a membrane which has a nonporous monolithic structure that provides an impervious barrier, thus blocking the passage of viruses, bacteria, fluids and particles. The structure of the film allows moisture vapor to pass through, allowing the wearer to remain comfortable while providing the highest level of protection.

Most nonwoven fabrics available for cleanroom applications have particle filtration efficiency between 94 – 98% meaning that the fabric allows hundreds of thousands of particles to be released into the cleanroom environment in addition to potential blood borne pathogens. PureArmor's™ monolithic

film design stops 100% of the particles and potential blood borne pathogens.

"PureArmor™ is an example of how Ahlstrom-Munksjö is leveraging our experience in manufacturing high protection surgical fabrics into products for other sensitive environments that require high levels of protection." commented Jason Beard, platform leader, High Performance Medical, Ahlstrom-Munksjö.

Ahlstrom-Munksjö's diverse product portfolio of fabrics within the medical segment also includes fabrics for use in many types of protective apparel, surgical drapes, gowns and sterile barrier systems meeting demanding performance needs.

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

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The fabric is treated with copper oxide to stimulate the production of collagen and other key proteins, stabilize skin layers and improve the look of skin. The result is advanced skin protection and enhancement, improved odor control and long lasting effect throughout the life of the product.

Meanwhile, Kibbutz Shamir, Israel-based Shalag Nonwovens' main business is in air-through bonded and calender bonded technologies, but also produces small volumes of stitchbonded and needlepunched nonwovens through the subsidiary Noam Urim. The company also manufactures with thermal bonded and air through bonded technologies in Oxford, NC, in the U.S. Shalag largely focuses on the hygiene market, including baby diapers, feminine hygiene and adult incontinence products.

Gabi Gal, Shalag's director of sales and marketing, says the company is currently upgrading one of its old calender bonded lines in Israel to a new air through bonded line, which will increase its air through bonded capacity in Israel by 50%. The reasoning behind the move is that Shalag sees more opportunities with ATB nonwovens than with calender bonded, according to Gal. The line is expected to be complete in April 2018.

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

Middle East report

Nonwovens producers in the region are finding success in the hygiene and medical markets

Activity in the Middle Eastern nonwovens industry is growing. Sitting between Europe, Asia and North Africa, companies in the Middle East benefit from the local raw material supply and low manufacturing costs. To get an update on what's new in this increasingly competitive geographical market, which has seen heightened investment in the last several years, Nonwovens Industry touched base with key nonwovens producers in the region.

Turkey

Straddling Eastern Europe and western Asia, Turkey's advantageous geographical position makes it a regional hub to key export markets, including the Middle East and North Africa region and Western Europe. With several new lines coming onstream recently, Turkey continues to be an important player in the nonwovens industry.

Three new lines have been added by Gaziantep, Turkey-based Mogul, which recently celebrated the openings of two new plants; its first foreign investment - in the U.S. - as well as the opening of a new plant in Luleburgaz, Turkey.

The maker of spunbond, meltblown and spunlaced nonwovens unveiled Mogul South Carolina Nonwovens - an \$18 million investment - in Grey Court, SC. The site operates a 3.2 meter, high-speed parallel laid spunlace line with 15,000 tons of annual capacity. The investment is intended to meet demand in the wipes, hygiene, filtration and automotive markets. From this base, Mogul says it will be able to better serve existing customers and capitalize on the growing need for high quality nonwovens in North and South America as well as in Asia-Pacific. Featuring 90,000 square feet of manufacturing space on 20 acres of land, the new site brings more than 70 jobs to the U.S., adding to the 500 employees that are currently part of the Mogul Nonwovens group.

"Mogul has always been a global player with the majority of sales exported to more than 50 countries globally, but to be an international player you also need to manufacture globally," says Serkan Gogus,

CEO of Mogul. "The U.S. is our largest single export market and one of the largest and sustaining economies in the world which played a role in the decision."

Meanwhile, the new Luleburgaz plant, outside of Istanbul, is now fully operational and is Mogul's third plant in Turkey. Mogul already operates two plants in Gaziantep. An Andritz neXline spunlace line was installed, and designed with a crosslapped configuration in order to cater to a wide variety of end uses such as applications for the automotive sector, artificial leather, dry wipes or roofing substrates. Mogul also invested in an Andritz Spunjet line for the site to produce technical nonwovens from splittable bicomponent filaments.

Also part of Mogul's growth strategy is new product development. "Diversification first gives us the chance to differentiate product mix and not to put all of our eggs in one basket, allowing us to reduce risks and then allowing us to be a one stop shop for our customers' different needs. And diversification allows us to serve different applications and customers," Gogus says.

Launched in recently, Mogul describes Madaline as a nonwoven that can be treated like a traditional textile - with similar touch and drape and the capability to be stitched without fraying.

Madaline features state-of-the-art and patented bico technology to extrude unique filament designs and thereafter subject them to high-pressure water jets to simultaneously shear, fibrillate, entangle and consolidate microfilaments into a fabric. Its microfilaments are up to 100 times thinner than a human hair. The fabric's dense structure provides good barrier and filtration properties and, thanks to its microfilaments, has good moisture management capability. It is absorbent, quick to dry and breathes well. Madaline can be used in a range of applications from clothing to home textiles and medical wipes to wallcoverings.

Durell spunlace from Mogul debuted in recently and is manufactured at the Luleburgaz plant. The crosslapped product supplements Mogul's existing production of Aqualace parallel-laid spunlace. According to Gogus, crosslapped spunlace technology

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differs from parallel laid spunlace in that the crosslapper forms a web by laying down the carded fiber at a 90-degree angle to the line's direction. In a parallel-laid process the carded fiber is laid down parallel to the line's direction. Through this crosslapping of the web, the resultant spunlace achieves similar tensile strength in both machine direction (MD) and cross direction (CD). Application areas include automotives, building materials, filtration, home textiles, wipes, medical, laminates, personal care, artificial leather, print media and disposable linens.

In Kahramanmaras, Turkey, Teknomelt, a producer of meltblown and spunbond nonwovens, operates out of one site in the city. M. Sami Oner, export manager of Teknomelt, says many industries and manufacturing plants call this city home, mostly in the textile industry, but Teknomelt is the sole nonwovens manufacture there. "A main advantage is that our city is close to the main ports in the region," he says.

Volume wise, Teknomelt's key markets are hygiene and medical, followed by absorbent products and wipes. According to Oner, the hygiene market is growing with new investments every year, but he says it's important to understand where this growth is coming from. Some roll goods manufacturers are establishing diaper-manufacturing plants, he explains, though growth records show new investments and growth for diaper producers and nonwovens producers are shown separately. "But if you look deeply, some of them are related - with the same company outputs that have raw material (nonwovens) and hygiene products manufacturing capabilities."

Growth is also being seen in the medical market, with new product introductions and increasing demand, along with the expectation of high quality products because of hygiene regulations. "Not only is producing and selling enough, but providing after sale support is becoming very important," Oner explains. "New products are usually introduced to market with cooperation between buyer groups and suppliers to understand the [situation] and provide the right material for it."

Each year, Teknomelt, which was established in 2009, tries to either make upgrades and

new investments or add new products to its offerings. In 2014, the company started to make meltblown wipes with a "crow's foot" pattern. This year, the company launched three new products - abrasive wipes, meltblown wipes with enhanced durability with multi layer construction, and an extra thick material made of meltblown for sound insulation in automotives.

"We are still one of the youngest but fast growing nonwoven manufacturers in Turkey," Oner says. "Every two years we apply for a fastest growing companies competition organized by government agencies, and in 2014 we took 31st place and in 2016 we were 52nd among the top 100 in Turkey. This encourages us, and we know that it is only possible with the help of our team that is focusing on quality and productivity with customer oriented approaches. We try to maintain our place and make it better every year."

Meanwhile, General Nonwovens, which operates out of two factories in Gaziantep, Turkey, manufactures polypropylene (PP) spunbond nonwovens, polyester (PET) spunbond nonwovens, polylactic acid (PLA) spunbond nonwovens, spunbond-meltblown-spunbond (SMS) nonwovens, and air through bonded nonwovens (ADL and ATB).

Several brands are manufactured by General Nonwovens including HyGen, which is used in the hygiene industry for topsheets, backsheets, ADL, leg cuffs, front ears and core-wraps. The producer also offers a very soft air through bond fabric for companies looking for soft-touch fabric used in premium disposable product end uses. Other brands include FilterGen for the filtration industry, TexGen for coated and laminated fabrics, as well as home textiles, AutoGen for the automotive industry and IndiGen for industrial and technical textiles applications.

New from General Nonwovens are PLA spunbond fabrics that are biodegradable and are made of renewable materials such as cornstarch or sugarcane. These 100% PLA spunbond fabrics are decomposable and environmental friendly. Because these fabrics are thermally bonded, they do not have any binder chemicals, according to Alican Yilankirkan, business development director, General Nonwovens.

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New supersoft highloft ATB products from the HyGen brand were also introduced recently, and are used both as a topsheet layer, which is in contact with a baby's skin, as well as the outer layer as a component of a super-soft breathable textile backsheet.

Yilankirkan says the company exports about 50% of its products to European countries and the U.S., while a limited portion serves Middle East markets. The other half of its output is consumed locally.

"Nonwoven production in Turkey is growing at a very high rate and therefore the competition becomes more and more visible every year," Yilankirkan says. "However, General Nonwovens as a company with roots not only in the nonwovens industry, but also in different fields of trade and industry, is well prepared to manage the business with its high-qualified team supported with a strong product pipeline."

Turkey, especially in the last decade, has become a center for nonwovens, he adds. "Almost all type of nonwovens are widely available in Turkey. These not only include commodity products but also specialties. Turkey has a very good strategic location supported with highly educated and skilled workforce and a good infrastructure. These parameters combined with the entrepreneurship vision of the families in this business lead Turkey to be center for nonwovens."

The most recent news from another Gaziantep-based nonwovens producer, Gulsan Group, is the purchase of a new Reifenhäuser Reicofil 5 line. Reicofil 5 supercedes Reicofil 4+ technology and sets new standards for spunbond and composite nonwovens, according to Reifenhäuser. The new line, which will be located in Gaziantep, Turkey, will feature six beams, will be 5.2 meters wide and will add 35,000 tons of capacity to Gulsan's operation. It will serve the hygiene and markets.

This news follows a previous announcement from Gulsan, in February 2017, that it would add a new Reicofil 4+ line at its Cairo, Egypt, site, which is on track to start in 2018.

These two latest investments will bring

Gulsan Turkey's total capacity to 120,000 tons and Egypt's total capacity to 40,000 tons per year.

According to the company, these new investment decisions for Turkey and Egypt have been made to support Gulsan's future growth in the industry and in the region with highly sophisticated and up-to-date production technologies to its business partners and reinforces the company's position as one of the leading manufacturers of spunmelt materials with total of 160,000 tons per year capacity in the EMEA (Europe, Middle East and Africa) region.

Saudi Arabia

In Saudi Arabia, Saudi Arabian Advanced Fabrics (SAAF) operates at two sites, one on the East coast of the country near Dammam and one on the West coast near Jeddah. A producer of spunmelt and treated nonwovens, SAAF's core markets are medical and hygiene.

"The location of KSA (Kingdom of Saudi Arabia) is very strategic for SAAF as it is a gateway to the Middle East region as well as Asia, Africa, Europe and the USA and sits alongside the largest source of raw material - oil - in the world," explains Darren Stein, sales director Hygiene, SAAF. "The all-round benefit of local raw material supply, converting and supply chain makes KSA a really great location for nonwoven production."

In the medical market, SAAF makes SMS fabrics for gowns and drapes, and CSR sterilization wrap, offering high tensile strength, elongation, and good air permeability that enables superior performance for this application. SAAF's Medalon product used for surgeons and other operating room staff offers a degree of protection, for both the patient and healthcare worker that is not found in traditional products, according to the company. Treated in-house, Medalon offers a high level of barrier to fluid penetration with a hydro head exceeding most products on the market, good antistatic properties and full alcohol repellency.

On the hygiene side, SAAF is a major supplier to diaper and feminine hygiene manufacturers that are looking for cost

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effective fabrics that are either hydrophilic (topsheet) or hydrophobic (BLC/backsheet), as well as core containment fabrics.

"SAAF is constantly evaluating expansion opportunities," Stein says. "[Our] focus is on both new products and machinery upgrades - changes that will give SAAF a further competitive advantage by taking products and capabilities to the next level."

In Dammam and Rabigh, Saudi Arabia, Saudi German Co. For Nonwoven Products (SGN) manufactures spunbond and spunmelt SMS materials from Reifenhäuser technologies. The manufacturer also has a distribution center in Antwerp, Belgium, that services its European business as a local supply. Targeting the hygiene, industrial and agricultural markets, Nigel Gautry, marketing and sales manager, SGN, says that 21-year-old company is entering the medical market with nonwovens for gowns, drapes and sterile barrier systems.

"We decided to enter the medical market as this is a market that is perfectly aligned to our core strategy of improving health and happiness," Gautry explains. "Medical interventions are increasing and the demand for single-use medical fabrics are in greater demand, especially in the developing markets close to our shores."

New product introductions from SGN include a range of absorbent materials for absorbent drapes and for disinfection wiping materials with high bulk, low lint and high absorbency with textile like feel. In hygiene, SGN UltraSoft is a high bulk, soft material for topsheet applications in baby and feminine care, while SGN UltraSilk is a high bulk, silky soft feel nonwoven which can be used for backsheet and topsheet applications in baby and feminine care.

Gautry says the Kingdom of Saudi Arabia is an ideal location for nonwovens manufacturing because it's the center of polymer production with low manufacturing costs, which can compete with other geographies. "Geographically [it's] centrally located for delivery to all continents," he adds.

Israel

Focusing on the global hygiene market, Avgol, headquartered in Tel Aviv, Israel,

delivers a range of products to the baby diaper, adult incontinence and feminine hygiene sectors. The spunmelt nonwovens producer supplies 32 countries from existing production sites in Tel Aviv, Israel; Mocksville, NC in the U.S.; Hubei, China; and Tula, Russia. The company recently reported to the Tel Aviv Stock Exchange that it had signed an agreement for the sale of its rights in its factory in Barkan, Israel, for NIS 52.5 million (\$15 million). The deal excludes the six production lines at the plant, which will remain under Avgol's ownership.

The sale includes a lease-back agreement under which Avgol will lease the property and buildings for two years for NIS 4.68 million (\$1.3 million) per year, with options to extend the lease for three periods of two years each. Avgol says that assuming the deal is completed it will post a one-time pre-tax capital gain of \$10 million.

The sale of the Barkan factory is in line with the decision by Avgol's board to eventually concentrate its Israeli production in its new factory in Dimona, Israel. The \$60 million manufacturing site in Dimona is part of Avgol's ambition to grow its customer base in Europe, the Middle East, Africa and South America. A new state-of-the-art Reicofil 4 line with SSMMS and twin calendar configuration was commissioned at the site in March and is currently commercializing, according to Shane Vincent, vice president global sales & marketing, Avgol.

The opening of the new Israeli site, located in the Negev desert, forms part of a huge multi-million dollar investment and expansion program by Avgol. A second production line was installed at its Russian site last year and a fifth line is being commissioned at its site in Mocksville, NC.

"In order to further grow our multi-national presence, we need to have world-class operations that allow us to deliver the very best new product developments, that are demanded by our customers, on a consistent basis around the world," Vincent says.

In new product news, Avgol introduced Skinguard topsheet material for the global adult incontinence market at INDEX show.

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Product stewardship for Personal- and Health Care Nonwovens – 30 years' experience of EDANA support to the industry in EMEA

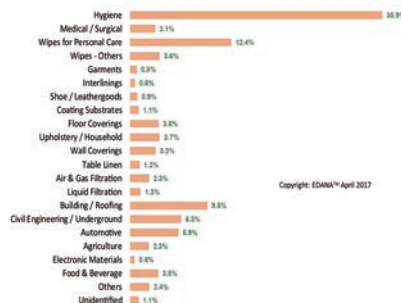
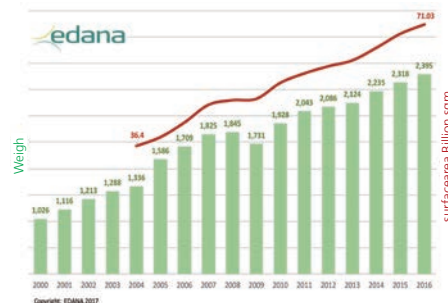
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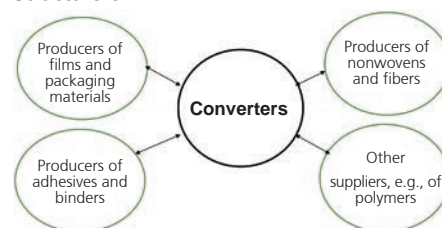
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- Conclusions

EDANA at a glance

- The International Association Serving the Nonwovens and Related Industries
- Representing a 2.4 million tonne industry in Greater Europe, of which about 50% go to single use hygiene, medical and wipes product markets
- Worldwide: 10 million tonnes



Structure of EDANA



Product Stewardship Defined

"Product stewardship is the practice of making health, safety and environmental protection an integral part of the life cycle of products. It is a shared responsibility

between producers, their suppliers and their customers based on close, sustained dialogue and working relationships across the supply chain, to help companies and their partners meet the increasing demand for safe and environmentally-sustainable products."

- Adapted from American Chemistry Council definition

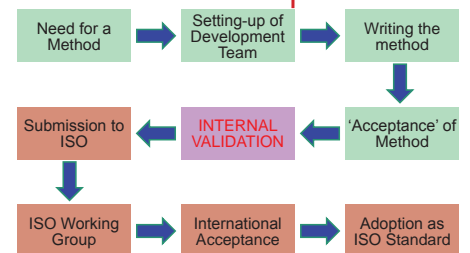
What Drives our Products?



Nonwovens Standard Procedures

- EDANA and INDIA publish Harmonized Test Methods for the Nonwovens and Related Industries
- Primarily for nonwovens
- Plus a limited number for finished products
- A global approach to testing nonwovens NWSP edition 2015

Test Method Development



Need for a Method

- To fill a technical void
- E.g., how to measure absorbency, abrasion resistance, permeability, tensile strength etc.
- To deal with a safety and/or regulatory concern
- E.g., how to test for trace contaminants
- To improve or replace an existing method
- E.g., recent 'Mannequin' test for measuring Absorbency Before Leakage of adult incontinence products

Internal Validation

- Inter-laboratory validation (companies and/or test houses)
- Correlation of data by statistical experts

Technology News

- Presentation to internal stakeholders
- Internal EDANA committee of technical experts from diverse backgrounds
- * End of the process for methods NOT to be used outside the Industry!

Submission to ISO

- For methods that are useful for the external world, outside our Industry
- Lends credibility of method where needed
- Imparts an international state-of-the-art status to the method
- In-depth process taking at least 2 years, possibly funded by multiple sources

Existing EDANA / INDA Standards

- 20 test methods on nonwovens are ISO-approved International Standards:
- ISO 9073-1 to ISO 9073-20
- 11 methods on superabsorbent polyacrylates are International Standards
- Approximately 130 other standards are internal methods for the Industry
- More being developed as we speak!

EDANA's Sustainability Model

- An effort to integrate and balance the potentially competing expectations of the present generation without compromising the ability of future generations to meet their needs
- 3 pillars of sustainability:
- Environmental
- Economic
- Social

Environmental Sustainability

- Commitment to responsible environmental practices in manufacturing operations, supply chain and product development
- Members implement plans to improve energy efficiency, reduce greenhouse gas emissions and waste, & protect and conserve natural resources
- Over the last 20 years, diaper manufacturers focused on weight reduction and improvements in materials, and are now involved in new pilot recycling technologies

Industry Initiatives: Environment

- Life Cycle Assessment methodology
- Sustainability Charter of December 2009
- Publication of Sustainability Reports on Absorbent Hygiene Products and nonwovens

in 2015, 2011, 2007 and 2005

- Upcoming 2018 Sustainability Report building on previous versions
- Infographics

Industry Initiatives: Waste Management

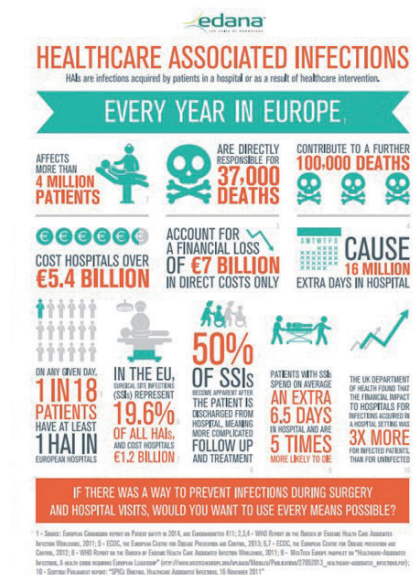
- Waste management compliance and proactive evaluation of product behaviour (both nonwovens production and post-consumer waste)
- Illustration of best practice and pilot projects for waste management of used AHP's in Brasil, India & South Africa

Economic Sustainability

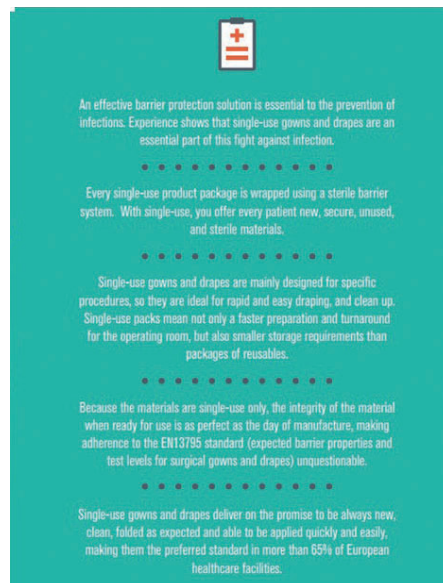
- EDANA members manufacturing absorbent hygiene products employ some 100,000 people in Europe
- Considerable growth and market penetration potential in newer European Union Member States
- Vision 2020 strategy & megatrends

'Social' Sustainability

- The personal and health care sectors deliver products that are now an indispensable feature of modern life, delivering:
- Lifestyle and convenience
- Skin health benefits
- Infection prevention
- Commitment to corporate social responsibility and Right4Hygiene
- www.right4hygiene.com



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- * Harmonized industry Position Papers
- * The case of Flushability
- * In-depth supply chain dialogue

SUPPLY CHAIN INFORMATION FOR ABSORBENT HYGIENE PRODUCTS



European Regulatory Landscape

Nonwoven-based personal care products are generally not directly regulated in the EU 2 noteworthy exceptions:

- Adult Incontinence Products: Regulated as Class 1 (i.e., low risk, non-intrusive) medical devices under the Medical Devices Regulation 2017/745.
- Personal Care Wet Wipes: Carrier medium for lotions regulated under the Cosmetic Products Regulation 1223/2009
- Industry must comply with all applicable EU legislation, national rules, technical standards and safety guidelines.
- Responsibility for compliance lies with the product manufacturer (the entity placing the product on the market), but requires in-depth dialogue with whole supply chain in order to succeed

General Product Safety Directive

- Establishes essential requirements to ensure safety for consumer products not covered by specific sector legislation.
- If there are no specific national rules, a product safety is assessed in accordance with:
 - European standards
 - European Community technical specifications
 - Codes of good practice
 - State of the art and consumer expectations

'Self-Regulation' by Industry

- * EDANA leading the way in Exposure-Based Risk Assessment for baby diapers
- risk= (hazard x exposure)
- * Voluntary Code of Practice for Tampons

EDANA's 'Priority Regulations'

- * General Product Safety Directive
- * REACH
- * Classification, Labelling & Packaging Regulation
- * Cosmetic Products Regulation
- * Biocidal Products Regulation 528/2012
- * Harmonised EU definition of 'nanomaterials'
- * Food Contact guidelines
- * Medical Devices Regulation & standard EN 13 795

Nonwoven surgical gowns and drapes

- EN 13 795 and ANSI/AAMI PB70:2012 similar references, used globally for performance and classification of surgical apparel and drapes
- ISO 22 610 becoming the global reference for resistance to wet bacterial penetration

EU Chemicals Legislation

- REACH (Registration, Evaluation, Authorisation & Restriction of Chemicals) in force since 2007 (and has inspired similar legislation in Turkey, China, Japan, US, Canada and Australia)
- Provisions for articles manufacturers
- CLP implementation of the United Nations' Globally Harmonised System

National Example: Germany

- BfR (Federal Institute for Risk Assessment) criteria for personal hygiene products:
 - Lists broad categories of materials used

Technology News

in manufacturing: nonwoven – PP, viscose, PE, PET with spin finish absorbent core – cellulose, polyacrylate etc.

- Specific criteria, e.g., cellulose for tampons in accordance with German Pharmacopeia 10, spin finishes for femcare in accordance with US CFR, and perfume oils in accordance with International Fragrances Association (IFRA) Code of Practice

Results

- * Slowly but surely, more regulation, more pressure from public, environment etc.
- * But ever-increasing ownership by Industry through global harmonisation
- * Outcome: Better products and better business conditions for the supply chain
- * Ongoing monitoring, identification & response to threats to avoid unwelcome regulation
- * Growing media pressure requires joint communication efforts

Product Stewardship for personal care wipes

- * A good case study: no regulation in any country
- * 15 years of industry initiative through EDANA/INDA guidelines and consumer info
- * Belgium, first country in the World to regulate, has adopted the industry guidelines (GD3)
- * Waste water associations recognise that education is only solution

The perception of wipes, and the issue

- There is little or no public understanding of why some wipes are OK to flush, and some aren't
- Wastewater treatment plants are facing real problems as a result of non-flushables, fats oils and grease, and other items in their network
- There is a habit and practice to use a moist wipe in the bathroom, without the habit of proper product selection and disposal
- Wastewater treatment plants are facing problems in many countries
- These problems are reported in the media, claiming that wipes, and sometimes specifically flushable wipes are to blame
- There is little or no public understanding of
 - The manufacturing technology used (and its impact on the performance of the wipe),
 - The variety of wipes available, and

- Why some wipes are ok to flush, and some wipes should go in the rubbish bin

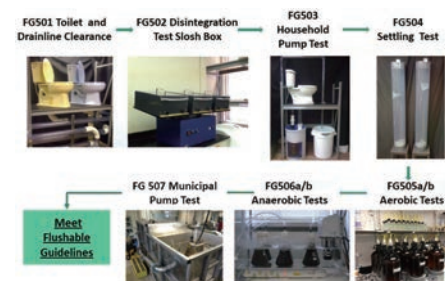
15 years of action by the wipes industry through EDANA and INDANA

- First Flushability Guidance (GD): June 2008
- GD2 published in March 2009
 - Includes a mark to identify products that should not be flushed (US and EU different symbols)
- GD3 published in August 2013
 - Simplified and streamlined assessment tests
 - One global "Do Not flush" logo
 - Publicly available free of charge from www.edana.org and www.indana.org
- Revised CoP Jan./April 2017



Main features of guidelines for assessing the flushability

7 Tests in GD3



2017 Revised Labelling Code of Practice

- The Scope changed in two ways
 - Only wipes designed to come in contact with human waste and/or related germs while in the bathroom be considered for disposal via the toilet (consistent with the 2012 UKWIR report)
 - Baby Wipes should not be marketed as "flushable" even if able to pass the flushability assessment tests
- The Decision Tree reflects the new position and includes examples
- The symbol location section has also been altered:
 - Requiring the DNF symbol be visible near the point of wipe extraction

Technology News

- Requiring the DNF symbol be "prominently visible" on the on-shelf package
- For Baby Wipes, the DNF symbol be placed on the front of the on-shelf packaging
- More precise direction given on size, and a comment on embossed symbols

Lessons for our global industry

- Blockages are a great story for a slow news day
- Fact is, wipes designed to be flushed do not cause blockages!
- Stories aren't staying in the one market. What happens in Europe quickly travels to the Americas or Asia (and vice versa)
- No one links 'nonwovens' with 'wipes'
- The general public doesn't understand the difference between various types of wipes
- Partnerships are critical to articulating our efforts, and creating a line of defence
- When it comes to communicating our message, we need to fight to be seen & heard



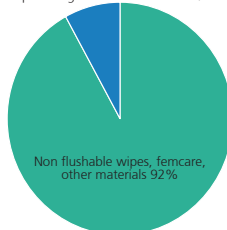
Tentative conclusion: a positive perspective on the issue of flushability

As anticipated, implementation of GD3 in EMEA and North America resulted in:

- Accelerated innovations in substrate design for flushable products
- Re-evaluation of products and re-labeling or introduction of new substrates
- Consistent reduction in flushable wipes found in collection studies: Latest blockage assessment results in UK show wipes designed to be flushable now represent <1% of solid debris

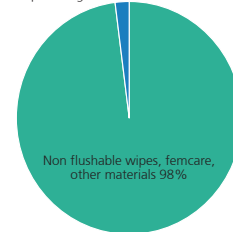
Blockage assessment: Maine, US 2011

Wipes designed to be flushable 8%



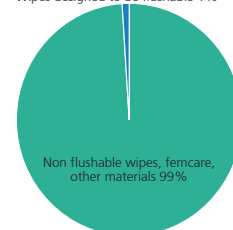
Blockage assessment: NY US 2016

Wipes designed to be flushable 2%



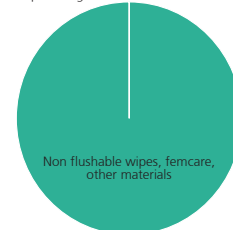
Blockage assessment UK, 2017

Wipes designed to be flushable 1%



Blockage assessments in Germany (2016), + Private observations in The Netherlands (2016)

Wipes designed to be flushable 0%



Tentative conclusion: a positive perspective (ctd.)

Revised (2017) Code of Practice will (after transition period):

- Improve visibility of DNF symbol
- Further reduce confusion about baby wipes, which should ALL be labeled DNF
- Allow stakeholders to concentrate on education programmes

Overall conclusion on Product Stewardship

- Growing complexity of global regulatory framework and exposure to media attention require more joint industry association initiatives
- Voluntary guidelines and supply chain dialogue have proven their effectiveness

(Source from: "The Forum of Medical hygienic, health care and Wiping Nonwoven Products, Guangzhou, this article extract.")

Technical Trends

India - Hygiene's next chapter

Low penetration and rising incomes mean growth will come, but challenges remain

Many hygiene companies are looking at India as the next (and probably last) great frontier for sales growth. Rising disposable incomes and low use penetration rates predict that the disposable markets will grow but experts are at odds over when this growth will take off.

"Whether it's in the next five years or the five years after that is what people are debating," says Pricie Hanna, diaper industry expert. "But it is definitely being seen as the greatest opportunity for growth after China."

According to Euromonitor, there is about \$11 billion worth of unmet potential in the Indian diaper market, \$5 billion in the sanitary protection market and \$1 billion in adult incontinence. This gap is closing, however, as consumers are spending more on baby care products and diaper sales are increasing. However, per capita consumption of nappies/diapers remains low in India compared to developed and even many developing countries as taboos remain in using them.

"There's been talks locally about baby diapers leading to rashes and that the products are not natural and of course also that it's a waste and an ecological threat to dispose of so many products, so there are multiple challenges to face while marketing and especially educating the population in India," says Johan Berlin of Investkonsult. "This is of course also an issue with feminine hygiene products - nthat they are not 'safe' or are 'toxic.' It's a combination of lack of education, too little disposable income to 'have the guts' to try and the taboos surrounding menstruation, although that is getting slightly better with several campaigns."

Currently, baby diaper usage is concentrated in urban centers in India and available in rural areas is limited. This is restricting growth. In addition, consumers in rural India see diapers as an expensive product and in order to save costs, they tend to use cloth-type nappies/diapers that are reusable.

"India has a 'non-disposable' culture that's in their backbone, which makes it a lot harder

to penetrate the market. Also, the tendency of having grandparents taking care of the kids has not opened up for day-care centers and/or kindergartens," says Berlin. "When that happens, we may see a slight change as well. Although we have working mothers in this generation, there's still an older generation of grandparents alive that are taking care of the kids. Add to this a climate which does not call for excessive clothing and the equation is pretty simple."

Per capita consumption of diapers remains very low at 39.3 units in 2016 for children aged zero to 3 years compared to 1,211.5 units in North America and 981.7 units in Western Europe. Consumers in India mainly use diapers only when travelling, which contributes to the lower per capita consumption of diapers in the country.

Meanwhile, in the feminine hygiene market, which has the highest penetration rate of disposable segments, leading sanitary protection manufacturers such as Procter & Gamble, Johnson & Johnson and Kimberly-Clark have increased advertising and promotional activities to educate consumers, which has increased the usage of sanitary protection products. However, per capita consumption of these products within the age group 12-54 years remained very low at 13 units in 2016 compared to per capita consumption of 244 units in North America and 255 units in Western Europe.

"Growth is mainly driven by improved education and awareness particularly," says Lynn Purvis, Hygiene marketing manager EMEA, H.B. Fuller. "Traditional media, such as television channels, newspapers, local NGOs, social media and the internet are also tools being used to overcome taboos and enabling women to be more open to talk about their femcare needs. Tool boxes and vending machines are being supplied in schools and colleges and the government is offering free or subsidized articles and working to resolve issues related to basic hygiene needs. Women's self-groups are also working towards spreading more awareness and building a healthy environment for information sharing."

Sanitary protection in India is dominated by international players. However, most of these

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Product News

Airtech launches Combo-Tech products

Combo-Tech product line bonds various vacuum bagging materials together

Airtech Advanced Materials Group, a manufacturer of vacuum bagging and composite tooling materials, is introducing new Combo-Tech combination products. Combo-Tech is the company's expanded product line that bonds various vacuum bagging materials together to form a better overall product and reduce "touch labor," saving companies hours of labor expense while increasing productivity.

According to the manufacturer, some of benefits include: saving time with fewer materials to cut and position; improving part quality with simplified process; improving surface finish with flatter materials; and reducing cost with less scrap and rework.

Combinations available include: 2 & 3 Ply Combo-Tech materials up to 2.2 m (7.2 ft) wide, for prepreg, infusion, and bonding applications.

Established in Luxembourg in 1991, Airtech Europe Sarl is a division of Airtech Advanced Materials Group, the largest manufacturer of vacuum bagging and composite tooling materials for prepreg/autoclave, resin infusion, and wet lay-up processes up to 426°C.

"Our product line consists of: vacuum bagging films, release films, pressure sensitive tapes, release liquids, peel plies, breathers and bleeders, sealant tapes, vacuum bag connectors and hoses, rubber, pressure pads, cutting tools, vacuum leak detectors, shrink tape, PTFE coated fiberglass, tooling prepregs and resins, and carbon and glass reinforcements," the company says. "Business focus areas include aerospace, wind energy, marine, automotive, printed circuit board, solar energy and general FRP composites."

The company has six locations worldwide: Huntington Beach, CA, USA; Chino, CA, USA; Springfield, TN, USA; Differdange, Luxembourg; Chadderton, England; and Tianjin, China. Airtech Europe Sarl is EN 9100:2009 and ISO 9001:2008 certified. (Source from: "www.convertguide.com")

NuTrend launches absorbent floor mat

TaskBrand SureGrip floor mats help prevent slips, trips, and falls

NuTrend, a manufacturer of sorbents, has introduced TaskBrand SureGrip absorbent adhesive floor mats featuring the next generation of sorbent technology to help prevent slips, trips, and falls. Made with a heavyweight needlepunched, polyester/polypropylene fabric, SureGrip offers superior absorption and an impermeable adhesive backing. They're fast-drying, won't slip, and are available in 50-foot or 100-foot rolls that can be easily custom-cut for hard-to-fit areas. The material is fire retardant as per ASTM 726.

SureGrip mitigates the sobering statistics for slip-and-fall injuries. Falls caused by slips — 12% of total falls — account for over 1 million hospital emergency room visits. Falls resulting from slips are the primary cause of lost days and, for people of ages 55 years and older, are both the leading cause of workers' compensation claims and the leading cause of occupational injury.

The heavyweight universal sorbent material absorbs excess moisture, oil, grease, condensation, and spills. SureGrip also provides effective barrier protection, stopping dust, dirt, and debris from entering offices or storefronts.

The advanced adhesive backing will ensure the mats stay put, regardless of constant foot traffic and rollovers by warehouse equipment like carts, hand trucks, and forklifts. For easy removal, the mats' remarkable sticky backing stops just short of the edges. (Source from: "www.nonwovens-industry.com")

Ahlstrom-Munksjö launches Trinitex® Advance W3000 for high efficiency gas turbine filtration

Ahlstrom-Munksjö, a global leader in fiber-based materials, announces the launch of Ahlstrom-Munksjö Trinitex® Advance W3000, a unique filtration media specifically designed for pulse jet gas turbine applications.

"Trinitex® Advance W3000 has the ability

Product News

to combine EPA (Efficiency Particulate Air) efficiencies, whilst delivering highest protection of the gas turbine in all demanding conditions, especially humid or industrial environments" says Cedric Vallet, Product Manager at Ahlstrom Munksjo. "Trinitex® Advance W3000 delivers high particulate removal efficiency, reducing corrosion and fouling, thus minimizing maintenance and unplanned shut downs. It also delivers higher efficiency at a low level of pressure drop, helping to minimize energy consumption. Trinitex® Advance W3000 enables extended performance in all challenging environments, increasing filter lifetime and reducing frequency for filter change" he adds.

W3000 is the first product on the Trinitex® Advance platform, designed to purify air for different industrial applications. From this platform, a family of products will be built over time, all delivering EPA efficiencies and defined customer benefits in different market sectors across Industrial Filtration. "Our product platform Trinitex® Advance is an example of how Ahlstrom-Munksjo can leverage on its experience in manufacturing high performance filtration products to deliver new solutions for Industrial Filtration

applications" comments Fulvio Capussotti, EVP Filtration and Performance. "We are looking forward to discussing Trinitex® Advance W3000 in details with our customers and exploring other potential new needs with them", he adds.

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

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products are priced at the mid to low level to make them affordable to consumers. Many consumers still do not use sanitary protection products due to the cost, therefore NGOs and consumers have been demanding that the government make sanitary protection products tax free.

Also hampering growth is the simple equation of affordability. "While pockets of more affluent consumers are demanding more differentiated products, like thinner and more natural-based choices, consumers need to be educated on why thinner can be as absorbent," Purvis says. "Typically the perception is that higher fluff content means better performance in terms of absorbency, particularly in femcare."

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



Asia Nonwoven Fabrics Association



is the only organization which represents the nonwovens industry in Asia



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

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5. ☐ Medical 医疗
6. ☐ Carpeting 地毯
7. ☐ Filtration 过滤器材
8. ☐ Industrial/Technical Textiles 天然纺织品

9. ☐ Roofing 屋顶材料
10. ☐ Electronic 电子
11. ☐ Packaging & Stationery 包装和文具
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