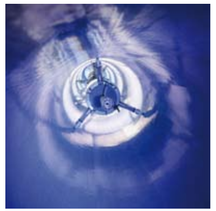
SAERTEX-LINER® – 没有两个管道是相同的：不同的规格，不同的剖面，因不同的废水的腐蚀能力以及不同的负荷量而产生的特殊的要求等，而局部条件的差异则更并不仅限于此。因此，消费者对一个既能节省时间和费用，又能保证设备使用寿命的灵活的解决方案的呼声越来越高。而 SAERTEX-LINERS 以其产品出色的材料特性和及其经济的安装支出足以满足对新型管道修复的最高要求。可以确定的一点是，现如今，“地下管道修复”在多数情况下不再意味着持续数星期的道路堵塞、交通瘫痪。而因此给众多居民楼和办公楼带来的不便也大多可以避免了。

根据不同的规格和墙的厚度，SAERTEX-LINER 的产品可以最长至 500 米。而且即便是同一条管线之内的规格变化，或者是弯曲角度最大至 30° 都可以毫无困难的实现。这同样适用于所有通用剖面的管道（圆形、卵形、嘴形以及盒形），管道规格范围从 DN150 至 DN1200，墙体厚度从 3 毫米到 12 毫米。

www.saertex-multicom.com

CUTTER – 您希望订做 SAERTEX 产品？没问题！只要将您的要求以及 CAD 图片格式提供给我们，我们就可以使用 CUTTER 系统进行精准的预剪裁以方便您的进一步加工。

SAERTEX-LINER® – All sewer pipes are individual. They all have different dimensions, sections, special requirements regarding aggressiveness and mechanical loads – there is a long list of locally differing conditions. Flexible solutions are therefore in demand in order to save time and money and ensure a long working life. Both its excellent material characteristics and the extremely economical installation method of the SAERTEX-LINERS® satisfy the highest requirements with regard to modern sewer pipe rehabilitation. One thing is certain, in most cases these days the rehabilitation of sewer pipes no longer means that entire streets have to be paralysed for several weeks at a time due to excavation work. Major inconvenience to a large number of homes and commercial buildings can also be avoided.



Depending on its dimensions and wall thickness, the SAERTEX-LINER® can be produced in lengths of up to 500 m. Even a change of dimension within one line or bends up to 30° can be effected without any problems. This applies to all common sections (circular sections, egg-shaped sections, mouth-shaped and box sections). Dimensions range from DN 150 to DN 1200, wall thicknesses from 3 mm to 12 mm.

www.saertex-multicom.com

CUTTER – Do you require made-to-measure SAERTEX product variants? No problem: According to your specifications and on the basis of CAD drawings, we precisely pre-cut the respective shape on our cutter system and forward it to you for direct further processing.

SAERTEX®
Reinforcing Your Ideas!

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SAERTEX worldwide

www.saertex.com

SAERTEX Germany
E-Mail: info@saertex.com

SAERTEX Stade, Germany
E-Mail: info.stade@saertex.com

SAERTEX France
E-Mail: info.france@saertex.com

SAERTEX Portugal
E-Mail: info.portugal@saertex.com

SAERTEX USA
E-Mail: info.usa@saertex.com

SAERTEX South Africa
E-Mail: info.rsa@saertex.com

SAERTEX India
E-Mail: info.india@saertex.com

SAERTEX China
E-Mail: info.china@saertex.com

完整产品序列:
新颖的，独创的，专为客户定制的

The entire range of products:
innovative, individual, custom-made.

WIND ENERGY
BOAT AND SHIPBUILDING
RAILWAY
AUTOMOTIVE
AEROSPACE
PIPE RELINING
BUILDING INDUSTRY
RECREATION

标准织物 Standard Fabrics

SAERuni – 单向增强材料，在 0° 与 90° 方向上。这种缝合的材料是由增强丝线，短切毡或者表面毡制成的。

可能宽度：30 – 3600 毫米

SAERuni – Unidirectional complexes – in both 0° and in 90° direction. This stitchbonded material is produced either with reinforcing threads, a csm or fleece.

Possible widths: 30 – 3600 mm

SAERbid – 双向增强材料，在 0° 或者 90° 方向上。可选择在上表面以及（或者）下表面缝合一条短切毡或者表面毡。

可能宽度：30 – 3600 毫米

SAERbid – Bidirectional complexes in 0° / 90° direction. As an option, a csm or fleece can be stitched onto the upper and/or lower side.

Possible widths: 30 – 3600 mm

SAERmax – 不同重量的多轴增强材料。每一层都有不同的方向与排列。角度在 22.5° 到 90° 之间

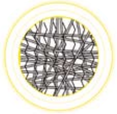
可能宽度：30 – 2540 毫米

SAERmax – Multiaxial complexes with various weights, variable directions and arrangement of the individual layers. Angles between 22.5° and 90° possible.

Possible widths: 30 – 2540 mm

SAERmat – 不含黏合剂以及化学成分的短切毡，其纤维的排列是随机无序的。缝合技术赋予这些织布以极好的悬垂性。

可能宽度：30 – 3600 毫米



SAERmat – Chopped Strand Mat (CSM) without binder and chemicals with random fibre orientation. Stitchbonding gives these fabrics an excellent drapability.

Possible widths: 30 – 3600 mm

SAERcore – 缝合，黏合或者缝制的，由 SAERuni、SAERbid、SAERmax 或者SAERmat以及任选的核心材料（如聚丙烯作为树脂流动区域）制成的夹入式（如三明治）的增强材料。

可能宽度：30 – 3600 毫米

SAERcore – Stitchbonded, glued or needled sandwich complexes consisting of SAERuni, -bid, -max or -mat with any desired core materials, e.g. polypropylene as resin flow zone.

Possible widths: 30 – 3600 mm

SAERtow® – SAERTEX的 “TowOptimisedWeight” 产品部门。这项革新性的技术是在2005年的法国巴黎“JEC复合材料展”第一次在公众前亮相的。随着这种多轴的碳纤维织物的面世，SAERTEX 也进一步确立了其在高技术含量织物领域的领先地位。SAERtow 的出现，使得一种低重量，高质量的产品设计成为可能。

SAERtow® – The “TowOptimisedWeight” product group of SAERTEX. These innovative constructions were first presented to the expert public in spring 2005 on the occasion of the Paris “JEC COMPOSITES SHOW” trade-fair. With this new generation of multiaxial carbon fabrics, SAERTEX has further reinforced its leading position in the sector of technical textiles. SAERtow offers developers and producers the option of designing high-quality light-weight items.

得益于 SAERTEX 这一特殊的生产技术，即便是面对 24K 重磅纤维，用HT 纤维生产的 75 克/平方米和用 IM 纤维生产的 100 克/平方米产品也得以顺利地完成。例如用这种技术，可以生产具有多种卓越性能和良好垂挂性的产品用于汽车和航空工业。

Thanks to the special SAERTEX production procedures, layer weights of 75 g/m² using HT-fibres and 100 g/m² using IM-fibres can be smoothly produced even with the application of ≥ 24K heavy tow fibres. This way, for example, end products which optimally combine functional top performance with drapability can be manufactured for the automotive or the aerospace sector.

SAERfix® – SAERfix 增强材料具有自我黏合能力的与不饱和聚酯和乙烯基树脂匹配的粘结层。尤其是在生产大型物件（如船体）必须将胶粘剂喷涂在模具上时，由此节省的时间和成本是相当可观的。SAERfix 增强材料可以最大程度地提高您加工中的精准度以及操作中的安全性，并且由于不含有任何溶剂将不会对人体产生任何毒副作用。

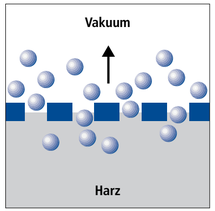
SAERfix® – SAERfix reinforcements have a special UP and vinylester-compatible adhesive with self-adhesion properties. The resultant savings in cost and time are considerable - especially in larger shapes such as boat hulls making mold adhesive spraying essential. SAERfix reinforcements give you maximum process precision and safety with easy handling and no deleterious effect on health, as there are no materials containing solvents.

VAP – 在真空情况下真空辅助处理可用于制作增强纤维复合材料。这种灌注处理方式是由 EADS 发明并保有专利权的。后由SAERTEX作为专利合法使用者向全球提供。这是一种使用特殊VAP薄膜在低压渗透下的过滤技术。

需要被渗透的成分是由一层可透气的微型多孔薄膜组成的树脂壁覆盖着。树脂将被阻隔在复合材料组合体中，而使其中气体和空气泡的数量将会极大的减少。

VAP系统正在被越来越广泛的应用于民用和军用航天飞行器(如空中客车 A380)、汽车工业以及制造风力叶片等领域，而由该系统所带来的好处在部件质量以及生产安全方面更是尤为显著。

SAERTEX 提供专门的课程培训、发展建议以及对 VAP 项目的支持。



VAP – Vacuum Assisted Process (VAP) for making fibre-reinforced plastic parts using vacuum engineering. The injection process was developed and patented by EADS and is offered worldwide by SAERTEX as general licensee. It works using membrane-supported low-pressure infiltration engineering.

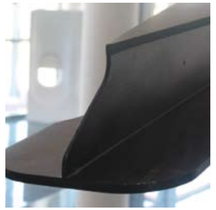
The component to be infiltrated is covered by a gas-porous micro porous membrane constituting a resin barrier. The resin is held back and remains in the component chamber. Gas and air bubbles are greatly reduced.

The benefits of VAP – which has become popular in civil and military aviation (e.g. on the A380) as well as in the car industry and in making rotor blades for wind energy plant - are evident in the component quality and process safety.

SAERTEX offers special training courses, development supervision and support in VAP projects.

预成型技术：基于所谓的 “Stade 预成型”，通过可单独调整的特殊的剪切、缝制或者粘合技术，可以进一步优化您的生产程序。

想深入了解？我们随时欢迎您的垂询。



Preform technology based on so-called Stade Preforms, which can be individually adjusted with a special cutting, sewing or binding fixation technology, may also further optimise your production procedures.

Simply forward a non-binding query to us we will be pleased to offer you comprehensive consulting.