

osthoff - senge

die Flamme la fiamma

the flame la llama la flamme



ПЛАМЯ

double-jet

烧毛机和预处理单元
SINGEING AND PRETREATMENT UNIT



配有 J 型箱的烧毛机生产线
Singeing range with J box.



气旋式过滤器、化学液准备槽、水洗过滤单元、鼓风机和吸烟电机
Cyclone filter, chemical tank, air blower, exhaust fan and air washer.

Controlled combustion One idea leads to worldwide success

Progressive thinking, development and comprehensive know-how combined with decades of experience in the field of singeing machine construction are the cornerstones for the success of Osthoff-Senge.

Walter Osthoff, the founder of the company, paved the way for the change in the technology of singeing back in 1912, with his invention of the high-performance burner with controlled combustion. Since then the controlled combustion system has been constantly developed and improved by further innovations till to the today built "Double-Jet" slot burner, protected throughout the world by patents.

Not only in the field of singeing burners Osthoff-Senge set standards. In 1971 already, at the Paris ITMA, the first programming device for singeing machines "SENG-MATIC" was presented.

1991 at the Hannover ITMA, a hairiness measuring device "Hamsat" was first shown to the public. A device for optical measurement and monitoring of fabric hairiness, and the process control in dependence of that value. Besides reliability and multi-purpose use, those developments have contributed to the fact that Osthoff singeing machines are integrated parts of continuously operating pretreatment and bleaching ranges of all well-reputation manufacturers, since years.

精心控制火焰燃烧 通向成功的理念

富有创意的思维、持续的健康发展、各种综合技术的运用以及结合数十年制造烧毛机的实际经验是奥斯多夫烧毛机取得成功的重要基础。

1912年，公司创始人沃特·奥斯多夫先生彻底改变了传统烧毛理念，他发明了可精心控制火焰燃烧的烧毛火口系统，经过几十年不断的改进和完善，终于成就了如今取得世界专利的“奥斯多夫双喷射火口”。

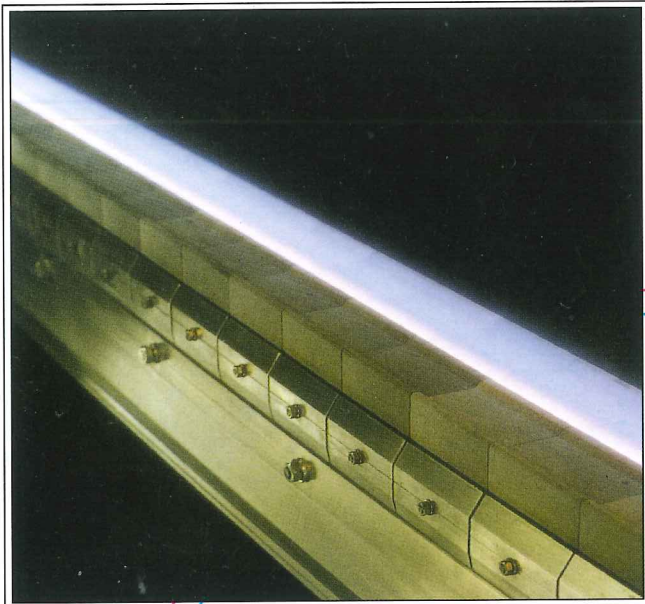
除烧毛火口之外，奥斯多夫公司还在烧毛机的其他技术领域引进了全新的概念。在1971年法国巴黎国际纺机展上，奥斯多夫公司首次向公众展示了烧毛机操作程序控制系统“SENG-MATIC”，大大提高了机器的自动化程度。

在1991德国汉诺威国际纺机展上，奥斯多夫公司又推出了独特的“烧毛后毛羽测试系统”，该系统可直观显示和检测织物烧毛后表面的绒毛残余情况，并指令中央电脑自动调节烧毛机的运转参数。稳定的质量、优良的售后服务以及多用途的使用特性使奥斯多夫烧毛机既可单机运转，也可与其他知名品牌的机器组合成烧毛、预处理和漂白生产线。



烧毛、退浆、漂白生产线

The continuous production line for singeing, desizing and bleaching.



完美的烧毛火焰蕴含巨大的机械动能和热能
The perfect singeing flame with high thermal and mechanical energy.

烧毛工序的主要目的是燃烧去除未与纱线紧密结合的织物表面伸展纤维，使其形成纹理清晰的布面。未烧毛的织物比已烧毛的织物更易沾污，合成纤维织物经烧毛工序后起毛、起球的现象大大减少。

经过良好烧毛的织物是印制精细花型和图案的前提与保证。织物经烧毛后因其表面松散伸展纤维已去除殆尽，可使染化料更易于渗透到纤维内部，从而避免色斑、染色不匀、阴阳面和对光线无规则反射等染色疵病，而且烧毛使织物更容易、更快速地退浆。

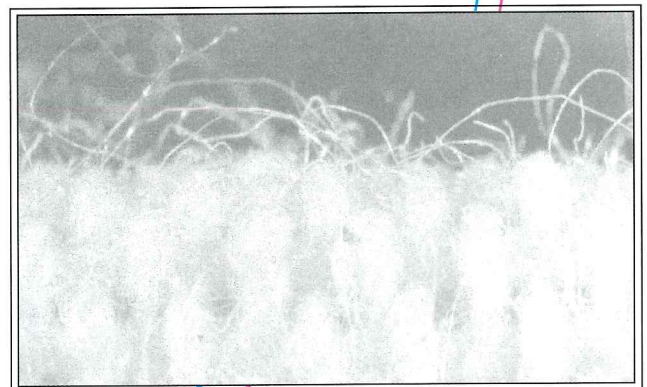
迄今为止，共有3000台烧毛机运转在世界各地100多个国家，一流的加工质量、稳定的机械性能以及良好的安装调试和维修保养服务造就了奥斯多夫公司在世界烧毛机市场的领导地位。

关键就在于火焰 The flame marks the difference

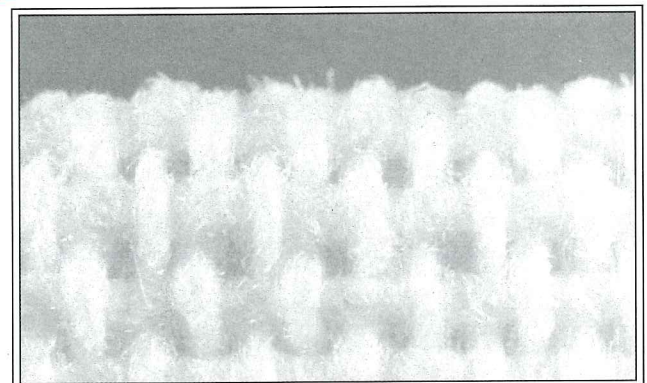
Similarly in the field of singeing machine accessories Osthoff-Senge is setting high standards of technical development. The development of sophisticated dust extractors and impregnation units represents a logical extension to Osthoff fabric singeing machines not only from the point of view of economy and reliability but the dust-free cloth entry system sets new standards in the working environment.

In the field of environment protection Osthoff-Senge also set the trend. Since 1990 exhaust air purification units based on the catalytic after burning system are successfully built.

Over and above all this, as a reliable partner for the textile industry, we offer a comprehensive service and maintenance package. In over 100 countries to which we have exported about 3000 singeing machines so far we provide experience application technicians to meet our customer's requirements. Their specialist instruction and advice when Osthoff singers are commissioned always guarantee that our products are used with successful results. The first-class quality of our products and the respect and satisfaction of our international clientele have resulted in Osthoff-Senge's position as today's world leader in the market for the manufacture of singeing machines.



显微镜下烧毛前织物表面结构
Fabric surface under microscope before singeing



显微镜下烧毛后织物表面结构
Fabric surface under microscope after singeing

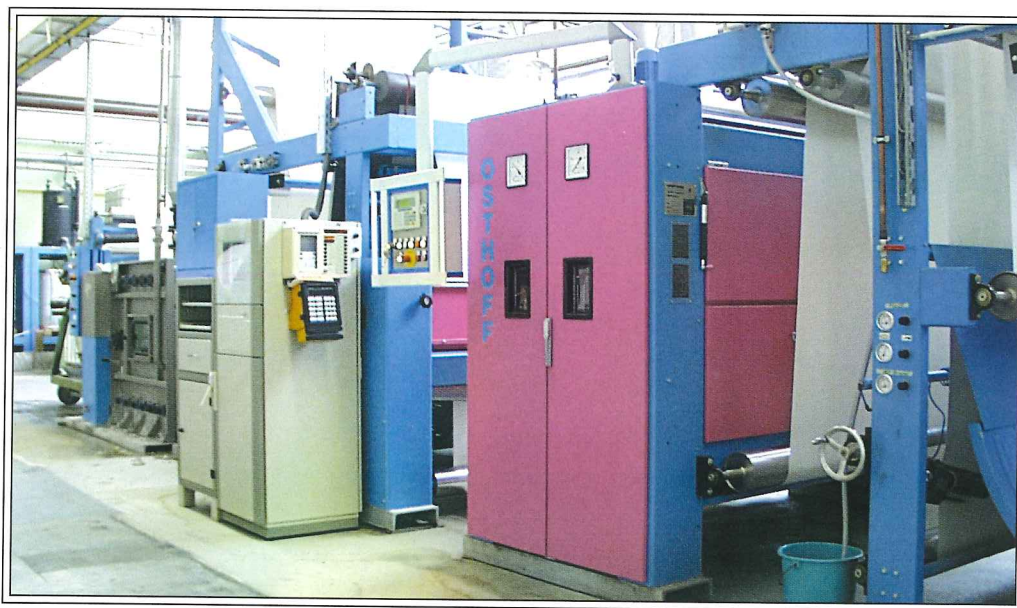
Osthoff-Senge Innovation and Ideas in Singeing Technology

In the age of industrialization, modernization and rationalization of production processes, there have also been many changes in the various fields of textile finishing.

For example, the problem of environmental protection at the workplace can only be solved with the help of "clean" technology. This requirements is met by the dust-free cloth entry system, combined with mechanical fabric cleaning. The beneficial effect of the singers can be further increased by the use of appropriate accessories, such as cloth accumulators, specially developed impregnation and wetting compartments, and suitable delivery devices.

To meet the needs of modern industrial management qualified expert knowledge must frequently be replaced by program controlled, fully automatic machines.

Ultra-modern, efficient singeing and pre-treatment lines have superceded the simple singeing machine. Many steps which used to be carried out separately are nowadays executed continuously in one process. The singeing machines and accessory products developed by Osthoff-Senge offer state of the art technology making it possible to have an economic edge over the competition.



THE DUST-FREE CLOTH ENTRY SYSTEM Osthoff-Senge Solutions for Environmental Protection at the Workplace

Fluff, lint and dust are a serious problem for the environment, and for the operators of fast-running machines. Along with surface threads, these factors also have a negative effect, on subsequent finishing processes. Osthoff-Senge's dust-free cloth entry system meets an essential economical, technological and social safety requirement when singeing fabrics.

The device consists of three machine components:

- the closed extraction chamber
- the fully sealed entrance section
- the "Vibra-Plus" fabric cleaning unit

奥斯多夫烧毛机 烧毛与环境保护

置身于工业化、现代化和理性化的进程中，印染整理行业也发生了许多变化，环境保护问题正日益被世界各国所重视和研究。

奥斯多夫公司将环保理念贯穿于机器设计制造过程中，充分考虑了烧毛工序可能造成环境污染的因素，采取必要措施创造良好的生产环境，保护操作员工的健康。

无尘布面处理系统 奥斯多夫公司 解决工作场地环境的方法

- 封闭式烧毛机体：烧毛过程产生的烟气被置于火口上方的强力抽风机全部吸走，防止外泄。

- 全封闭式无尘进布区域：该区域四周被塑料条幅完全遮蔽，形成一个全封闭空间，顶部则配置强力吸风电机，将松散绒毛、布面灰尘等全部吸走，避免了生产车间的空气污染。
- 刷毛箱和对应的过滤吸尘装置：在烧毛机前、后均有配置。烧毛前，布面上的灰尘、绒毛和松散纤维经刷毛后全部被吸入集尘袋，只有干净的空气被排出室外；烧毛后，布面上的烧毛灰（焦炭化合物）借助刷毛辊和强力吸风扇被全部吸入水洗过滤器中，经溶解、沉淀后排出机外，只有干净的空气被排出室外。

The " Vibra-Plus " Fabric Cleaning Unit

The heart of the dust-free cloth entry system is the " Vibra-Plus " fabric cleaner, which can also be used as an independent unit with the same successful results, either after singeing or before or after other finishing machines. The Vibra Plus achieves outstanding results in cleaning fabrics by intermittent beating and brushing combined with a strong suction mechanism achieving high air exchange rates.

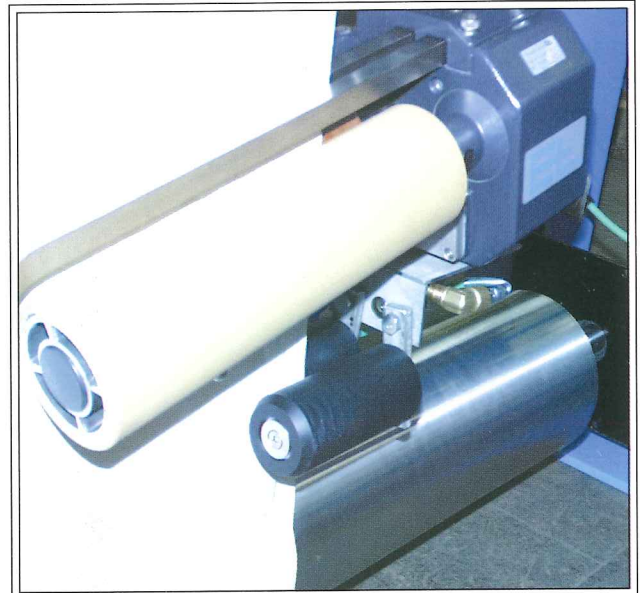
The direction of rotation of the rollers, the direction of the flow of expelled air and the direction of cloth fabric passage work together strengthening the cleaning performance of the Vibra Plus even further. The rotation of rollers in the same direction as the fabric path ensures low tension conveyance of the fabric, in contrast to conventional cleaning units. Thus, even with extremely intensive cleaning, the cloth is not subject to tension strain ensuring optimum quality results.



" Vibra-Plus " 织物清洁单元

"Vibra-Plus" 织物清洁单元对取得无尘布面的效果至关重要。该单元可配置在烧毛机前面或后面，单机使用也能取得同样理想的除尘效果。其除尘原理是借助刷毛辊对布面的振荡、拍打和梳刷，使灰尘、绒毛无法附着在织物上，然后通过吸风槽所产生的强大空气对流将这些垃圾尽数吸除干净。

与传统清洁装置相比，"Vibra-Plus" 织物清洁单元刷毛辊的旋转方向和织物运行方向一致，可保证织物处于低张力状态下，即使对织物进行高效强力清洁也不会影响织物的最终质量和外观。



THE SINGEING MACHINE Information on Osthoff-Burner Technology

In order to guarantee the same high-performance singeing results for all fiber qualities the direct singeing system forms the technological basis in Osthoff singeing machines. High demands are made of technical performance of singeing machines not only by animal, vegetable and regenerated fiber qualities, but particularly by fabrics made of synthetic fibers, and blended fiber fabrics. The direct, intensive singeing flame, the short contact period between flame and cloth, and the ignition flame temperature necessary for vaporization of polyesters all represent decisive advantages within the Osthoff singeing system.

奥斯多夫烧毛机 基本特点

为保证对所有纤维组成的织物取得同样满意的烧毛效果,烧毛火焰必须符合相当的标准,短促强力的烧毛火焰、织物与火焰尽可能少的接触时间以及其他配套措施使奥斯多夫烧毛机适合不同纤维织物的烧毛,例如:动物纤维、植物纤维、合成纤维、再生纤维以及上述纤维的混纺或交织品,尤其能大大降低涤纶或其混纺织物的起毛、起球和热损伤概率。



Energy supply to Osthoff singeing machines

Singeing burners are most often fueled with gas. The Osthoff-Senge "Double-Jet" is suitable for any type of gas. If direct gas supply is not available, Osthoff-Senge delivers units to gasify petrol, kerosene and naphta. Besides the burner construction, the correct gas & air mixture is decisive for the flame quality. Osthoff-Senge uses proportional mixing valves, guarantying a constant ratio independent of the amount of mixture fed to the burners.

奥斯多夫烧毛机的能源供给

可使用任何燃烧气体,如城市煤气、天然气、液化气等,也可借助附加装置使用汽油、煤油或石脑油等。完美火焰的产生除了基于火口的合理设计外,还依赖于稳定的空气和燃烧气体的混合比。奥斯多夫烧毛机采用步进混合比例阀,无论输送到火口的燃烧气体和空气的总量是否发生变化,其混合比保持持久不变。

THE DOUBLE - JET BURNER

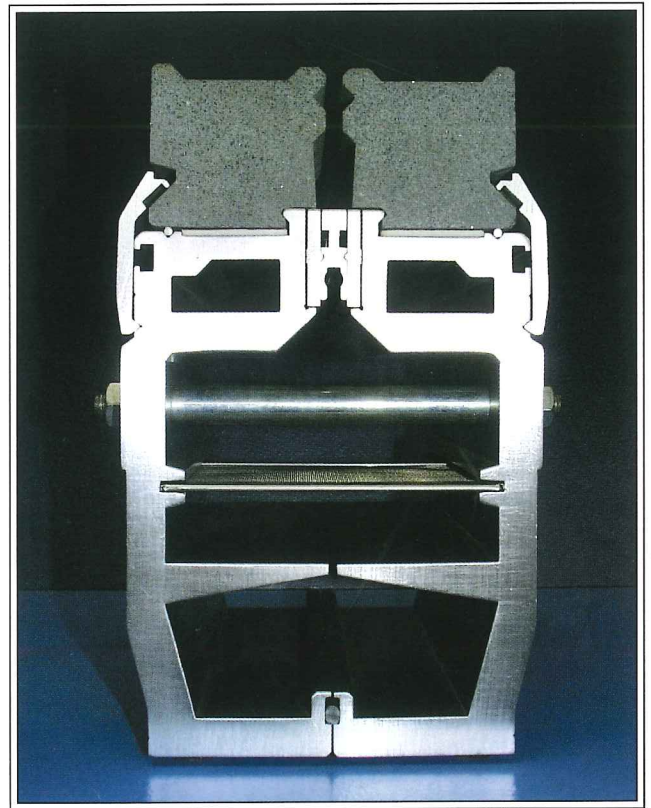
The heart of the Osthoff Singeing Machine

Osthoff-Senge use High Performance Double-Jet Burners in all machine types. Developed by ourselves, and patented world-wide, it allows Osthoff-Senge to set high standards for the quality of the singeing flame generated in the burner, which is the key function of the entire installation.

The essential features of the **Double-Jet Burner** include:

- equal distribution of the mixture by means of a series of expansion and compression chambers.
- uninterrupted flame band achieved by exit of the gas-air mixture from two parallel slot nozzles.
- generation of a homogenous flame by ideal combustion of the gas-air mixture within the combustion chambers formed of moulded ceramic bricks.
- Generation of a highly-concentrated, high energy flame: the prime requirement for singeing textile materials of natural, regenerated and synthetic fibers.

These properties clearly distinguish the Double-Jet Burner from conventional burners, with respect to reliability, precision, performance, capacity, and energy consumption.



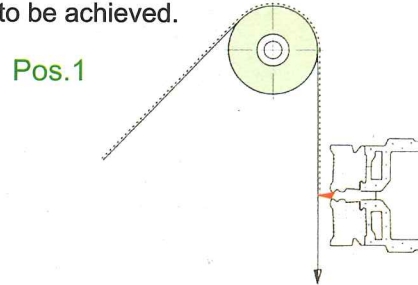
“双喷射”火口 奥斯多夫烧毛机的“心脏”

“双喷射”火口由奥斯多夫公司自行开发研制，并获国际专利注册。该火口由特殊的轻型合金材料制成（详见上图火口横断面），可产生完美的烧毛火焰，其特性如下：

- 空气和燃烧气体的混合体在进口室中进行第一次膨胀，然后经狭小的压力通道压缩后进入稳定室进行第二次膨胀。大容量的混合室和狭小的通道有助于空气和燃烧气体充分混合，然后被均匀分配输送到火口的各个区域。
- 火口内置的过滤网可将杂质排除在燃烧室外。
- 经多次压缩和膨胀后的空气和燃烧气体的混合体进入分配槽，该槽在左右每边各配有5毫米的膛孔，这些膛孔的作用是使混合体通过两个平行的出火槽，随后被点燃形成不间断的火焰带。
- 火焰在燃烧室内燃烧并通过耐高温陶瓷砖的引导喷射而出，使火焰既有高热能，又有高机械动能，从而满足不同纤维织物的烧毛要求。

SINGEING TECHNOLOGY

Osthoff have developed singeing machines with a variety of singeing positions in order to meet the range of requirements for textile finishing. The choice of model is dependent on the quality of the textiles to be processed and the type of singeing to be achieved.



Singeing onto free-guided fabric

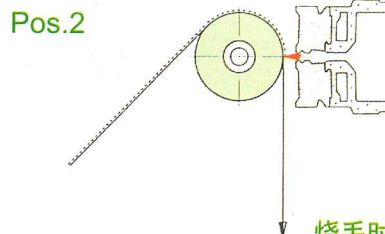
The singeing flame meets the free-guided fabric at right angles as the fabric passes between two guide rollers. This position is recommended for materials made of 100% natural fiber and for blended fabrics which have been thoroughly beaten, with weights over 125g/m² (Pos. 1)

不同的烧毛位置

烧毛位置视不同的烧毛工艺要求和织物类别而定。奥斯多夫烧毛机配置了不同的烧毛位置，以最大程度地满足不同纺织品的生产需要。

对自由引导的织物进行烧毛

火焰成直角作用于自由引导的织物，织物在此烧毛位置时能得到最高的能量，达到最强的烧毛效果，适合天然纤维、再生纤维织物或其他纤维交织的织物克重超过125克/平方米的厚重织物(Pos. 1)。

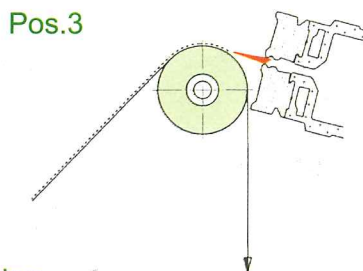


Singeing onto a cooled roller

The singeing flame meets the fabric at right angles as it is bent over a water-cooled roller. The choice of this position is recommended for qualities of fabric composed of temperature sensitive fibers, open-weave blended fabrics and those with weights of less than 125g/m² (Pos. 2)

烧毛时织物有水冷却辊作背衬

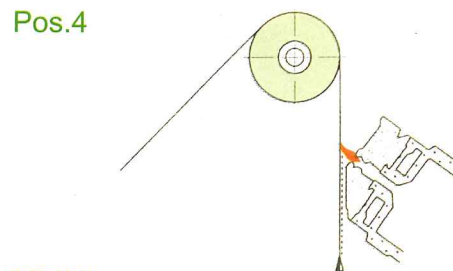
火焰成直角作用于织物，但织物由一水冷却辊作衬垫，火焰只作用于织物表面和交织点。此烧毛位置特别适合合成纤维织物以及那些织物克重小于125克/平方米的开放式组织结构织物(Pos. 2)。



Tangential singeing

The singeing flame passes close to the fabric with the jet direction being at a tangent to the fabric surface. This singeing process is to be recommended for all materials which cannot tolerate direct exposure to flame. Tangential singeing can also equalize protruding fibers and repair filament brakes. (Pos. 3 + 4)

In addition to the singeing position the singeing effect can also be influenced by variation of key singeing parameters namely speed, flame intensity and distance of the fabric from the burner. These are readily adjusted and monitored making the process more precise and reproducible.



"切烧"

火焰与运行织物呈切线角接触，只有织物表面的松散纤维被烧尽，而织物几乎不接触火焰。此烧毛位置特别适合轻薄型织物和对温度极为敏感的织物，也适合为短纤维织物作后工序准备或为增加织物的匀染性作准备(Pos. 3 + 4)。

除烧毛位置外，织物运行速度，火焰强度和火口织物间的距离都是影响织物最终烧毛效果的参数。有效监控上述工艺参数，可提高烧毛效果的精确性和重复性。

Automatic Flame Width Adjustment

Automatic adjustment of the flame width is a logical development in singeing machines, especially with regard to energy conservation.

The appropriate width of flame is automatically defined by setting the cloth guiders to the cloth width.

The intensity of the flame is also adapted automatically to these values by means of the integrated intensity adjustment mechanism.

Singing Machine Safety

Osthoff singeing machines conform to the strictest German safety regulations. When delivered abroad the safety features of Osthoff singeing machines can be adapted to the standards and guidelines of the country in question.



Machine types and application

In view of the great variety of textiles, e.g. wovens, knits open or tubular, nonwovens, carpets face and back and others more, Osthoff-Senge supplies different models which are equipped to meet the special requirements. Besides the use in the common textile field, Osthoff-Senge today is successful in other fields as the singeing of technical textiles, filter media and glass. The machine program was extended recently by singeing machines for individual threads or yarn on beams.

烧毛火焰宽度自动调节装置

奥斯多夫烧毛机可根据设定的织物幅宽自动调节火口火焰的宽度，以降低能源的消耗。火焰宽度缩短后，火口压力也相应自动调节。按客户的要求也可提供火焰宽度手动调节装置。

烧毛机的安全特性

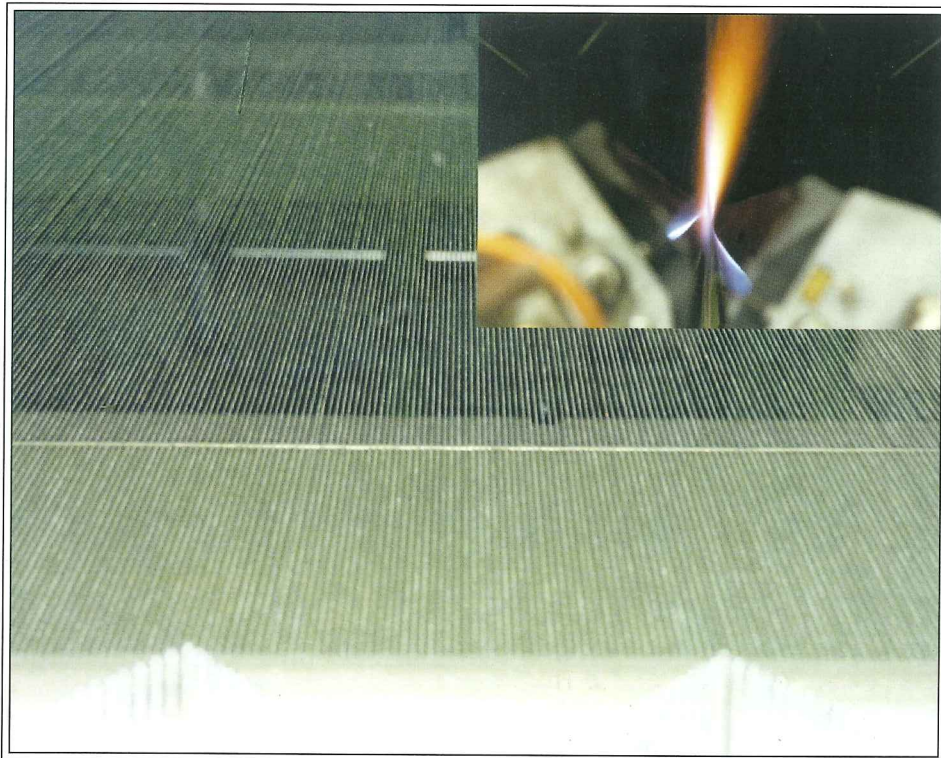
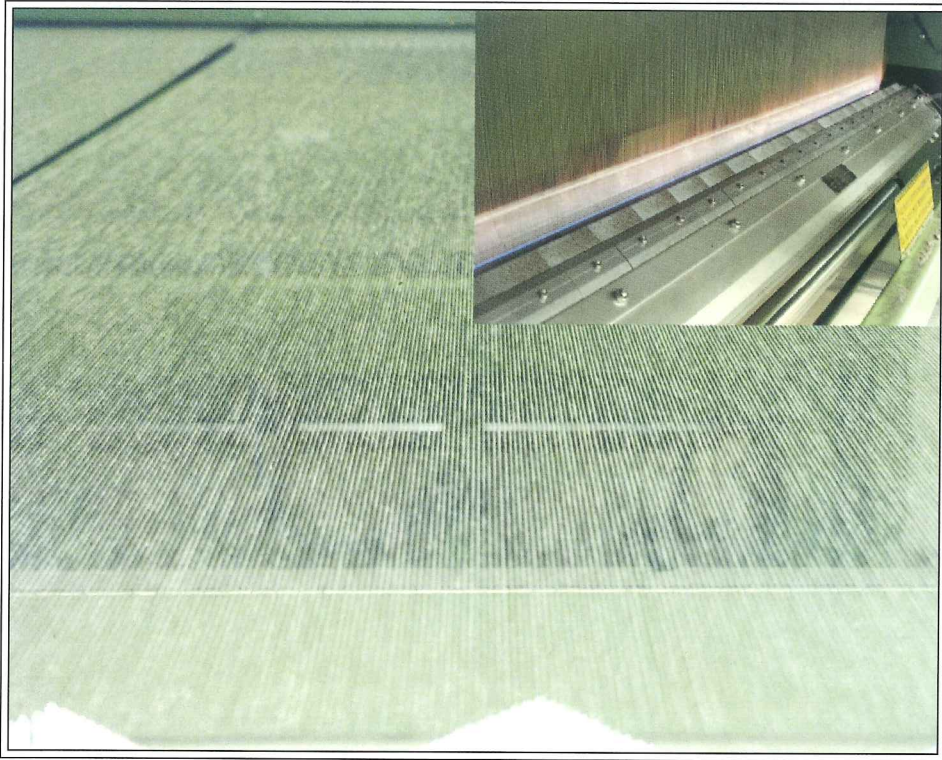
奥斯多夫烧毛机遵守最严格的国际安全标准，时刻将安全操作视为机器重要的组成部分。烧毛机配备了储气罐，若工厂突然断电，或突然中断压缩空气供应，或紧急停车，储气罐内的压缩空气足以立即关闭火口，并使之远离织物以防酿成火灾。当燃烧室中火焰不正确燃烧或火焰突然熄灭时，机器将立即自动停止运行，并自动切断燃烧气体。



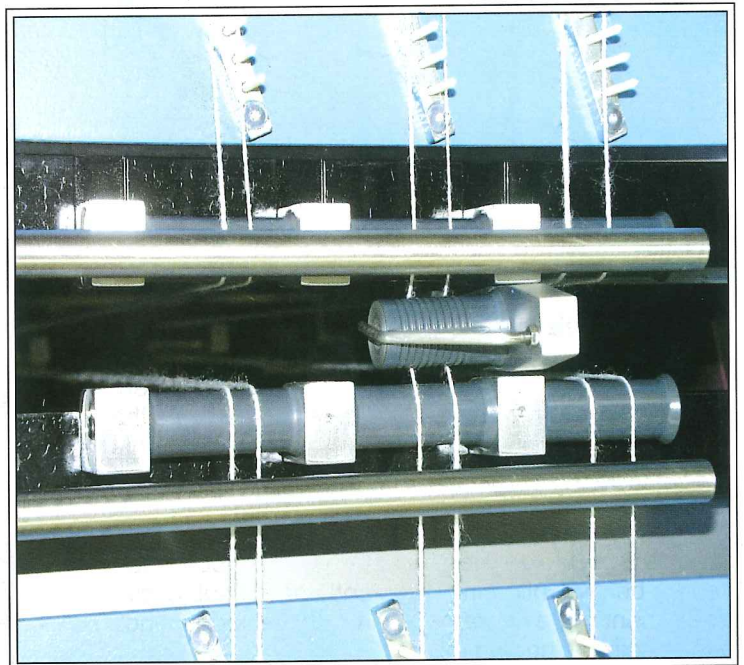
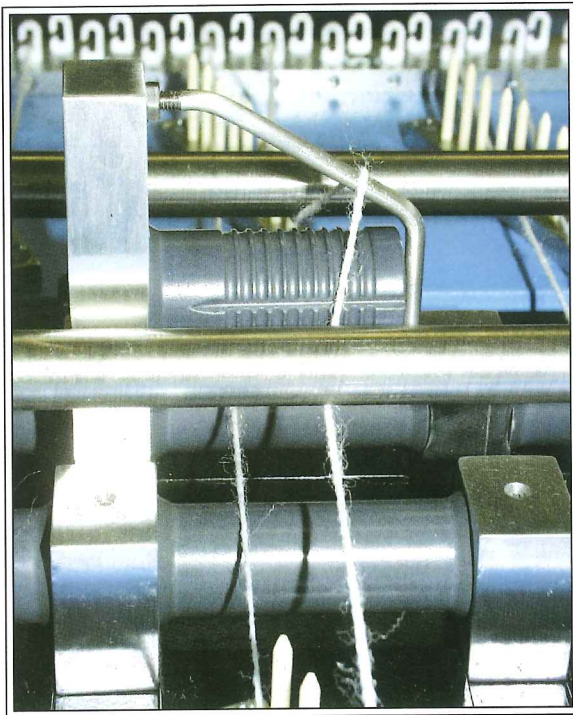
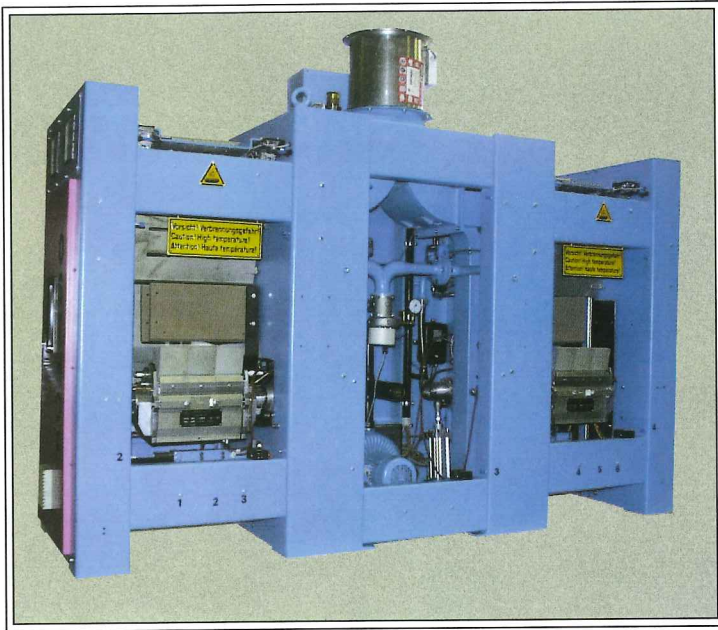
烧毛机的不同种类

为满足不同类别纺织品的烧毛要求，奥斯多夫公司提供以下不同的烧毛机，分别适合于机织物、圆筒针织物、开幅针织物、无纺布、地毯、筒纱、经轴等。奥斯多夫烧毛机除运用在纺织品领域外，还成功地被运用于技术纺织品、过滤媒介层、玻璃和玻璃纤维等领域。

精致的纱线烧毛机
YARN FLAME SHEARING MACHINE



精致的纱线烧毛机
YARN FLAME SHEARING MACHINE

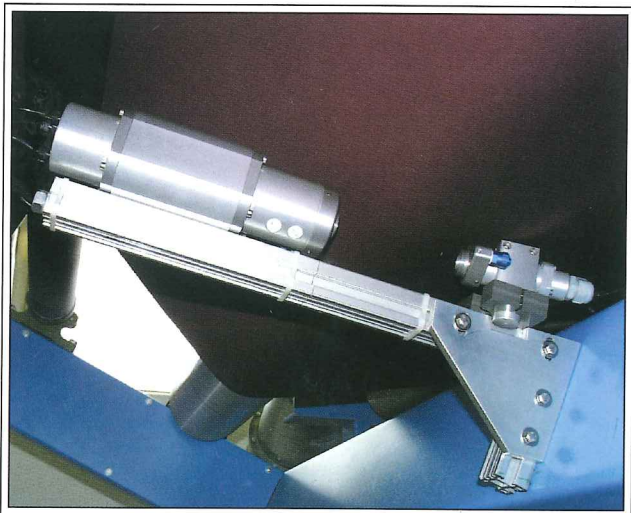


The SENG-MATIC High Tech in Singeing Machine Construction

Economic pressures for rationalisation and the shortage of qualified personnel make the use of process controlled machines a must in order to maintain a competitive market presence.

Osthoff-Senge have developed a process controller for singeing machines, the SENG-MATIC, with the aim of constantly guaranteeing the commercial success of textile processing companies. The operation of fabric singeing machines is considerably simplified by this high tech product.

The function of the SENG-MATIC is based on the interdependence of the fabric temperature and the singeing effect. The use of the process controller keeps the singeing effect constant at all times, excluding the possibility of damage to the fabric. Even when the singeing machines are part of a continuous production line where the cloth speed varies in relation to the process the SENG-MATIC guarantees trouble-free operation with maximum economy and excellent results. The hairiness tester is an ideal complement to the SENG-MATIC.



The Hairiness Tester The "Unerring Eye of the Singeing Machine"

Osthoff-Senge's Hairiness Tester provides a device which automatically recognizes the hairiness or pile height of textile materials, displays them on a screen, compares set points and actual values and adjusts the intensity of the surface processing by means of this data until the rest hairiness corresponds to the pre-set standard.

By using the hairiness tester in this way, the singeing process can be defined exactly. The process can thereby be controlled independently of the subjective assessment of the operator ensuring that it corresponds to the desired singeing effect.

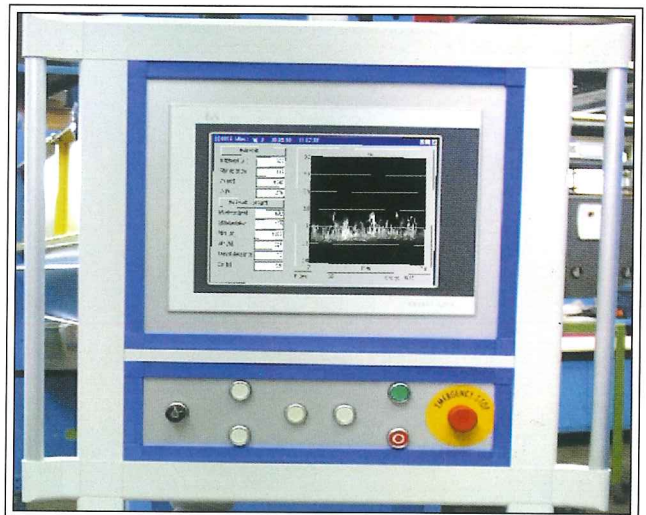
Further to this Osthoff-Senge also offers a hairiness tester for testing purposes. This device works on the same principle as the one described above, but instead of examining running fabric it only examines a sample piece, which is mounted in the instrument.

SENG-MATIC 高科技的人机界面

日益激烈的市场竞争、经济压力和熟练技术工人的紧缺,对机器人的自动化提出了愈来愈高的要求。

有鉴于此,奥斯多夫公司提供了烧毛机实时监控和测试系统:SENG-MATIC。该系统可使烧毛机的操作最简化,并实时监控不同织物的烧毛工艺。

SENG-MATIC人机界面基于织物表面温度和最终烧毛效果以自动调节机器运行的相关参数,并保证不损伤织物从而使机器运行达到最优化效果。即使烧毛机配置在整条生产线中,该系统也可根据织物不同的运行速度来自动调节相关的烧毛工艺参数。SENG-MATIC系统可保证无忧操作、最经济的使用特性和稳定完美的烧毛效果。烧毛后的毛羽测试仪是该系统有益的补充。



毛羽测试仪 烧毛机的“眼睛”

奥斯多夫公司提供的毛羽测试仪可自动检测纺织品表面经烧毛后剩余绒毛的高度,在屏幕上作直观显示,并在设定值和实际值之间进行比较,自动调节火焰强度或车速等工艺参数以使最终的实际值和设定值相符。

毛羽测试仪还能对烧毛效果进行精确的控制。操作可根据工艺要求任意设定机器参数以达到所需要的烧毛效果,除此之外,奥斯多夫公司还提供仅用于测试的“毛羽测试仪”。它的工作原理和机载“毛羽测试仪”完全一致,所不同的是它不用于检测连续运行的织物,而是对一块固定长度的织物样进行检测。

The production program includes:

- Singeing machines for all types of woven fabric
- Singeing machines for knitted fabric in open width form
- Singeing machines for tubular fabric
- Singeing machines for carpet, face and back
- Singeing machines for yarn, beam to beam , creal to cone
- Singeing machines for technical textiles, felt, nonwovens
- Automatic control and monitoring units
- Hairiness control and monitoring units " in line " and " off line "
- Fabric cleaning and dedusting units
- Impregnating units and dosing systems
- Exhaust air cleaning units
- Catalytic after burning systems

产品系列:

- 适合各种类型机织物的烧毛机
- 适合各种圆筒针织物的烧毛机
- 适合各种开幅针织物的烧毛机
- 适合各种地毯的烧毛机 (正、反面)
- 适合各种纱线的烧毛机
- 适合各种技术纺织品的烧毛机, 如无纺织布、毡
- 自动控制和检测系统
- “在线”、“离线”毛羽测试仪
- 织物清洁和除尘单元
- 浸渍槽和给液系统
- 吸烟和排风系统
- 燃烧油汽化装置



The rails to your success

通向成功之路

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