

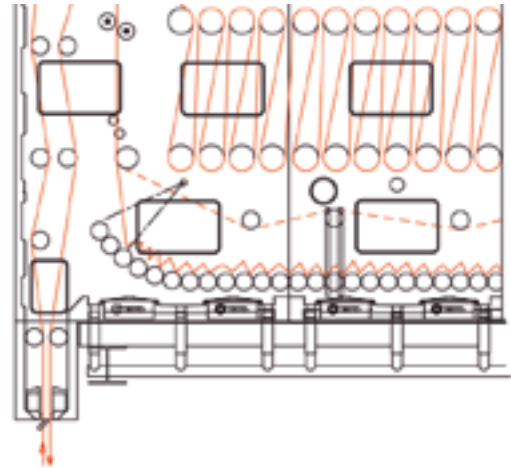
The background of the entire slide is a close-up photograph of several large, tightly rolled pieces of white fabric. The fabric has a visible texture and is arranged in a way that creates a sense of depth and volume. In the upper right corner, there is a logo and text.

efi *MEZZERA BLEACHING*

Bleaching Line for Open Width Woven and Knitted Fabric

Continuous open width
desizing, scouring,
bleaching range.
Fabric ready for dyeing
or printing.

BLEACHING



PREPARATION: THE BACKBONE OF THE DYEHOUSE

The fabric preparation for dyeing, printing or full white goods is the pillar supporting the entire dye-house. This is the first and most important step of all processing: total performance and absolute reliability are required by the customers, as well as enough versatility to cope with the changes in articles, fashion, production style. Mezzera technology gives the customer a wide range of possibilities, tailoring the preparation range according to their individual specifications.

THE BASIC OF CELLULOSE BLEACHING

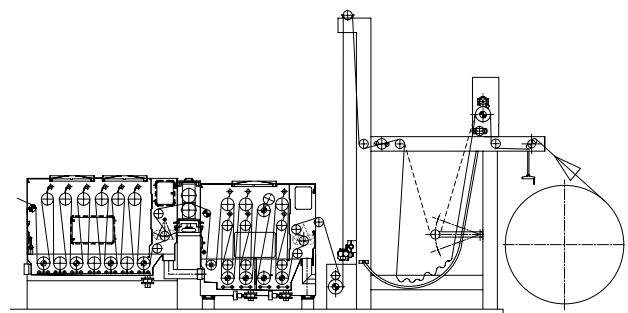
The symmetrical molecule of hydrogen peroxide $\text{H}-\text{O}-\text{O}-\text{H}$ is activated by the addition of caustic soda, which causes heterolytic splitting with formation of the peroxy-anion - O_2H responsible for bleaching: the peroxy-anion, when suitable chemicals are added in the recipe, mainly reacts with cellulose and provides for the oxidation of the natural dyes in the cotton.

Single step or double step scouring and bleaching

The continuous desizing, scouring and bleaching process allows to remove the size, to degrade the waxes and natural fats which are contained in the natural cotton (scouring or alkaline boiling), and to oxidize the chromophores molecules. Mezzera technology is tailored according to customer specifications: scouring and bleaching may be achieved either in single or double step.

HWT AND ACTIVA DESIZE PRE - WASH

The pre-wash section is essential to get a perfect hydrophilicity of the fabric before the impregnation with the scouring and bleaching chemicals. The fabric enters in the scouring and bleaching range after pad batch desizing. A strong washing action has to take place in the very first compartment where normally is used the washing tank HWT, because his strong washing effect. The strong mechanical action jointed with the high temperature are ideal for desize the fabric dipply. Following, using the high efficiency washing tank ACTIVA, we rinse perfectly the fabric before than the wet-on-wet impregnation.



HWT and ACTIVA: washing after desizing

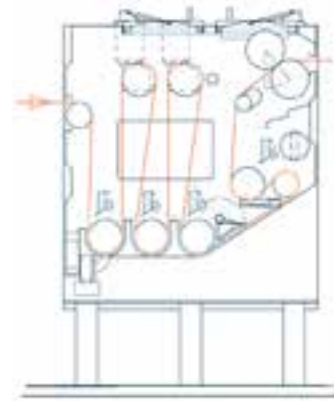
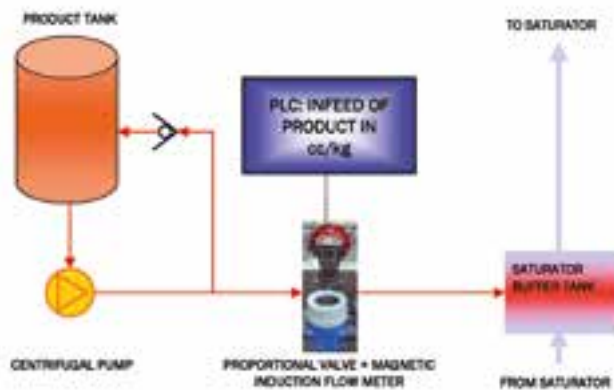
ACTIV-SAT WET ON WET HIGH-EFFICIENCY IMPREGNATION

The impregnation section is the heart of the machine. After a high squeezing the fabric enters the ACTIV SAT wet on wet saturator, where the chemical products are added.

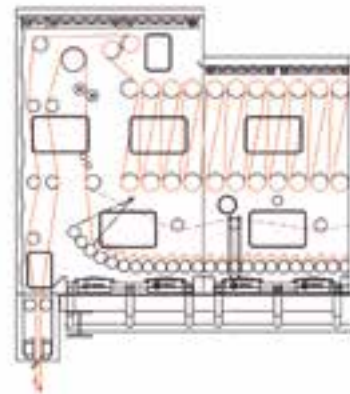
ACTIVE SAT respect the following fundamental parameters:

- high and uniform bath application on the fabric
- high interchange from bath and fabric
- low bleaching liquor volume
- precise dosing system of the chemical products

Chemical station of a scouring and bleaching range with individual chemical products dosing in cc/kg



Activ Sat: intimate contact between fabric and liquor



Inlet outlet section PERFECT STEAM

ACTIV- STEAM - the steaming section

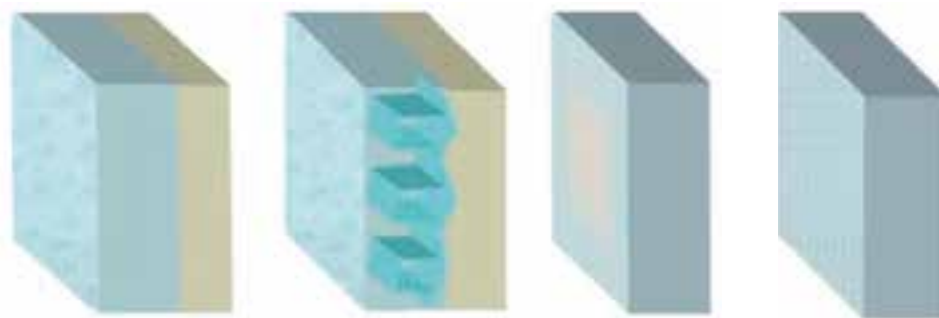
The chemical reactions take place in the PERFECT-STEAM steamer. The steamer is modular and may be assembled to satisfy all production speeds. After a tight strand initial part to properly and uniformly heat up the fabric, this is plaited on a roller bed and brought until the end at the speed appropriate for the chemical reaction to take place: the residence time may be varied at customer's choice. In the ACTIV-STEAM steamer, the saturated steam is internally generated on water bed embedded into the steamer itself,

by injecting live steam in the water bed. The steam rises and reaches the roof of the steamer, after which gradually stratifies downwards, filling the whole steamer volume. Special drop collectors heated by coil of superheated steam are placed on the roof to avoid condensation and dripping of drops over the fabric. A temperature probe is installed in the lower point of the steamer for monitoring and controlling of the temperature inside the chamber.



BLEACHING

THE ACTIV – SAT DESIGN PRIVILEGES BATH—FABRIC INTERCHANGE



Application phase: the saturator liquor and infeed pick-up water are initially separated

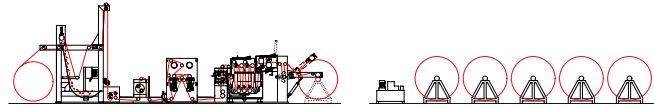
Start of interchange

The interchange phase continues: the liquor starts the diffusion inside the fabric

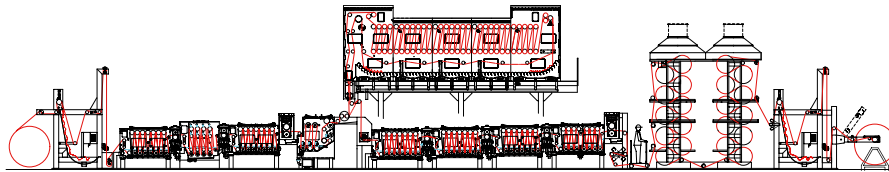
Most of the bath has replaced the infeed pick up water



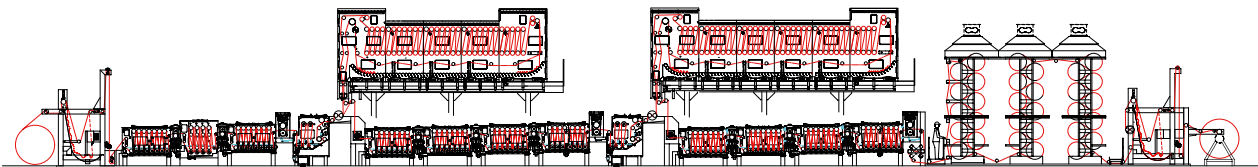




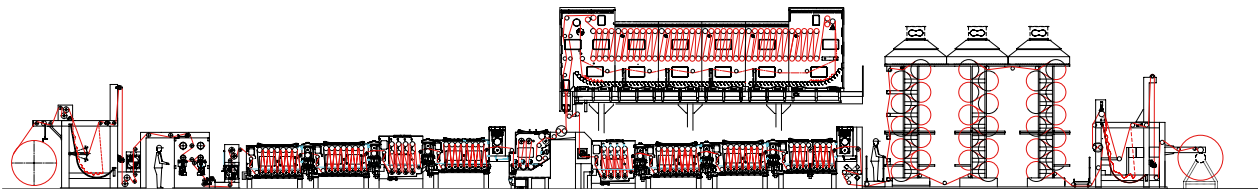
Singeing, impregnation and dwelling for desizing



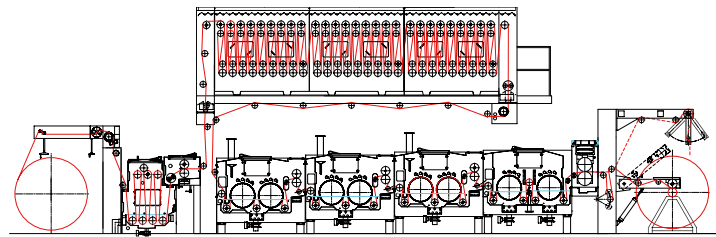
One steamer scouring and bleaching



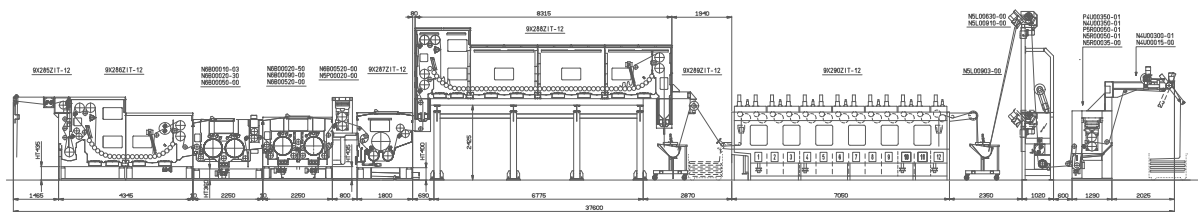
Two steamers scouring and bleaching



Singeing, on-line desizing, scouring and bleaching



Bleaching range for fabric with high lycra content



Demineralizing, scouring and bleaching range for knitted fabrics



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