Continuous open width desizing, scouring, bleaching range. Fabric ready for dyeing or printing.
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 H-O-O-H is activated by the addition of caustic soda, which causes heterolytic splitting with formation of the peroxy-anion - O2H 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 diply. Following, using the high efficiency washing tank ACTIVA, we rinse perfectly the fabric before than the wet-on-wet impregnation.
**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

**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.
APPLICATION

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

THE ACTIV – SAT DESIGN PRIVILEGES BATH—FABRIC INTERCHANGE
Singeing, impregnation and dwelling for desizing

One steamer scouring and bleaching

Two steamers scouring and bleaching

Singeing, on-line desizing, scouring and bleaching
WOVEN AND KNITTED FABRIC SOLUTIONS

Bleaching range for fabric with high lycra content

Demineralizing, scouring and bleaching range for knitted fabrics
EFI fuels success.

We develop breakthrough technologies for the manufacturing of signage, packaging, textiles, ceramic tiles, and personalised documents, with a wide range of printers, inks, digital front ends, and a comprehensive business and production workflow suite that transforms and streamlines the entire production process, increasing your competitiveness and boosting productivity. Visit www.efi.com/reggiani or call +39 035 3844511 for more information.