

Brazzoli®: Innoflow EXL HT

With 50 years of specific experience in the textile sector, the Brazzoli Company is globally recognized as one of the leading manufacturers of dyeing machines, with high technological content, for the treatment of fabrics in rope form. Recently new innovative impulses allowed the company to extend its own production range towards the open-width discontinuous dyeing by presenting specific technology for optimization of the industrial process of dyeing in open width form.

Innoflow® Exl creates a new kinetic molecular exchange with the translational motion of the treatment bath; a unique hydrokinetic concept never previously considered in the industrial dyeing treatment process. INNOFLOW® EXL by introducing this new bath translational motion application interacts directly on the hydrodynamic limit layer, decreasing considerably the speed difference between the fabric and the treatment bath. The market confirms that INNOFLOW® EXL is the dyer that makes dyeing possible at maximum quality levels with minor processing costs. Without using air to convey fabrics but using treatment water which is nonetheless required for dyeing and the subsequent washing, ensures that the customer is using the natural element with which all essential steps in exhaustion rope dyeing process are performed.

The recent sales of INNOFLOW® EXL, followed by some comparisons with competitor machines, with respect to the real treatment costs (recipe and energy costs, the area occupied by the equipment to carry out production, the cycle time, environmental-related issues, such as the volume of machine acoustic emissions, etc.) have confirmed that "water" technology of INNOFLOW® EXL wins against "air" technology.

Comparisons were made by customers wanting to check directly real treatment costs while measuring consumption in terms of chemical products and energy as well as in terms of the cost of the surface



Innoflow® EXL HT.

occupied by the equipment and investment costs related to the environmental impact (the law requires that noise be kept under precise levels to avoid heavy fines and this is a cost to be considered), maintenance costs (maintenance costs of high powered equipment and extremely expensive mechanical seals to be taken into consideration) inside the company.

To understand the importance of the new technology, it is necessary to analyze different phases of a dyeing process with regard to hydro and thermodynamic aspects. In the dyeing process, the main phases occur simultaneously and therefore the velocity of the dyeing will be determined and depended upon the speed that the dyes diffuses within the fibers. Such velocity coincides with the speed of the bath exhaustion.

The present dyeing machines technology defines certain conceptual parameters, which influence the final dyeing results. A parameter of certain importance is the hydrodynamic limit layer, that results

between two speeds, speed of the fabric flow and the speed of the treatment bath; the latter is always superior to the fabric speed. INNOFLOW® EXL by introducing this new bath translational motion application interacts directly on the hydrodynamic limit layer, thereby decreasing considerably the speed difference between the fabric and the treatment bath. In this way, the resistance encountered by dye molecules in motion towards the fabric are reduced and dyeing treatment speed will be higher due to much smaller the "thickness" of the hydrodynamic limit layer.

This result is obtained with the introduction of a unique technology of its type that moves the fabric in a transversal motion to the conventional bath flow. This movement ensures a continuous mixing and uniformity of the bath while approaching the real conditions of operation to those achievable in laboratory. INNOFLOW® EXL is available in the version XC1 (200 kg per channel) and XC2 (250 kg per channel) for the treatment of traditional fabrics, XC3 (300kg per channel) for terry towel and upholstery fabrics, XC4 (400 kg per channel) for terry towel having weights higher than 1000/1500 gr/mt.

Innoflow® EXL Vacuum

Upon specific request the INNOFLOW® EXL can be supplied with VACUUM version, the most advanced technical solution for the treatment of vat dyes. ♦

Ferraro offer machines for the finishing of knitted fabrics

Ferraro SPA was founded in Busto Arsizio in 1953 and it is specialized in the construction of machines for finishing of knitted fabrics. The continuously evolving, textile machinery finishing market demands high quality and reliability and uniform results. Ferraro is manufacturing shrinking machines, calenders, squeezers, overturn-folding machines, unrolling-folding machines, rope openers, laser engraving to meet the requirements of finishing industry.

The technological knowledge, the productive power and the dynamic commercial system have allowed Ferraro's

products to be well known all over the world. After continuous and pressing requests from customer worldwide, Ferraro decided to develop a special compacting machine for knitted fabric with rubber belt: **COMPTEx-S**.

Another machine **COMPTEx FV** shrinking machine for tubular knitted fabrics is ideal for the finishing of 100% cotton knitted fabrics such as jersey, piquet, interlock, plush and rib fabrics.

The new **Complex RC** finishing line for for open width knitted fabric dryer on tenter frame or relaxing dryer is suitable



The special compacting machine COMPTEx-S for knitted fabrics.

for either 100% cotton fabrics or blended fabrics. According to Ferraro, "we offer high quality and reliability and unlike the competitors' products, our machines are completely made in Italy to fully meet these special requirements." ♦