



ITMA 2003 - Chemical Finishing

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ABSTRACT

Textile chemical suppliers who exhibited at ITMA 2003 were surveyed. No novel textile chemicals were announced, but several finishes of interest are discussed.

Keywords: Chemical Finishes

Chemical Suppliers

This year was the first time that textile chemical suppliers were permitted to display at the ITMA exhibition. Forty-one dyestuff and chemical suppliers availed themselves of this opportunity. Suppliers from Europe, Asia, and the Americas were present. No novel chemical finishes were seen. Some of the more interesting products are summarized below.

BASF, Ludwigshafen, Germany, showed a new auxiliary system for batch dyeing polyester fabrics. The dyexact XP system is based on Basojet® XP, an alkyl phenol free combination product that contains leveling, dispersing, trimer controlling, and emulsifying agents. Other compatible products are available if additional chemical control is needed.

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CHT, Tuebingen, Germany, introduced two new products for garment wet processing. DENIMCOL BLE gran. is an oxidative bleach for indigo that does not adversely affect elastic fibers, thereby allowing stretch denim garments to be efficiently bleached without fiber damage. TUBINGAL 6069 is a flaked 100% active cationic softener that can be added to garment processing machines without dilution. In addition to providing softening, fading from NOx and ozone is greatly reduced.

Clariant, Muttenz, Switzerland, presented several new products. Plexophor ECO is a unique biodegradable sequestrant/stabilizer for hydrogen peroxide bleaching that does not contain phosphorous, nitrogen, or silicates. Sandoperm SE1 is a 96% active self-

emulsifying amino silicone that forms emulsions with 10 nanometer particles, providing extremely soft hand without the characteristic "slick" silicone feel. ACTIFRESH® is a finish that combines antibacterial properties with a cyclodextrin. The antibacterial component reduces the likelihood of body odor while the cyclodextrin component absorbs any odors that are formed.

Ran Chemicals, Nagpur, India, showed a series of unique surfactant based preparation chemicals that can desize and scour cotton goods without enzymes. All warp sizes are removed and the absorbency of the scoured goods is outstanding. Specific members of the RAN-SC family of products are recommended for batch and continuous processes. Another series of nonionic polymers, the RSF family, provides silicone like softness with hydrophilic non-silicone products with little or no yellowing.

Cognis, Dusseldorf, Germany, presented the Skintex® system, a series of microencapsulated products that can deliver cosmetics such as moisturizers, anticellulites, hair retardants, and tanning agents to the skin from treated textiles. The microcapsules are durable to laundering and only release their active ingredients when the textile is in contact with skin. Cognis also introduced the Colette® system, a combination of amylases and pectases that allows desizing and scouring to be carried out simultaneously with less water and alkali than standard processes.

Amitech, Oxford, New Jersey, USA, offered Pyromescent, a new flame retardant for textiles based on intumescent chemistry. This product is durable to laundering and allows treated mattresses to pass the strict California flammability requirements. Currently, applications to cotton and cotton blend fabrics are covered by confidentiality

agreements, but no such restrictions exist for other fibers.

Novozymes, Bagsvaerd, Denmark, presented Scourzyme L, a pectinase product designed to scour cotton without the normal high concentrations of alkali. This process, called Bio-Scouring, is becoming more attractive as environmental concerns over textile preparation processes increase.

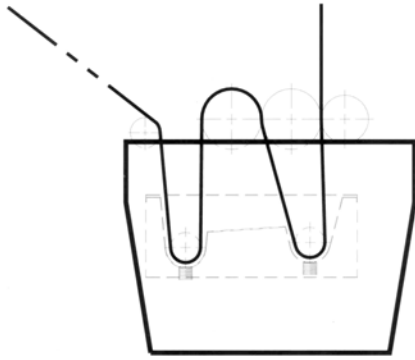
Ciba Specialty Chemicals, Basel, Switzerland, introduced two new processes for batch preparation of cotton knit fabrics and yarns. SMART PREP is designed for goods to be dyed while SMART WHITE is for white goods with optical brighteners. These processes are shorter and use less water than traditional preparation procedures due to the use of INVATEX® AC, a product that allows easier cleanup after bleaching.

Boehme, Geretsried, Germany, introduced CERAFIL BRS, a combination product for cotton preparation that incorporates a peroxide stabilizer, sequestrant, scouring agents, and dispersant into one formulation. This product not only simplifies bleach recipes but also gives more reproducible whiteness values.

Chemical Applicators

The application of chemical finishes to textiles was also addressed at ITMA 2003. No new application designs were seen, just incremental improvements to existing systems. Some of the more interesting improvements are shown below.

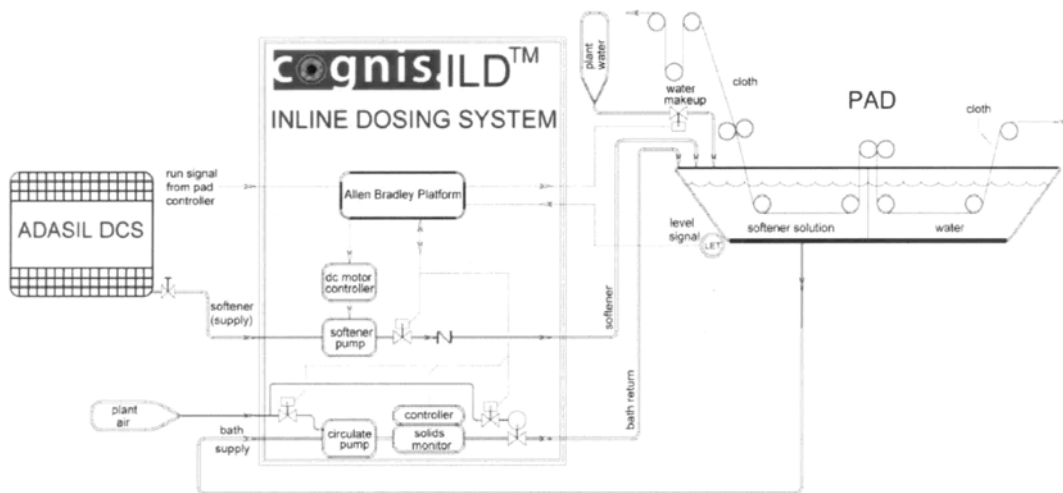
For high wet chemical pickup applications **Morrison Textile Machinery**, Fort Lawn, South Carolina, USA, introduced a newly designed pad, the Micro-Sat, which combines a low volume pan with a double dip-double nip fabric path. A chemical dosing system is provided to maintain constant chemical concentrations in the pad bath.



Mirco-Sat Pad by Morrison

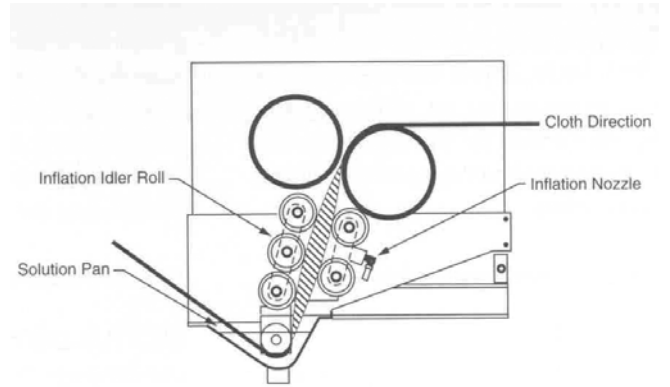
Fratelli Carlessi Spa, Ugnano, Italy, showed a newly developed apparatus for the spray application of chemicals to fabrics. The SPRAYTEX has 5 spray heads with a reciprocating trolley that provides even applications across the fabric. The spray heads are electronically controlled to adjust for fabric width and desired application effects.

Cognis has developed a dosing system for wet-on-wet finishing that incorporates online monitoring of the chemical concentration in the pad bath and automatically adjusts the chemical feed to the desired level as needed. The ILD® system provides a more consistent finished product at lower cost.



Tube-Tex, Lexington, North Carolina, USA, has redesigned the Pro-Pad pad for chemical application to tubular knitted

fabrics. This pad is available in 2 or 4 roll configurations and can process double strands of fabric with just one operator.



Pro-Pad by Tube-Tex

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