KNITS FEATURE AT INDUSTRIAL FABRIC SHOW

A variety of new applications for knitted products were showcased at the recent IFAI Expo 2005 held in Texas, USA. Report by Kathlyn Swantko.

While some sectors of the textile industry have suffered during this first year of open trade and the removal of quotas on Chinese goods, the industrial fabrics sector seems to be adjusting nicely to the transition, and in many cases even prospering. This year's IFAI Expo, sponsored by the Industrial Fabrics Association International (IFAI), was held October 26 - 29, in San Antonio, Texas, and the show generated high excitement for those looking for the latest fabric developments, and new industrial applications for fabrics .

The IFAI Expo is truly an international event, drawing a record number of pre-registered visitors from over 35 countries, 36% of which were first-time visitors. And, with the help of the annual Expo, the association has also become a strong trade organisation.

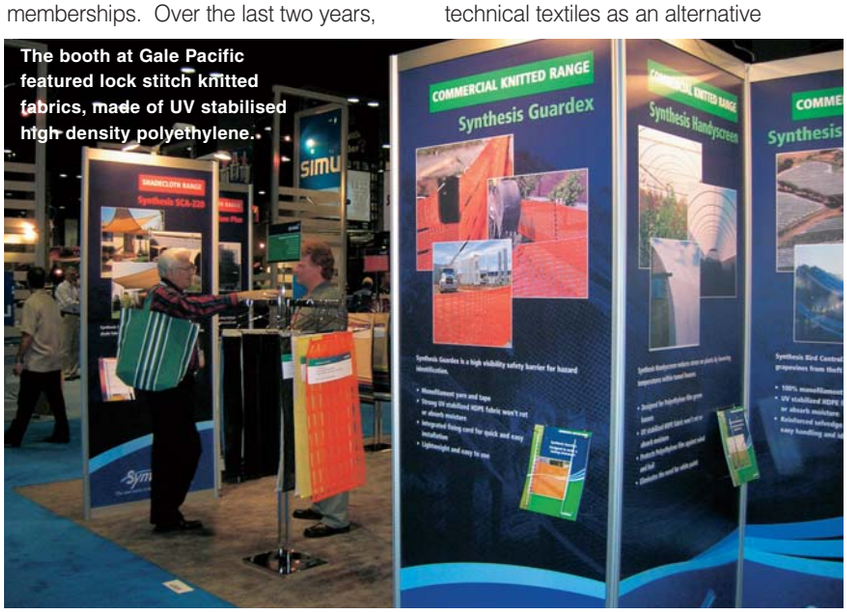
Steve Warner, president of IFAI, stated, "We've had a fantastic year! We have not only been very successful in recruiting new members, but we've also had more members staying in the association. We had our highest retention rate this past year of 87%, which has been tracking upwards over the last few years."

Warner attributes the higher membership to the fact that IFAI is "recruiting smarter members -people who are not just on the fringe, but those who are actively involved in the industrial fabrics industry." In addition, Warner said that IFAI now offers 13 special interest sections for those members who really want to get something out of their memberships. Over the last two years, IFAI's membership participation in these different areas has jumped from 50% to 64%.

Warner noted, "Our job at IFAI is to make people aware of the applications of technical textiles as an alternative material to stone, steel, wood, etc. And, there are some viable products out there, with new applications and new markets being discovered all the time."

Two new industrial applications for knitted fabrics in the U.S., cited by Warner, include hail protection canopies for car lots, and a growing need for UV protective shades for playgrounds. Warner explained, "The state of California has recently mandated that playgrounds need to have a certain percentage of UV protection for children. So, there are a number of companies that are busy meeting those guidelines. This (legislative) trend started in California, and is now working its way across the southern half of the U.S."

There are also new products for medical applications, digital imaging, and building wraps. In addition, Warner mentioned that many of IFAI's members have been working overtime in providing fabrics for shelters, portable water storage containers, etc. for hurricane and



The booth at Gale Pacific featured lock stitch knitted fabrics, made of UV stabilised high density polyethylene..

Above: The Industrial Fabrics Association International (IFAI), was held recently in San Antonio, Texas, USA.

Above: Shadecloth applications such as 'Synthesis' from Australia's Gale Mills blocks up to 94% of UV rays. Fabric weights are from 9.4 to 10.3 oz per square yard.

tsunami disaster relief.

Knitting International looks at these and other highlighted applications for knitted products showcased at IFAI Expo 2005.

Harrison Technologies

This Broadalbin, New York, based vertical knitting mill, maintains facilities in Taiwan and mainland China, is part of the Sinotex, Inc. Group of companies. It produces coated fabrics under the 'Toughtek' and the 'Rhinotek' brands. The company specialises in full garment packages, such as gear bags and hunting products and provides laminations, coatings, and technical fabric developments. These include fabrics with UV protection; grip functions; abrasion resistance; fire, mildew and wind resistance; waterproof breathability; antimicrobial; and, cold crack prevention. The company also provides product development services for its customers, and maintains cut-and-sew facilities in Bangladesh, Sri Lanka, Vietnam, and mainland China for garment assembly.

According to Gary Becker, president of Harrison Technologies, the company uses mostly knits as the substrate backing for its coated products. He explained, "Our coated fabrics are mostly knits, especially in the Toughtek line, because a lot of our customers like to have some sort of stretch in the fabric without having to add spandex, which would increase the price."

At IFAI, Harrison showed the expanded line of Toughtek and Rhinotek brands, incorporating a line of camouflage coated fabrics for the hunting market under the Camogrip and Camoguard labels, and a line of high visibility safety coated fabrics under the Vistek label. The company also featured a line of 100% polyester knits with anti-microbial, UV protection, and DWR finishes for the hunting market, as well as 100% polyester spacer meshes containing odor adsorption and anti-microbial finishes for the outdoor market.

Applications in knitted fabrics for the medical industry, include an anti-microbial laminate with a waterproof moisture barrier designed for gurney covers, and a spacer mesh fabric for wheelchair cushions for Roho, a major supplier of wheelchairs.

Becker stated, "A major problem with the spacer meshes currently being used for wheelchair cushions is that they don't wear well. So, we've come up with a way to do a Cordura version of a spacer mesh that wears much better."

Also at the show was Gale Pacific based in Braeside, Australia. This 54 year old company specialises in the manufacture of consumer and outdoor advanced polymer and coated knit fabrics. The company's produces a range of knitted shade cloth, gazebo covers, umbrellas, exterior window shades, and shade sails, which are exported to more than 15 international markets, including the USA.

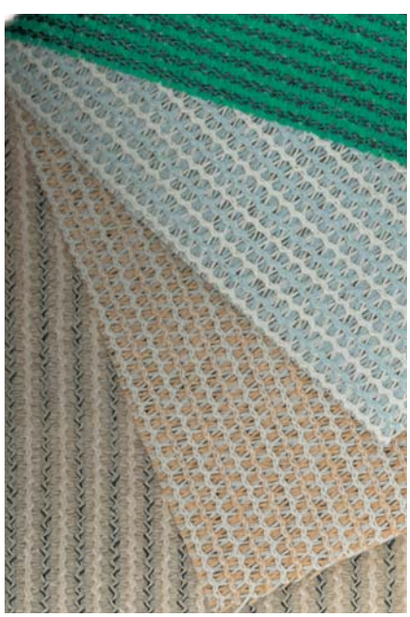
Gale Pacific also produces polyethylene and polypropylene coated products for many agricultural, horticultural, and industrial applications, including high strength hot house fabric for fruit, plant, and vegetable growth; tarps for cotton and grain module covers; dam liners; hail protection structures; and hazard protection fencing used at construction sites.

At IFAI, Gale Pacific featured its line of Coolaroo Commercial 95 shadecloth for use in tension structures and shade awnings. This lock stitch knitted fabric, made of UV stabilised high density polyethylene, is designed to breathe and is available with UV protection ranging from light UV block of 50 - 56% to extra heavy UV block of 84 -90%. The knitted construction prevents tearing and fraying, and remains unaffected by moisture and extreme temperature changes. The solution dyed process employed ensures good colorfastness.

Typically, UV protection is highest for darker colored fabrics. However, the Commercial 95 line of Gale Pacific shade cloth offers a broad color range with high UV protection. Trent Rowe, marketing manager for Gale Pacific commercial products, explained, "We have developed the technology which allows for high shade, high UV block, and a lot of colour. Even in lighter colours, the product will provide the same high UV block. So, you can sit under a lot of colour, like a yellow, and you won't get burned."

Knitted polyethylene mesh

US-based Volm Bag Company, Inc.of Antigo, Wisconsin, began in 1954 as a family operation supplying used and new burlap bags. Over the years the business broadened its range of capabilities and expanded into multiple office and manufacturing locations. Today, Volm Bag Company is completely vertical, and works with such customers as Dole,



Right: Specialty decorative warp knitted shade cloth from Volm Bag Company, Inc. The mesh fabrics are used for privacy screenings.

Sunkist, and Green Giant to produce packaging materials that fit their specific food items. Volm has also expanded into industrial manufacturing with knitted items, including snow and garden fences, shade cloth, and privacy fabrics for tennis courts and wind enclosures sold through such national and regional retailers as Menards and Fleet Farm.

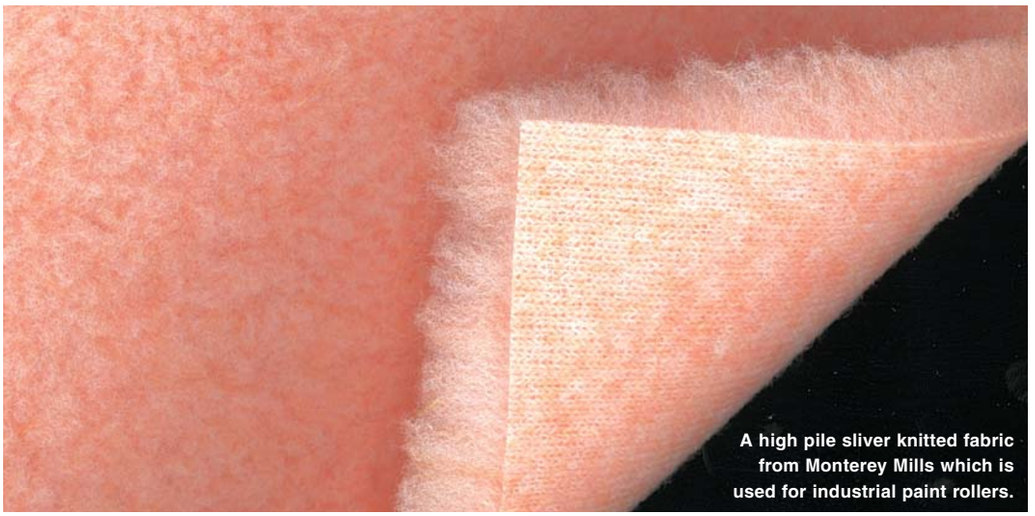
At IFAI, Volm featured its shade cloth, made of knitted polyethylene mesh, for agriculture and horticulture applications. The fabric provides varying shade from 30% to 90%. Volm also showed a line of colored shade cloth for more decorative architectural applications. This product provides durable protection from the sun, wind, and rain, and is available in four fashion colors. In addition, the company showed its privacy screen mesh, which restricts visual intrusion and conceals unsightly areas, and its erosion control and silt fencing fabrics.

One of the most unique items that Volm presented was a knitted mesh fencing product utilising its patented 'Pocket-Net' system, which is a reusable fence with a built-in pocket knit into the polyethylene mesh fabric for support stakes. The kit is also sold with post sleeves and plastic caps for easy assembly. The product is sold with and without the stakes into the consumer market through retail stores, as well as through distributors for industry applications. Sue Mohr, technical fabrics manager, explained, " The built-in pocket provides an opening ready-made for a stake. It's an instant fence!"

Technical sliver knits

Founded in 1965 in Jaynesville, Wisconsin, Monterey Mills is a sliver knitter with a long history in the paint roller business and was recently acquired by Roller Fabrics, Milwaukee. Monterey Mills also provides pile fabrics for hospital pads, mattress pads, music case liners, auto body buff pads, pet beds, air filtration, and water filtration. Besides it industrial applications, the company provides a line of fashionable faux furs for over-the-counter retail stores.

At IFAI, Monterey Mills showed one of its newest products, which is a high heat pile fabric that can withstand temperatures of up to 450 degrees F. This product can be used in manufacturing plants where the production processes require filtration fabric that can be exposed to very high heat.



A high pile sliver knitted fabric from Monterey Mills which is used for industrial paint rollers.

Another new industrial fabric is a window washing pile fabric that holds a maximum amount of water. Dan Koopmann, sales manager, stated, "In order to save time, window washers on high buildings and skyscrapers, want to make one dip into a pale of water and be able to wash as many windows as possible. This product makes that possible."

The fibers used by Monterey Mills in its various sliver knit pile applications include 100% wool, 100% polyester, 100% acrylic, acrylic/modacrylic blends, and aramids for the high heat industrial markets.

Dating back to 1860 in Brooklyn, New York, John Boyle opened his sail making business that was the start of John Boyle & Company. Now based in Statesville, North Carolina, the company has a long history of serving the marine and industrial fabric industries. In 1977, John Boyle & Company began its 9-gauge and 18-gauge weft-insertion warp knit business. Because of its large production capacity, John Boyle also provides knitting services to other companies, including some of its competitors.

Scott Wilkinson noted, "If one of our customers has a large order that they can't knit in time, they'll come to us. Our industry consists of a small family of people that support each other in the USA. We sell to some of those people and they also sell to us."

Typical applications for John Boyle fabrics include industrial quality marine products, tents, geo-textiles, and fabrics for medical applications. According to Wilkinson, the company has a very extensive application base.

John Boyle also provides manufacturing and finishing capabilities, including an array of branded multi-ply laminated fabrics for banners. The company also offers custom coatings of acrylics, vinyls, and urethane polymers on woven, non-woven, and weft-inserted knit fabrics for making awning, sign, and banner fabrics. The custom finishes are used to produce fabrics with extra resistance to fire, water, mildew, UV, scuffs and abrasion.

Heavy duty warp knits

New Jersey company, Fablok Mills is a vertical warp knitter that has been knitting, dyeing, and finishing mesh fabrics for over 50 years. Fablok's capabilities include fabrics in a broad range of uses from heavy-duty durable fabrics to fine lightweight fabrics. The company prides itself in it short 3-week delivery times on a selection of 95 different mesh fabrics, made primarily from polyester, nylon, and polypropylene yarns.

According to Joe Sutton, sales manager, the applications for its meshes in Raschel and tricot constructed fabrics vary from an extra-fine misquito netting, all the way through to strong meshes for military applications. He said, "From A to Z, we cover a wide range of needs for several different customers, including filtration applications, high visibility safety vests for the highway department, military, geo-textiles, athletic wear, medical, police body armor, luggage, hats, laundry bags, etc. The list goes on and on!" ■