

View of Allegheny River and Pittsburgh from David L. Lawrence Convention Center.



# Specialty Fabric boom expected

The recent IFAI Expo held in Pittsburg is now a major showcase for specialty fabrics including warp and weft knits. By Kathlyn Swantko.

The IFAI Expo has become the single most important event for the specialty fabrics industry in the American market. Over 6,500 professionals came to Pittsburgh, October 27-29, to see and hear about the latest innovations in the specialty fabrics industry, and to access trend and technical information through cutting-edge seminars and educational programs. The show was also a good place to network.

Regarding the wide interest the show draws, IFAI President, Steve Warner commented, "IFAI attracts professionals from the entire textile industry value chain, from fiber producer to the end product manufacturer to the users and specifiers of the finished products." According to IFAI officials, participants traveled to Pittsburgh

from a record 51 countries to attend this year's show.

As the textile industry has developed more specialty areas, IFAI has evolved from its traditional "industrial fabrics" focus to a broader focus that includes many smaller markets under the "specialty fabrics" umbrella. Warner said, "Specialty fabrics is the terminology we're using today, because we think that it signifies that we focus on all these little niche markets all over the place. And, somehow it seems to come together at this show, where we bring together small niche markets and niche organizations that can't survive on their own."

As the issues and needs of the IFAI membership have changed, the IFAI Expo has been a prime showcase for new products and trends, and a resource for

education. "Our industry has seen a dramatic shift in the supplier base from traditional textile fabrics to more advanced flexible fabrics," Warner continues. "We've seen tremendous growth in niche markets like medical and military. IFAI Expo addresses our members changing needs by offering timely educational programs along with the opportunity to network and experience emerging products."

But, it's not just about the trade show. This year's pre-show conference covered two of the most dynamic specialty areas: Medical Textiles 2004 and the 4th International Conference on Safety & Protective Fabrics. IFAI plans to continue holding pre-show seminars prior to future expos. In addition, traditional educational tracks provided overviews on trends and

opportunities for discussion and interaction on a broad variety of topics, are also an integral part of in the show.

The specialty fabrics industry is being driven in part because of constant technological advances, which create new innovations. Warner explained, "There are new applications being developed every day. I've been doing this for 28 years, and I hear about at least one new product application that is totally different every week. It's like a rising tide! This industry is swelling up because there're new applications all over the place. And, the stronger you can make a product, the more applications become available."

New applications were featured by several knitters exhibiting at the IFAI Expo. KnitAmericas looks at some of the companies and the innovations offered.

Tek-Knit Industries, a Montreal, Canada, based producer of warp knit fabrics, specializes in custom designed products to meet customers' technical fabric needs. The company produces a wide range of warp knit fabrics, including mono and multi-filament mesh fabrics, made from aramid, nylon, polyester, polyethylene, and polypropylene yarns.

The company's product applications include mono-filament shade and fencing fabrics, truck cover fabrics, high performance sportswear fabrics, pool and leaf cover fabrics, high visibility fabrics, cut resistance fabrics, specialty and fire resistant fabrics, sports netting, agricultural fabrics and protective netting for hail or debris. Products are designed according to

**A selection of warp knit nylon fabrics from Charbert which supplies IFAI exhibitor Techno-Med Technologies. Green fabric is 74% (40/34f) spun-dyed nylon/26% (280 denier) Dorlastan, and 4.70 oz/sq yard; Blue fabric is 79% (50/34f) spun dyed cationic polyester/21% clear spandex (T-s8), and 5.35 oz/sq yd. Black shimmer fabric is 6.60 oz sq yd and 80% (70.8f) bright ribbon nylon; 11% (15/1) spun dyed nylon and 9% Lycra (40 denier).**

customer specifications, and mostly fabricated to order.

At the show, Tek-Knit promoted a wide range of heavy duty polyester re-enforcement & support fabrics, hi-visibility fabrics, and FR protection fabrics, such as Nomex comfort meshes.

Glen Raven Technical Fabrics is a 125 year old company is a broad based supplier of both warp knits and woven fabrics for a variety of end-use applications. At IFAI, Glen Raven featured warp knits that are currently

being used in apparel and home furnishings, automotive, and protection categories.

Within the apparel and home furnishings areas, Glen Raven showed numerous fabrics utilizing integral fabric finishes, which provide high performance properties for the hunting, fishing, and other outdoor activewear markets.

Proprietary products, such as Microsuede and Repelzz, keep people drier, warmer and safer during a full range of outdoor activities. Some examples of other uses for its warp knit fabrics include bedding, window treatments, graduation gowns, footwear insoles, and children's sleepwear.

On the protection side, there are a multitude of knitted safety and protective fabrics engineered by Glen Raven for both civilian and military applications. End uses for flame resistant and medical fabrics range from rain-suits to personal floatation devices to the shell fabrics used in fragmentation or bullet resistant vests. The company's flame resistant fabrics, GlenGuard FR, are in a variety of applications not only because of their resistance to fire, but also for their durability, fade resistance, cleanability, and



**Activity in the Techno-Med Technologies booth**



Fabric roof on the David L. Lawrence Convention Center

comfort. GlenGuard RX is another Glen Raven protective fabric being used in the medical area for durable, reusable gowns and patient drapes, which can be manufactured with and without the use of anti-static yarns.

In the automotive category, Glen Raven is working with its customers in providing knitted fabrics that offer FR, UV/fade resistance, color uniformity, durability, abrasion and tear resistance. One of the specific end-uses for knitted fabrics is in automobile headliners.

### Medical products

The owners of Techno-Med Technologies chose IFAI to launch their newly formed fabric science and product development company. Techno-Med focuses on providing support to innovative-thinking entrepreneurs, who want to bring new knitted fabric developments for medical applications. Mark Lazarus, CEO, and David Unger, president of the company, bring a wealth of technical knowledge, product development, marketing and sales experience to their partnership. Each previously worked for 20 plus years with Liberty Fabrics. (Liberty Fabrics was formerly a division of Courtauld's Textiles, with portions of the business eventually being sold to Sara Lee and McMurray Fabrics.)

According to Lazarus, there is a gap in the medical industry market for various new textile product developments. To fill this void, Lazarus and Unger established Techno-Med as a product development resource for medical textiles, specializing in compression fabric technology. Lazarus said that most of the 'big guys' have been running the same fabrics for 20 – 40 years. By using recent developments in fiber, yarn, and finishing that have had previous

applications in the performance sportswear category, Techno-Med has the ability to develop and market more innovative solutions to medical problems than what has previously been available in the medical field.

Some of the performance yarns and finishes used by Techno-Med include DAK Americas' Delcron HydroPur fiber, Wellman's Holofiber, DuPont's Teflon, Noble Fiber's X-Static, Friction Free, and Trap Tek. These innovative yarns and finishes combined with its partner mills, Charbert for warp knits, and United Knitting for circular knits, Techno-Med says it is able to produce the right technical knit construction for any innovative medical product or device developed by its entrepreneur customers.

Unger explained, "Mark and I have a passion for developing new technical medical applications. We have taken a position that there is strength in numbers, and with our innovative client base, we can be a step ahead of our competition in developing new product applications. Basically, we provide assistance to the entrepreneurs who come to us seed their ideas. So, these people don't have to worry about sourcing the fabric and developing the fabric. We can do that on their behalf."

At IFAI, Techno-Med showed a variety of knitted fabrics, which have applications in post-surgical garments. The company has built a stock program on a variety of core compression fabrics that can be used in post-surgical garments, which Techno-Med sees as a major focus for the new medical product developments in the future.

Meanwhile, Gehring Textiles, founded as a family business in 1946, has become a diversified manufacturer of warp knit fabrics and specialty fabrics used in aero-

space, medical, sports performance apparel, outdoor, safety, high visibility markets, ballistics, fire fighting apparel, composites, traditional apparel, aquaculture (fish farming), military, and geo-textiles.

Skip Gehring, president, said, "No one market controls more than 15% of our business. So, if one market drops to zero, there is still 85% of our business left. It's not easy to maintain such a broad market base; however, it's the only way to stay profitable today."

Gehring's Fabrics are constructed from mostly synthetic yarns, utilizing mostly nylon and polyester in blends with Nomex, Kevlar, spandex, and PBI fiber. However, the company has the technical capabilities and experience to develop fabrics to any desired specifications. Some of the applications include: conductive fabrics, mill specific fabrics, fire retardant fabrics, composites, netting, D3 fabrics, mesh monofilaments, fleece, loop, warp knits, tricot, raschel, suede, and contract dyeing and finishing.

In addition to its warp knitting and specialty fabrics business, the company is also involved in custom manufacturing, and operates its own dyeing/finishing facility. According to Gehring, over the past year the knitting mill is ran at nearly full capacity for a 5-day week, producing about 80,000 pounds of fabric, and utilizing utilized about 162 different yarns. The dye house puts out about 120,000 pounds per week, with a total capacity for about 200,000 pounds per week. The excess capacity in the dye house allows Gehring to do dyeing and finishing for other companies. Gehring Textiles also researches new constructions in new fibers, keeping its customers as leaders in the specialty fabrics field. The company prides itself in its research and development, its manufacturing quality, its timeliness and its attention to customer service.

At IFAI, Gehring was showing its spacer fabrics. Gehring noted, "There's really no one that is doing more with these fabrics throughout the world than we are. We're targeting primarily performance sports apparel, ballistic applications, fire fighting apparel, medical, and composites. We actually have about 180 spacer fabrics in stock. So, if anyone comes in with a new application, we probably have something that is close to what they'll need."