

## Innovation at fiber of textile maker's evolution

*By Laura Ricketson, Staff Writer*



**CONCORDIA FIBERS CEO** Randall Spencer in his company's clean room.

**PBN:** What kind of products does Concordia make textiles for?

**Spencer:** The company started in silk yarns, and then with the advent of synthetic yarns in World War II, the company changed over to producing nylon fibers and then polyester fibers. Over the years, it's evolved into an expertise in handling a range of synthetic man-made filament materials, and that's the foundation for where we are today. ... We got into advanced composites for aerospace applications; we were making high-performance thermo-plastic yarns that were going into composite structures for stealth aircraft and jet fighters on an experimental basis. That evolved into yarn that became the foundation for the Prince Vortex tennis racket, a carbon/nylon composite.

**PBN:** When did you decide Concordia needed to innovate, and what did the company do?

**Spencer:** Even as we were building our ability to produce industrial sewing threads and increasing our capacity in the late 1990s, it started with the Asian currency crisis and things just started to snowball from there. The sophistication of the manufacturing in the Far East rose radically. Instead of buying secondhand equipment, they were buying brand-new equipment and were starting to produce fairly high-quality goods inexpensively, and at the same time the retailers were starting to coordinate purchasing and distribution patterns closely with this. We were doing a lot of specialty manufacturing for major thread producers but all their core production went offshore. The only thing that was left here was the technical stuff which we were doing. We look back and remember that we've done this once – we got into the aerospace industry – and we can do it again. The opportunity where we thought textiles had the greatest expertise

was in the medical arena. The area that really stood out was a new range of textiles that are bio-absorbable. What makes these polymers unique in fiber form is that they become great scaffolds for tissue engineering. You can actually seat cells onto the scaffolds, grow the cells into tissues, get the tissues differentiated for different body parts. We got introduced to that by one of the major Italian textile machinery makers, Ratti. (Ratti suggested that Davol contact Concordia.) Davol came to us with a bio-absorbable fiber and told us they heard we could get it into a fiber. We designed the machine that could convert those filaments into a yarn and then we helped with taking those yarns and redesigning a knitting machine to make them into a fabric. (Concordia now devotes a portion of its production to manufacturing the fabric for medical uses.) Biomedical is still very small (here), but we can see it becoming dominant in a very short time.

**PBN:** How would you describe manufacturing today?

**Spencer:** Where manufacturing remains the same is you're taking some raw material and converting it into a product that provides some sort of value to the end-user. It could be another manufacturer; in the United States it's not necessarily the consumer. We see our role in the medical device business; we never imagined ourselves as making final medical devices. Our expertise is in fiber handling, so we want to be a foundation for medical device companies to come to, to handle the fiber handling issues of making tissue scaffolds.

**PBN:** How should we measure the strength of the industry?

**Spencer:** Just holding our own is a huge accomplishment. What's my goal for people working for us? It's to figure out opportunities for them to expand their skill sets, and then once we have that foundation to grow the business opportunities to which they can apply those skill sets. It's kind of one step at a time, but it takes retraining, re-education and it takes investment, particularly in the biomedical industry. The product life cycle is longer, so you have to have some staying power to get there. That's why we're trying to balance our core business against these new product developments, and it's very challenging. That's where the Slater Center played a remarkable role. And it's innovation; coming up with products for next month. And it almost is "next month"; it is so fast. As you're making something, if you're not thinking about the next version, you're already behind.

**PBN:** How have overseas competition and trade issues affected Concordia's business?

**Spencer:** To the extent that it's had a huge impact on our core business because it's driven our margins to nothing. The price expectations of our customers is that the prices are going to go down by X percentage each year, not even rise. It's made the attractiveness of our core business not attractive at all and it's made it hard to survive. There are a lot of people in the textile industry who think it's horrible, that we've kind of opened up a market and allowed all this to happen to our core business. But lobbying just as hard on the other side are these retailers bringing all of these low-cost goods of reasonable quality back into the country and you look at our inflation level and there's a reason for that. Would some protection have been nice? Probably. But the overall economic picture was inevitable. There are a lot of resources in the world, and it's a

shrinking world, and distribution and ability to sell products anywhere and design them anywhere is accelerating.

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