

Getting started in technical textiles—the secrets revealed

The urgent needs of those wishing to transform their businesses to the manufacture of textile products, but not knowing how to start doing so, were fully addressed at a conference in Stratford-upon-Avon, UK, 14–15 November, reports Nick Butler.

It's a familiar tale but, none the less, for too many a chilling reality: textile companies in the industrialized world confront disaster as emerging competitors from countries with far lower labour costs threaten to completely strip them of their markets. The emergence of a truly global marketplace, with trade barriers abolished everywhere, is potentially ruinous for those that try to compete with the newcomers on price alone.

Of course, one much vaunted solution to this crisis is to make use of technology to develop novel products with added value—exploiting skills, equipment, investment capital and advanced materials that are not readily available to these emerging rivals. Some have successfully made such a transformation already and *Technical Textiles International* has been reporting on their activities since 1992.

Others, however, have still to make the leap from manufacturing traditional products to making technical textiles. For them, time is running out rapidly. Accelerating changes in the World Trade Organisation (WTO), exemplified most pertinently perhaps by the enrolment of China, threaten to overwhelm those that do not act now.

Yet so many companies that are aware of the need are stalled by a lack of understanding as to how to affect the



necessary changes. Which technical markets should they choose—geotextiles, medical textiles, automotive, architecture, filtration, safety and protection or any of the many others one may find represented in this magazine? Not easy choices to

Conference Chair Roshan Shishoo outlined many reasons why technical textiles offer the industry in the industrialized world the opportunity for sustainable growth, despite the enormous and growing competition in more traditional sectors from the developing nations with lower wage economies.

make when an organization has no prior knowledge of the sector or the needs of its potential new customers.

Moreover, what resources (trade associations, training facilities, information sources, and information technology) exist to help these companies? Do they need to consider new materials or equipment, or can they adapt existing machinery to meet the needs of their new business? And, possibly a wholly new set of problems could be caused by the introduction of more stringent quality controls and standards demanded by more exacting customers.

The aim of a conference, *How to Enter the Technical Textiles Markets*, held for the first time in Stratford-upon-Avon, UK, 14–15 November 2002, was to provide answers to these questions and to introduce those with experience of transforming their businesses to those in desperate need of help. To achieve these goals, organizer International Newsletters adopted some familiar and some not-so familiar methods:

- plenary papers consisted mainly of case studies involving actual transformations of businesses;
- all presentations were by the invitation of the Conference Chair Professor Roshan Shishoo and, as a result, were of a high standard compared with so many other more technically orientated, less strategically focused meetings;
- each of the four sessions (see boxes pages 30 and 31) ended with a panel discussion or forum involving all the relevant speakers. This led to lively debates and widened the topics discussed beyond the usual questions specific to one speaker alone;
- delegates were given the opportunity to pre-book one-to-one meetings with speakers and Chairs, to ask questions in private and to form personal contacts.

Conference programme day 1

I: Which markets should I choose?

Chair: Jaime Ampuero, DuPont Europe, Switzerland.

- Plenary: Transforming your business, Roshan Shishoo, IFP Research, Sweden;
- Overview of technical textiles and their markets, Michael Jänecke, Messe Frankfurt, Germany;
- How do I choose the most attractive technical textile markets for my business?, David Rigby, David Rigby Associates, UK;
- Focus on automotive markets, Walter Fung, UK;
- Focus on geotextiles, Bernard Myles, Geotextiles consultant, UK.

Forum 1: Which markets should I choose?

2: What do I need to re-engineer my company?

Chair: Nick Butler, Editor, *Technical Textiles International*, UK.

- Plenary: Case Study, Stefano Carosio, Dappolonia SpA, Italy;
- EU and national government funding, Chris Byrne, DTI Technical Textiles Project Co-ordinator, UK;
- How can trade associations help?, William Lakin, EURATEX, Belgium;
- How can trade associations help?, Paul Dewingaerden, EDANA, Belgium;
- Re-training of technical personnel, Guy Nemoz, IFTH, France
- What information sources are there?, Guy Kitteringham, International Newsletters, UK;
- Use of IT systems, David Cullis, XeBusiness, UK.

Forum 2: How do I re-engineer my company?

Lesson learned

Appropriately, Conference Chair Roshan Shishoo started the event by clarifying its aims and structure. Judging by the large and enthusiastic attendance from around the world, there was no need for him to state the principal reasons that companies needed to make the transformation to technical markets, but in doing so he set the context for the rest of his speech and those that followed.

Accentuating the positive, he gave several causes for believing that the textile industry in the industrialized world could enjoy sustainable growth:

- technical textiles encompass a wide range of uses;
- technical textiles are highly functional and high-performance materials;
- technical textiles exploit innovative production processes;
- they are niche products and markets.



Chris Byrne (above, left) outlined the funding and support available to companies working in or developing technical textile products or services.



David Cullis (above, right) believes that the textile industry is behind other sectors with respect to its adoption of information technology.

As an aside, Shishoo also pointed out the relevance of many of these issues to the philosophy behind the European Commission's draft proposal for its research and development funding over the next few years—the so-called 6th Framework. Potentially, therefore, European manufacturers could exploit this resource for developing technical textiles. Later in the day, Chris Byrne of the UK Government's Department of Trade and Industry (DTI) covered this source of funding and others, some national and some international, in more detail.

Another cause of optimism, Shishoo added, was that consumers in the industrialized world are learning to be more demanding; for instance, sports and leisure wear now requires a far higher degree of functionality. Speaking from the floor during one of the forums, delegate Ashish Puri from Indo-Rama Synthetics, Indonesia, contrasted this with the situation in the developing world. Technical products are highly regarded in the West, he said, where they contribute to the maintenance of a high expectation of lifestyle. In developing regions such products are not needed, implying that those developing technical products need not fear the imminent encroachment of further competition from the low-wage countries.

Shishoo also stressed the need for the manufacturer of technical textiles to learn to listen to the needs of the customer and to respond to them. For instance, in the development of one market, airbags, suppliers along the whole chain learned to cooperate with one another for the collective good. As a result this, at the time, new application for textiles stimulated the development of new technologies, materials and solutions that, in turn, found other uses. Such sentiments were echoed throughout the meeting, particularly during the case studies given by Stefano Carosio of D'Appolonia and Ticona's Birgit Haas and her colleagues.

Shishoo did, however, sound one note of caution: the general perception of the textiles industry by those outside of it is poor. As a result, students are not attracted to study the subject and, in a classic example of negative feedback, higher education establishments give it less emphasis, making the problem worse still. If the industry is to attract the calibre of employee needed to sustain the development of technical textiles, a way must be found to improve the industry's image and to bolster the study of the subject.

One way to polish the industry's image was touched on during Carosio's case study. D'Appolonia has organized a competition, with the support of the European Space Agency, with the aim of stimulating new applications of space technology in the textile and clothing sectors. This and similar exercises will hopefully help to put a high-technology gloss on textiles.

Clearly, D'Appolonia values the need for communication and other parts of this case study concerned ways to spread the messages about the various technology transfer projects with which Carosio's company has been involved. Much use is made of the Internet, for instance, and great store set on publications, internal and external, as well as displays at exhibitions and in museums. Guy Kitteringham of the organizer International Newsletters helped complete this message with a comprehensive overview of the various sources of information available on technical textiles.

Market choices

After Shishoo, the rest of the first morning's session concerned the markets that make up the technical textiles industry. Messe Frankfurt's Michael Janecke gave an overview of the various sectors and some advice on how newcomers might begin the daunting process of narrowing down which ones to concentrate on. Not surprisingly, and

Conference programme day 2

3: What materials and machinery do I need?

Chair: William Lakin, EURATEX, Belgium.

- Plenary: Case Study, Birgit Haas, Ticona GmbH, Germany;
- Technical fibres, Colin Purvis, CIRFS, Belgium;
- What can weaving technology offer?, Filip Lombaert, Picanol, Belgium;
- What can knitting technology offer?, Marc Weber, HS Niederrhein, Germany;
- What can nonwovens technology offer?, Geoff Kershaw, NSC Nonwovens;
- Coating and laminating technology, Gabriel Mantzouridis, Coatema, Germany.

Forum 3: What materials and machinery do I need?

4: How do I maintain standards and quality for value-added products?

Chair: Roshan Shishoo, IFP Research, Sweden.

- Requirements for automotive textiles, Eric Söderbaum, Volvo Car Corp, Sweden;
- Requirements for medical textiles, Dirk Hoefer, Hohenstein Institute, Germany;
- Quality requirements for value-added products, Robert Crosskell, SGS Ltd, UK;
- Research and development testing centres, Roshan Shishoo, IFP Research, Sweden.

Forum 4: How do I maintain standards and quality for value-added products?

with justification, the organizer of *Techtextil* stressed the benefits of attending such an exhibition, where all aspects of this diverse industry can be encountered.

David Rigby followed this with some practical and much-appreciated advice on how to refine these selections still further. Rigby stressed the need for an organization to begin by analysing its own existing business, and to understand its strengths and weaknesses. The next stage is to understand fully the market or markets of interest and, crucially, to remain focused on those and those alone.

Pre-empting the thoughts of other speakers, chairs and delegates, he also suggested that to make this transition viable requires a complete culture change within an organization. If delegates were daunted by such a prospect, others suggested it was possible to take one step to begin with, perhaps developing a single niche product, to demonstrate that the complete metamorphosis was going to be worthwhile.



The importance of technical textiles was emphasized by the representation of so many of the major trade bodies: Paul Derwingaerden (left, above) attended on behalf of the European Disposables and Nonwovens Association; Bill Lakin spoke for Euratex; Guy Nemoz of the Institut Français Textile Habillement also made a presentation; as did Colin Purvis (left below), Director General of both the Comité International de la Rayonne et des Fibres Synthétiques (CIRFS) and the European Association for Textile Polyolefins (EATP).



Nevertheless, all agreed that the key to long-term success was to stay focused and to continue to innovate. Stagnation was not an option.

Narrowing the choice still further, the organizer chose two of the larger sectors, Automotive and Geotextiles, for more detailed presentations, provided by Walter Fung and Bernard Myles, respectively. Indeed, the following day Myles revealed that he felt certain at least one of the attendees, with whom he had held a one-to-one meeting, would indeed follow-up the event and start to make geotextile products. The South American firm learned, he said, that it already had the right machinery and technical know-how to make the products, as well as a market in which to sell them.

Materials and machines

This anecdote also illustrates that, in the absence of major investments (both in plant and personnel), the ability to adapt the existing expertise of companies to make new products for their chosen markets clearly depends on the suitability of their existing machinery. No matter what sort of machinery they owned, delegates learned more about the sorts of technical products they might start to make with it. The morning session of the second day covered weaving, knitting, nonwovens, and coating and laminating

equipment, with speakers from major machinery manufacturers objectively presenting, and then discussing in the forum, the advantages and disadvantages of each type for manufacturing textiles with various special properties.

It is worth mentioning that, unlike so many conferences, the speakers to their credit did not use their time to merely advertise their latest piece of machinery. Instead, they stuck to their brief and informed the audience of the possibilities or limitations of particular types of generic machinery for making technical textiles.

Possibly they realized that by doing so they were creating new markets for themselves, as well as helping to prevent the demise of existing customers—a real example of the maxim outlined above that success depends on total cooperation throughout the whole of the production chain.

To complete this section, Colin Purvis Director General of both the Comité International de la Rayonne et des Fibres Synthétiques (CIRFS) and the European Association of Textile Polyolefins (EATP) introduced delegates to the many exotic performance fibres that have emerged in recent years. Like Shishoo, he was upbeat, arguing that the increase in new applications (for instance, airbags, sportswear, transportation and reinforcements) more than compensated for any decline in fibre usage for some of the longer standing technical end-uses such as conveyor belts. Technical textiles are a growing priority for fibre producers, who are tailoring their development and production accordingly, he concluded.

Resources

Demonstrating the high priority afforded to technical textiles by other sectors, Bill Lakin of Euratex and Paul Derwingaerden of the European Disposables and Nonwovens Association (EDANA) represented their



Taking up Roshan Shishoo's call for the industry to project a more high-technology image, Stefano Carosio of Italy's D'Appolonia discussed several novel ways that companies could publicize their activities to a wider audience.

respective trade bodies, revealing to delegates how they thought that these could contribute to the transformation process. Also speaking in the session, *What do I need to re-engineer my company?*, was Guy Nemoz from the Institut Français Textile Habillement (IFTH) who tackled the issue of retraining personnel.

David Cullis of information technology (IT) supplier XeBusiness extolled the virtues of computer systems to modern businesses. Cullis suggested his experience was that, compared with other sectors, the textiles industry as a whole was somewhat backward in this respect and so had relatively much more to gain by adopting IT solutions.

This session also tackled the issues of information sources (Guy Kitteringham) and government funding (Chris Byrne), both of which are referred to earlier in this article. Not mentioned above is the thought that, although traditional sources of funds are available for companies that have made the transition to the technical sector, Byrne was not aware of any support specifically designed to aid the transformation process itself. This should be countered by the knowledge that a significant number of companies from Northern Ireland received support to attend the event. However, despite several requests to the DTI, no other UK companies were supported by Government funds, neatly illustrating the vagaries of such funding mechanisms.

Maintaining quality and standards

To begin to explain the essential nature of high standards of quality in technical applications, the organizer chose an end-user from the automotive industry—Eric Söderbaum of Sweden's Volvo Car Corp. Dirk Hoefer of the highly respected Hohenstein Institute then repeated the message, this time from the perspective of another important group of end-users—the medical industry.

To add the views of a testing organization, Rob Crosskell of SGS Ltd was invited and, finally, the Conference Chair Roshan Shishoo, who had begun proceedings the day before, concluded the conference by discussing the role of research and development centres. All the speakers stressed the need for the highest quality standards to be achieved and maintained if added-value products were to succeed. Delegates were introduced to the concept of end-users with exacting demands and, once more, reminded of the need to cooperate all along the production chain for maximum effectiveness.

Closing remarks

Drawing the conference to a close, Shishoo reiterated many of the points made above:

- technical textiles offer the prospect of long-term and sustainable growth;
- companies must learn to cooperate all along the supply chain;
- high quality and standards are crucial;
- for most the transformation to becoming a technical textile business will involve a complete change of culture;
- begin by understanding the existing business, its strengths and its weaknesses;
- pick your market, understand it fully and stay focused;
- keep innovating, never stagnate;
- to attract the highest calibre of graduate, essential to the long-term health of the industry, textiles must shed its low-technology image and overcome the current crisis in education and training.

The need for such a conference was completely vindicated by the larger than expected and highly enthusiastic attendance, from all over the world. To continue to meet this demand, the organizer has already begun to plan for the next event. In the meantime, a CD-ROM with the full conference proceedings is available (see the inside front cover of this issue for an order form).



Further information

How to enter the technical textiles markets was held at the Stratford Manor Hotel, Stratford-upon-Avon, UK, on 14–15 November 2002.

An order form for the full proceedings of the 2002 event can be found on the inside front cover of this issue.

The organizer is already making plans for the next event. For information on this, contact:

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