Technical Textiles
in North America
- Putting the industry in perspective

William C. Smith
Industrial Textile Associates
Greer, SC, 29650 USA
www.intexa.com

ita

Techtextil 2001
The technical textiles industry in North America is the world's largest and richest. And it is doing fine -- *for now!*

*But everyone wants a part of it, and the economic downturn is beginning to have an impact!*
The NA technical textiles industry accounted for 33% of the world's industrial textile production in 1998.

Today, it is 30%

By 2005, it is projected to be 28%

Production will actually grow, but share of world market will shrink — to benefit of SE Asia and China.

Source: David Rigby study for Messe-Frankfurt
Even with slowdowns:

- Housing starts at historical high
- The automobile industry, the industry's largest market, though projected to be down 10%, will still yield 16 million vehicles — normally an excellent year.
- Many new markets are being generated, and many selected ones are growing.
- Spending on construction rose end of 2000
Make no mistake:

The degree and longevity of an economic slowdown, and how wide-spread it becomes (and the negative global impact) will have heavy and significant impact on the technical textiles industry — for good or bad!
Major changes have been due to:

- Consolidation
- Development of new technology
- Changing way of doing business
- Growth in nonwovens
- Solidifying position in market
- Exporting more
The technical textiles industry in North America is highly fragmented.

One can spend an entire career in the industry and not be aware of large, significant markets in other areas or utilizing other technology
Technical Textiles in North America - Putting the industry in perspective

Greatest benefit of US market is that it is a united one —

All same language, seamless state-to-state business, no regional differences or laws impacting negatively.

The per person consumption of textiles in US/Canada is 40+ square yards per person per year, Europe about 21 sq yds per person, elsewhere in world just over 7 square yards per person.

Everyone wants a part of the industry — thus the growth in imports

Techtextil 2001
The US economy has had unheralded growth over the last decade!

The Industrial textile segment benefits from that type of economy!

And it is being impacted by imports, though not as severely as apparel ---- yet!
Most industry respondents feel the downtown will be a relatively short one — at least in NA.

Most feel the projected growth will be realized, maybe surpassed, certainly in some areas.
<table>
<thead>
<tr>
<th>Application</th>
<th>Poundage 1995 (Tons)</th>
<th>$ Value 1995 ($Million)</th>
<th>Poundage 2005 (Tons)</th>
<th>$ Value 2005 ($Million)</th>
<th>%CAGR 95-05 (Consumption)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>150</td>
<td>590</td>
<td>168</td>
<td>663</td>
<td>1.1</td>
</tr>
<tr>
<td>Construction</td>
<td>405</td>
<td>1147</td>
<td>528</td>
<td>1551</td>
<td>2.7</td>
</tr>
<tr>
<td>Clothing/Shoes - Technical Components</td>
<td>176</td>
<td>1485</td>
<td>154</td>
<td>1287</td>
<td>(-1.3)</td>
</tr>
<tr>
<td>Geotextiles</td>
<td>84</td>
<td>389</td>
<td>143</td>
<td>659</td>
<td>5.4</td>
</tr>
<tr>
<td>Home Applications - Technical Components</td>
<td>554</td>
<td>2443</td>
<td>788</td>
<td>3385</td>
<td>3.6</td>
</tr>
<tr>
<td>Industrial Applications</td>
<td>544</td>
<td>2579</td>
<td>739</td>
<td>3543</td>
<td>3.1</td>
</tr>
<tr>
<td>Medical</td>
<td>368</td>
<td>2021</td>
<td>409</td>
<td>2276</td>
<td>1.1</td>
</tr>
<tr>
<td>Transportation</td>
<td>530</td>
<td>3139</td>
<td>633</td>
<td>3612</td>
<td>1.8</td>
</tr>
<tr>
<td>Environmental</td>
<td>56</td>
<td>312</td>
<td>90</td>
<td>458</td>
<td>4.9</td>
</tr>
<tr>
<td>Packaging</td>
<td>119</td>
<td>524</td>
<td>154</td>
<td>700</td>
<td>2.6</td>
</tr>
<tr>
<td>Protective</td>
<td>45</td>
<td>435</td>
<td>61</td>
<td>620</td>
<td>3.0</td>
</tr>
<tr>
<td>Sport/Leisure</td>
<td>82</td>
<td>513</td>
<td>109</td>
<td>628</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>3113T</strong></td>
<td><strong>$15,577</strong></td>
<td><strong>3976T</strong></td>
<td><strong>$19,382</strong></td>
<td><strong>2.4%</strong></td>
</tr>
</tbody>
</table>

Source: David Rigby study for Messe-Frankfurt, 1997

Techtextil 2001
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires</td>
<td>334</td>
<td>353</td>
<td>392</td>
<td>2.2</td>
</tr>
<tr>
<td>Coated Fabrics</td>
<td>111</td>
<td>251</td>
<td>300</td>
<td>3.9</td>
</tr>
<tr>
<td>Transportation Fabric</td>
<td>64</td>
<td>113</td>
<td>130</td>
<td>5.0</td>
</tr>
<tr>
<td>Hose &amp; Belting</td>
<td>82</td>
<td>89</td>
<td>100</td>
<td>2.5</td>
</tr>
<tr>
<td>Filtration</td>
<td>30</td>
<td>32</td>
<td>35</td>
<td>1.9</td>
</tr>
<tr>
<td>Electrical and Related</td>
<td>15</td>
<td>56</td>
<td>75</td>
<td>6.8</td>
</tr>
<tr>
<td>Felts</td>
<td>27</td>
<td>52</td>
<td>60</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>663</td>
<td>946</td>
<td>1092</td>
<td><strong>3.0</strong></td>
</tr>
</tbody>
</table>

AGR 93/98 = % Annual Growth Rate 1993 to 1998
Source: The Freedonia Group & Technical Textiles International
### Technical Textiles in North America - Putting the industry in perspective

#### Automotive Interiors - Average usage by square yards

<table>
<thead>
<tr>
<th></th>
<th>Cars</th>
<th>Lt. Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seating</td>
<td>7.2</td>
<td>4.9</td>
</tr>
<tr>
<td>Headliner</td>
<td>4.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Carpeting</td>
<td>4.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Trunks</td>
<td>1.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Quarterpanels</td>
<td>4.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Misc.</td>
<td>2.5</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24.8 sy</strong></td>
<td><strong>17.2 sy</strong></td>
</tr>
</tbody>
</table>

(Does not include air bags, hoses, belts, filters, tires, and hidden uses)
Imports have impact on industry — *BUT*

*Greater impact is due to:*

- Replacing outdated, obsolete, excess plants
- Increased production efficiencies
- Market shifts
  - Nonwovens replacing wovens/knits
  - Nonwovens create new markets
  - Some markets mature and fade
- Vertical integration — up and down
- Consolidation
- Lowering cost and becoming more competitive
As important as NAFTA may or may not be to the US economy and the overall textile industry, and the affects are debatable,

Only 12.7% of textile related NAFTA trade currently involves industrial textiles

NAFTA has had relatively little impact — so far — on industrial textiles in the US, but a lot on apparel.

Most, not all, industrial textiles need to be near customer and site of fabrication. And much fabrication is more complex than apparel. Technical expertise needs to be nearby. That also restricts many imports.
Canada and Mexico have gained a lot from NAFTA:

- 88% of Canada’s total exports are now to US
  
  From 20% of textiles to now over 50%

- Mexico had been growing 12% per year since NAFTA. So far in 2000, 4%, may end year under 2% due to slow economic conditions in the US
Two major factors currently affecting NA markets in a time of slowing economy:

- Too many suppliers
  Created by unbridled economic growth last decade

- Too much inventory
  Inventory-to-shipment ratio highest since 1991
  (due to high production in growing 1st half of 2000)
  Many producers selling off at distressed prices

It is unfortunate, but the industry will lose some weak suppliers and producers. Resulting consolidation will create stronger industry overall

Techtextil 2001
One major industry analyst (best not named):

We are not *all* going to die!

Industrial textile companies smart enough not to incur large debts are doing well

*We need a recession to come in and get rid of some weak companies (to make a stronger industry).*

Drastic words, but perhaps words that need to be said.
Is there a future? Of course. The industry is too strong and too vital.

The industry will prosper through the use of new technology and innovative application of that technology to use textiles to solve problems.

- Smart/Interactive/Intelligent textiles
- New fibers and yarns
- Innovative and creative application
Trends:

- Traditional vendor/supplier relationships are changing — extensive upward and downward integration to continue
- Increased globalization — but also growth in markets in other parts of the world. WTO and NAFTA and CBI will impact.
- Niche/specialty markets increasing in importance
- Traditional manufacturers are becoming more responsive to customers' needs — building partnerships and alliances
- Economic trends will have significant impact — currently downward, but will recover.
Thank you for listening

William C. Smith
Industrial Textile Associates
Greer, SC, 29650 USA
www.intexa.com

ita

Techtextil 2001