



China Technical Textile Industry Survey

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INTRODUCTION

Objectives

This is an update of the market survey executed in 2010. This research was conducted with the objective providing an overview of the technical textile industry in *China*.

Methodology

- Generally speaking, conducting market research in *China* is different and significantly more challenging compared with developed countries because of 1) the size and diversity of the country; 2) lack of fully reliable centralized/official information databases; 3) constant and extremely rapid change - the whole *China* economic system is far from being in equilibrium.
- Therefore solid market research work must be based on multiple resources and activities.
- Our methodology leverages a combination of resources/activities such as:
 - All background information (client data, existing available information, etc.)
 - Secondary research (in Chinese, English), which include different resources from proprietary databases to access to associations or magazines etc.
 - Primary research, which includes access to external business network, interviews with experts and key insiders, etc.
 - Collective *China* knowledge/sector expertise/market research expertise with over 200 consulting projects executed in and outside *China*.
- Key sources of information for this report include background information (e.g. existing report), secondary sources (e.g. National Textile Industry Association), and government bureaus.

EXECUTIVE SUMMARY

- The technical textile industry, which is high value added, is experiencing relatively high growth.
- Total production of technical textiles exceeded 8 million tons (RMB 4 hundred billion output value) in 2010, driven mainly by domestic infrastructure construction and health care development.
- Technical textile industry is increasing proportionally relative to whole textile industry structure, accounting for 20% of the total industry in 2010.
- Chemical fiber is the main raw material used for producing technical textile (~90% of total raw materials currently); nonwoven fabrics are the main products produced by companies.
- There are about 2,500 companies¹ in *China's* technical textile industry; the ratio of domestic to foreign companies is ~4:1; companies are highly concentrated in five provinces (more than 70% of total industry output in 2010), which are: *Shandong, Jiangsu, Zhejiang, Fujian and Guangdong*.
- Domestic companies are mostly in the mid and low end of the market; most are SMEs with weak R&D ability; while foreign companies dominate the high-end market.
- Total exports in 2010 were US\$ 8.8 billion, an increase of 38% over 2009; total imports were US\$ 2.8 billion in 2010, 23% increase from 2009.
- Total exports in 1H 2011 were US\$ 5.7 billion, an increase of 31% over 1H 2010; total imports were US\$ 1.5 billion in 1H 2011, 11% increase from 1H 2010.
- *China* mainly imported technical textiles from *Japan, Taiwan, South Korea and the United States*; *Italy* ranked #6 in 2010 for countries exporting technical textiles to *China*, and is the same position in 1H 2011.
- The market is expected to develop rapidly, driven by demand and government support, especially in *health care, automotive, agriculture, architecture, environment protection and new energy*²

¹ Note: including only companies with annual revenue of more than RMB 5 million.

² Technical textile applications: health care: mask, sanitary napkin, bandage, artificial organs etc.; automotive: seat cover, air bag and tire cord etc.; agriculture: sun-shade net, fly net, and other cover materials; architecture, waterproof materials, or combined with cement to increase tensile strength; environment protection: filter materials; new energy: high-performance materials

MARKET OVERVIEW

Technical textile development & production

- Technical textiles (fibers, yarns and fabrics) industry has been developing for more than 15 years in *China*; it is one of the three main categories within the textile industry, along with *home textiles* and *apparel textiles* and sector requires a higher level of technology, more intensive capital requirements and higher quality of labor relative to home and apparel textile industries.
- Technical textiles have been widely applied in areas of architecture, healthcare, automotive, military and aerospace sectors, etc.
- The technical textiles industry has been developing relatively fast, even during global economic crisis period.
- Total production exceeded 8 million tons (RMB 4 hundred billion output value) in 2010, a 20% increase over 2009.
- High growth of technical textile industry in 2010 and 1H 2011 was driven mainly by domestic consumption, which accounted for >70% of the total consumption.
- Infrastructure construction and health care development contributed the most, which are two key areas receiving funds from *China's* stimulus package.
- The following chart shows technical textile production (also production of fibers used by technical textile industry) from 2006-2010.



Source: China Textile Industry Association

Proportion of technical textile in industry structure

- Chemical fiber is the main raw material used for producing technical textiles, accounting for 90% of total raw materials (remaining 10% are natural fibers).
- Fiber consumption is regarded as the key measurement to judge structure proportion of different textile industries.
- Technical textile consumed only 17% of the total fibers used by the entire textile sector, making it the smallest industry compared to home textile and apparel textile.
- However, the proportion is increasing and it is planned to reach 19% by 2011 according to “*Textile Industry Restructuring and Revitalization Planning*” (here after the “*Planning*”) issued by State Council in 2009.
- The “*Planning*” was emphasized to develop new technical textile products, accelerate technical textile industry development, and improve its industrialization.
- Technical textile plays more important roles in textile industry
- Although proportion of technical textiles in the overall textile sector is increasing, it is still far behind the level of Western countries, where ~30% of textile production is technical textiles.

Categories of technical textile products

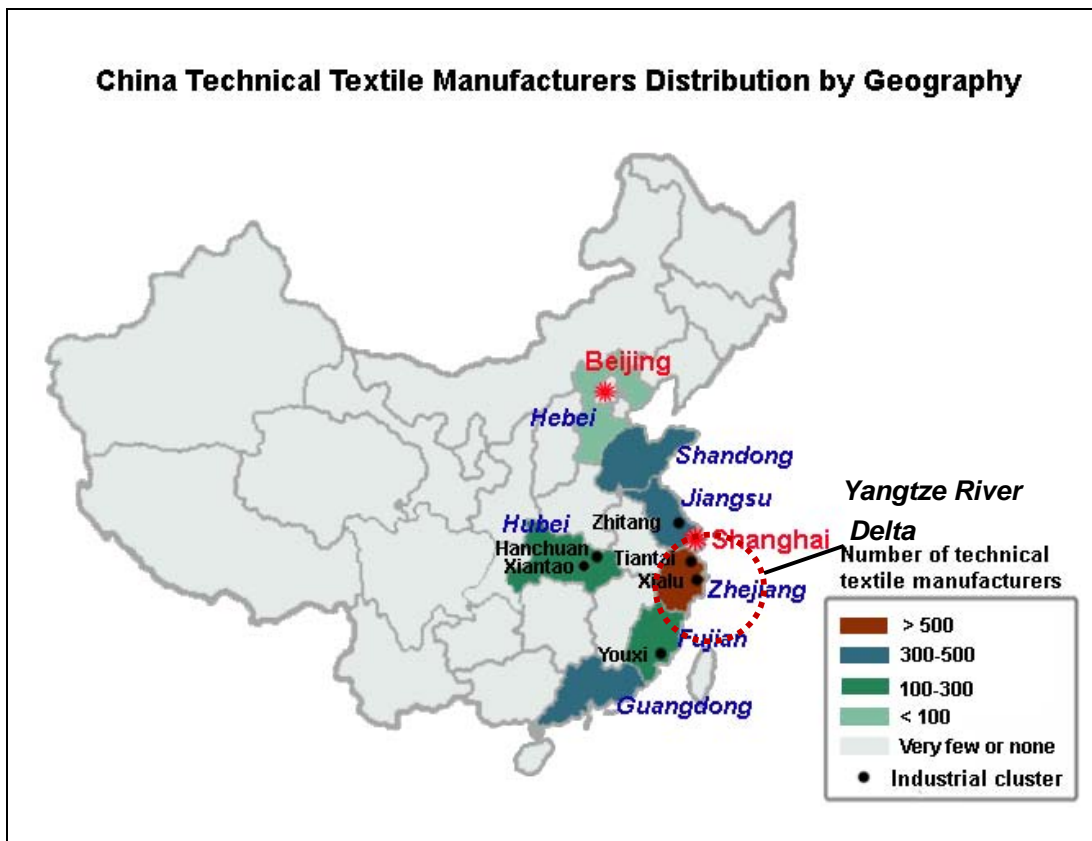
- Technical textile products are divided into three categories: *rope & cables, woven belt & cord fabrics, and non-woven fabrics.*
- Among them, non-woven fabrics accounts for ~50% of industrial output.

Level of China's technical textile industry

- *China's* technical textile industry is still at a primary stage of development when compared to the *US, Japan* and European countries.
- Overall technical textile industry has relatively low R&D level and little investment; most products are middle & low quality, high-end products are in relatively short supply.
- Raw materials and fabrics currently rely primarily on chemical fibers and nonwoven fabrics; manufacturers should develop diversified materials and fabrics.

COMPETITIVE LANDSCAPE

- There are about 2,500 companies in *China's* technical textile industry (~80% domestic and ~20% foreign), of which ~850³ companies specialized in nonwoven fabric production.
- Manufacturers are highly concentrated in East *China*, especially around the *Yangtze River Delta*; while few are located in Western *China*, which only account for <5% of the total production.
- Key provinces for production include *Shandong, Jiangsu, Zhejiang, Fujian* and *Guangdong*; in 2010, these five provinces accounted for more than 70% output of *China's* technical textile industry in 2010.
- The following map shows distribution of technical textile manufacturers and key cities of concentration in *China*.



Source: JIJ analysis on multiple sources

³ Note: including only companies with annual revenue of more than RMB 5 million.

- Technical textile industry has developed fast in *Zhejiang* province and has become a leading industry in the province, which accounts for >30% of total industry output in *China*.
- *Zhejiang* province is strong in nonwoven fabrics production and has formed two clusters: *Tiantai* county, producing mainly fabrics for filter; *Xialu* town producing mainly nonwoven fabrics and is the largest spun-lace nonwoven fabric production base of *China*.
- *Jiangsu* province is #1 in cord fabrics production in *China*; it is also a key producer of nonwoven fabric production, accounting for ~15% of total output in *China*.
- *Jiangsu* is also a key manufacturer of nonwoven fabric machinery, producing ~65% of *China's* total output; machinery is primarily produced in the *Zhitang town cluster* and is usually exported to the *US, Australia, Russia, Japan, India, etc.*
- *Shandong* province is a key producer of leather substrates, geo-textiles advanced composite materials and textiles applied in the in health care industry.
- *Guangdong* and *Fujian* provinces are developed in the area of nonwoven fabrics; *Guangdong* has accounted for ~30% of nonwoven fabrics output in *China* for many years; while *Youxi* county in *Fujian* has become *China's* key leather fabric cluster.
- *Hubei* province is leading in medical textiles, which produces ~1/3 of *China's* medical textiles; ~80% of medical textiles in *Hubei* province are exported.
- Clusters in *Hubei* province include *Xiantao* and *Hanchuan*; exports of nonwoven fabrics in *Xiantao* accounted for 20% of total nonwoven fabric exports in 2009; *Hanchuan* is strong in the production of polyester yarns.

Key domestic players

- As the technical textile industry developed relatively late in *China*, most domestic companies are SMEs with weak R&D; there are limited research institutes as well.
- Domestic companies mainly focus on nonwoven fabric production as well as woven and knit fabrics production.
- Key domestic companies include *Jiangsu Kuangda Automobile Textile Group Co., Ltd*, *Zhejiang new transit Holdings Limited* and *Fujian Nanfang Co., Ltd*.
- *Jiangsu Kuangda Automobile Textile Group Co., Ltd* is specialized in car interior fabrics, and has taken 35% market share in *China*.
- *Zhejiang new transit Holdings Limited* is the largest spun-lace nonwoven fabric producers in *China*.

- The company started to cooperate with *Kimberly* from 2008, supplying spun-lace nonwoven fabric; because of this cooperation, exports increase to 40% of *Zhejiang new transit Holdings Limited* total sales.
- In 2009, *Fujian Nanfang Co.* set up a cooperation agreement with *Honda* to provide automotive interior products; *Nanfang* produces high-temperature filter material since 2010.

Key foreign players

- Large foreign technical textile companies began entering *China* in late 1990's and 2000; they primarily occupied the high-end market, especially those from *US*, *Japan* and European countries.
- For example, in the high-end market of the health care area, technical textile products are dominated by *Fiberweb*, *Polymer Group Inc. (PGI)* and *Mitsui Chemicals*.
- *Fiberweb*, one of the world's largest groups in the nonwoven fabric industry, entered *China* in 2001 with production of hi-tech air laid material for absorption and/or distribution of liquid.
- In 2009, *Fiberweb* acquired *Hengguan (Tianjin) Specialty Nonwovens Co., Ltd.* and aimed to develop special nonwoven fabrics.
- *PGI* has set up three production bases in *Guangdong* and *Jiangsu* provinces, which make it *China's* largest nonwoven fabric producer and the unique producer of integrated medical fabrics.
- *PGI* also holds a majority share of *Nanhai Nanxin Nonwoven Co., Ltd*, which is the largest spun-bonded nonwoven fabric producer in *China*; 90% of products produced are for exports.
- In 2010, *PGI* has set up the most advanced and customized polypropylene spun-melt fabrics production line in *China* and a R&D center in the city of *Suzhou (Jiangsu province)* to support product innovation.
- The following table shows key domestic and foreign wool fabrics manufacturers in *China*

Table: Key domestic and foreign technical textile manufacturers in China

Company type	Company name	Location	Year established	Key products and features
State-Owned Enterprise	<i>Hebei Zeyu Tarpaulin Co., Ltd.</i>	Baoding, Hebei	1960	Technical textile products including tarpaulin and tent etc.
	<i>Fujian Nanfang Co., Ltd.</i>	Nanping, Fujian	1994	Polyurethane (PU) fabrics, PU leather and non-woven fabrics production lines
Private Chinese	<i>Hainan Xinlong Nonwovens Co., Ltd.</i>	Haikou, Hainan	1993	Diversified nonwovens and their converted products; has five production lines including spun-bond, spun-lace, spun-lace composite, paste dot coating and nonwovens converting
	<i>Zhejiang new transit Holdings Limited</i>	Shaoxing, Zhejiang	1979	Spun-laced nonwoven fabrics and high-grade synthetic leather fabric with France, German spun-laced nonwovens advanced production lines
	<i>Jiangsu Kuangda Automobile Textile Group Co., Ltd.</i>	Changzhou, Jiangsu	1990	<ul style="list-style-type: none"> Interior decorative fabrics for automobiles and other transportation vehicles Mainly support automotive manufacturers are <i>Shanghai Volkswagen, Shanghai GM, Dongfeng Nissan</i> etc.
	<i>Dalian Ruiguang Nonwoven Group Co., Ltd.</i>	Dalian, Liaoning	1991	Has four spun-bond nonwoven, one SPC pulp airlaiding composite spun-lace nonwoven, one advanced spun-lace nonwoven and two meltblown nonwoven production lines
Wholly Foreign Owned Enterprise (WFOE)	<i>PGI China</i>	Foshan, Guangdong; Suzhou, Jiangsu	2000; 2005	Three production bases: <ul style="list-style-type: none"> <i>Nanhai Nanxin Nonwoven Co., Ltd.</i> (JV in Foshan); <i>PGI Nonwoven (Foshan) Co., Ltd.</i> and <i>PGI Nonwoven (China) Co., Ltd.</i> in Suzhou Produce spun-bonded polypropylene nonwoven fabrics
	<i>Fiberweb (China) Airlaid Co., Ltd.</i>	Tianjin	2001	<ul style="list-style-type: none"> Solely owned by <i>UK Fiberweb Group</i> in 2001 Hi-tech airlaid material for absorption or distribution of liquid for main use in the disposable feminine hygiene products and absorbent products
	<i>Mitsui Chemicals (Shanghai) Co., Ltd.</i>	Shanghai	1998	<ul style="list-style-type: none"> Solely owned by Japanese <i>Mitsui Chemicals Group</i> PP spun-bond nonwoven used for automobiles and medical fields
	<i>Toray Polytech (Nantong) Co., Ltd.</i>	Nantong, Jiangsu	2008	<ul style="list-style-type: none"> Solely owned by <i>Toray</i> in 2008 Manufacture and marketing of highly functional polypropylene spun-bond and its processed goods

Source: JLJ analysis, company website

PRICE LEVEL

- Price of technical textiles vary among different products (e.g. yarns, fabrics and end products) and is usually dependent on quality and process technology and its specifications; in general most domestic Chinese producers are in the low-mid end range.
- As technical textile fabrics produced in *China* focus on nonwoven fabrics, this section mainly provides prices of different types of nonwoven fabrics.
- Average imported price of nonwoven fabrics was about US\$ 5,200/ton (RMB 35,360/ton) according to imports in 1H 2011.
- The following table shows a few examples product specifications and prices from manufacturers.

Table: Key types, features, and pricing of technical textile fabrics in China

Types	Product features	Price from manufacturers US\$ (RMB)
<i>Polypropylene spun-bond nonwoven fabrics</i>	<ul style="list-style-type: none"> • Composition: 100% polypropylene • Weight: 13.5g/m² • Width: 2.7M 	<i>Shanghai Fengwei Nonwovens Co., Ltd.</i> ~ US\$2,147/ton (RMB14,600/ton)
	<ul style="list-style-type: none"> • Composition: 100% polypropylene • Weight: 13.5g/m² • Width: 3M 	<i>Zhejiang Kingsafe New Textile Group Co., Ltd.</i> ~US\$2,279/ton (RMB15,500/ton)
<i>Spun-lace nonwoven fabrics</i>	<ul style="list-style-type: none"> • Composition: viscose/ polyester • Weight : 30g/m² – 200g/m² • Width: 3.2M 	<i>Ji'an City Sanjiang Superfine Fiber Nonwoven Co., Ltd.</i> ~US\$ 2,700-3850/ ton (RMB 18,360-26,180/ton)
	<ul style="list-style-type: none"> • Composition: viscose/ polyester/ bamboo • Weight: 30-220g/m² • Width: 3.2M 	<i>Suzhou Changsheng -Spunlace Nonwoven Co., Ltd.</i> ~US\$2,700-2,800/ton(RMB 18,360-19,040/ton)
<i>Meltblown Nonwoven fabrics</i>	<ul style="list-style-type: none"> • Composition: 100% polyester • Weight: 10-80g/m² • Width: <3.2M 	<i>Suzhou Mediceng Nonwoven Fabric Co., Ltd.</i> ~US\$1,500-4,000/ton (RMB10,200-27,200/ton)
	<ul style="list-style-type: none"> • Composition: 100% polyester • Weight: 10-500g/m² • Width: 2.4M 	<i>Jiangyin Golden Phoenix Special Textile Co., Ltd.</i> ~US&1,000-3,500/ton (RMB 6,800-13,800/ton)
<i>Leather substrates</i>	<ul style="list-style-type: none"> • Composition: 100% polyester • Weight: 180-220g/m² • Width: 1.5-2.3M 	<i>Changshu Yanrui Nonwoven Products Co., Ltd.</i> ~US\$1,500-1,800/ton (RMB10,200-12,240/ton)
	<ul style="list-style-type: none"> • Composition: 100% polyester • Weight: 100-120g/m² • Width: 1.85-4M 	<i>Anxin Kaixing Chemical Fiber Products Co., Ltd.</i> ~US\$1,765 (RMB12,000ton)

Source: JLJ analysis based on multiple sources; Note: Prices indicated are example prices from a few selected manufacturers, actual price will vary depending on product specification, purchasing volume, etc.

DISTRIBUTION CHANNELS

- For technical textiles, it is generally foreign companies and medium to large private Chinese companies that serve the export market; trade shows and e-commerce are a major sales & marketing channel for them.
- Private Chinese SMEs in the textile sector predominantly serve the domestic market.
- The table below shows the key types of suppliers for different technical textiles produced in *China* and imported from other countries, and their dominant sales channels.

Table: Key sales and distribution channels of technical textile fabrics

Sector	Key customer market	Main type of supplier	Key sales channels
<i>Textiles (yarns & fabrics) produced in China</i>	Export	- Foreign companies - SOE - Mid-large private Chinese companies	Direct sales / trade companies (some contacts obtained through participating in trade shows)
	Domestic end product manufacturer (e.g. mask producers)	- All types of companies	Direct sales (some through distributors)
End technical textile products (e.g. tents, car interior products, medical mask) produced in China	Export	- Foreign companies - SOE - Mid-large private Chinese companies	Direct sales / trade companies (some contacts obtained through participating in trade shows)
	OEM	- Middle-small private Chinese companies	Direct sales / supply to major large private Chinese companies
	Domestic automotive manufacturers etc.	- All types of companies	Direct sales (some through distributors)
<i>Imported fabrics</i>	<i>End product manufacturers in China (e.g. auto interior products manufacturer)</i>	<i>Foreign suppliers importing fabrics into China</i>	<i>Mainly through Chinese distributors</i>

- Technical textile fabrics are produced by manufacturers themselves, and few of them outsource their production to sub-contractors; fabrics are sold directly to the clients and there is almost no retail market.

- Domestic technical textile fabric manufacturers sell fabrics to downstream end product manufacturers, e.g. mask producers and car interior producers, and then end products manufacturers sell products to end customers, e.g. automotive manufacturers.

IMPORT AND EXPORT ANALYSIS

The following import/export analysis for technical textiles (fiber, yarn, fabrics and end products) is based on the 12 customs categories as shown in the table below

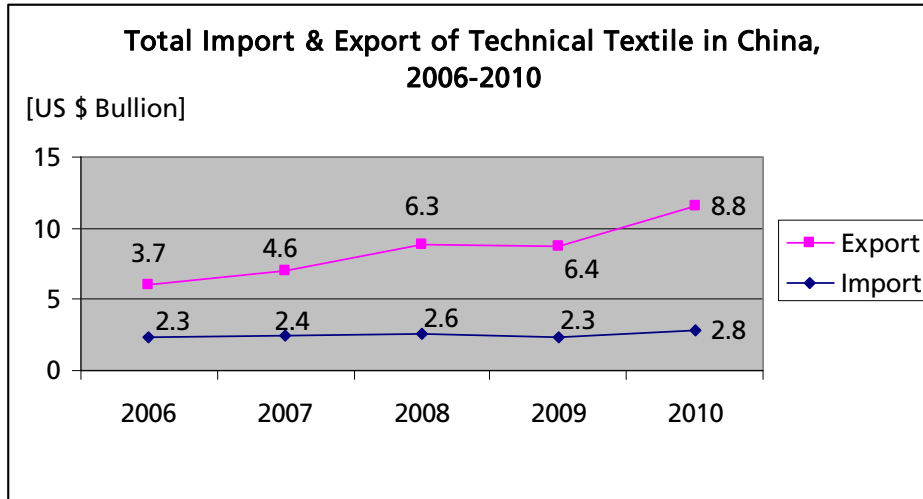
Table: Customs categories for textile raw materials and products

HS Code	Description
5601	Wadding of textile materials and articles thereof; textile fibers, not exceeding 5mm in length (flock), textile dust and mill neps
5602	Felt, whether or not impregnated, coated, covered or laminated:
5603	Nonwovens, whether or not impregnated, coated or laminated
5605	Metalized yarn, whether or not gimped, being textile yarn, or strip or the like of heading No. 5404 or 5405, combined with metal in the form of thread, strip or powder or covered with metal
5607	Twine, cordage, ropes and cables, whether or not plaited or braided and whether or not impregnated, coated, covered or sheathed with rubber or plastics
5809	Woven fabrics of metal thread and woven fabrics of metalized yarn of heading No. 5605, of a kind used in apparel, as furnishing fabrics or for similar purposes, not elsewhere specified or included
5902	Tire cord fabric of high tenacity yarn of nylon or other polyamides, polyesters or viscose rayon
5903	Textile fabrics impregnated, coated, covered or laminated with plastics, other than those of heading No. 5902
5907	Textile fabrics otherwise impregnated, coated or covered; painted canvas being theatrical scenery, studio backcloths or the like
5910	Transmission or conveyor belts or belting, of textile material, whether or not impregnated, coated, covered or laminated with plastics, or reinforced with metal or other material
5911	Textile products and articles, for technical uses, specified in Note 7 to this Chapter
6306	Tarpaulins, sails, awnings, tents, etc.

Source: World Trade Atlas, APEC tariff database and China Customs

Overview

The chart shows total imports and exports of technical textile between 2006-2010



Source: World Trade Atlas

Import of technical textiles

- Imports of technical textiles reached about US\$ 2.8 billion at the end of 2010, and 1.5 billion in 1H 2011.
- The following tables show the top countries *China* imported technical textiles from between 2008 – 2010 and 1H 2009-1H 2011.

Table: China’s technical textiles import by country during 2008 – 2010

Rank	Country /Region	Value			% Share			% Change
		2008	2009	2010	2008	2009	2010	10/09
	World	2,550.99	2,263.60	2,794.89	100.0	100.0	100.0	23.5
1	Japan	526.59	503.16	631.05	20.6	22.2	22.6	25.4
2	Taiwan	490.67	415.65	499.29	19.2	18.4	17.9	20.1
3	Korea, South	437.18	405.79	480.74	17.1	17.9	17.2	18.5
4	United States	339.54	255.05	304.22	13.3	11.3	10.9	19.3
5	Germany	134.41	112.75	174.27	5.3	5.0	6.2	54.6
6	Italy	47.73	47.12	52.25	1.9	2.1	1.9	10.9
7	Thailand	38.51	34.99	51.04	1.5	1.6	1.8	45.9
8	Hong Kong	71.64	48.27	49.70	2.8	2.1	1.8	3.0
9	Luxembourg	33.22	34.03	45.32	1.3	1.5	1.6	33.2
10	United Kingdom	27.32	24.17	34.89	1.1	1.1	1.3	44.4

Source: World Trade Atlas

Table: China's technical textiles import by country during 1H 2009 – 1H 2011

Rank	Country /Region	Value			% Share			% Change 11/10
		2009	2010	2011	2009	2010	2011	
	World	1,038.48	1,361.65	1,507.85	100.0	100.0	100.0	10.7
1	Japan	216.26	299.60	331.20	20.8	22.0	22.0	10.6
2	Taiwan	206.85	257.87	278.22	19.9	18.9	18.5	7.9
3	Korea, South	188.53	235.18	275.98	18.2	17.3	18.3	17.4
4	United States	120.93	143.72	148.51	11.7	10.6	9.9	3.3
5	Germany	45.98	80.54	105.02	4.4	5.9	7.0	30.4
6	Italy	21.42	28.67	30.04	2.1	2.1	2.0	4.8
7	Hong Kong	28.50	25.61	26.15	2.8	1.9	1.7	2.1
8	Thailand	16.02	22.92	22.95	1.5	1.7	1.5	0.1
9	United Kingdom	11.63	15.52	20.43	1.1	1.1	1.4	31.7
10	Luxembourg	9.56	24.51	16.55	0.9	1.8	1.1	-32.5

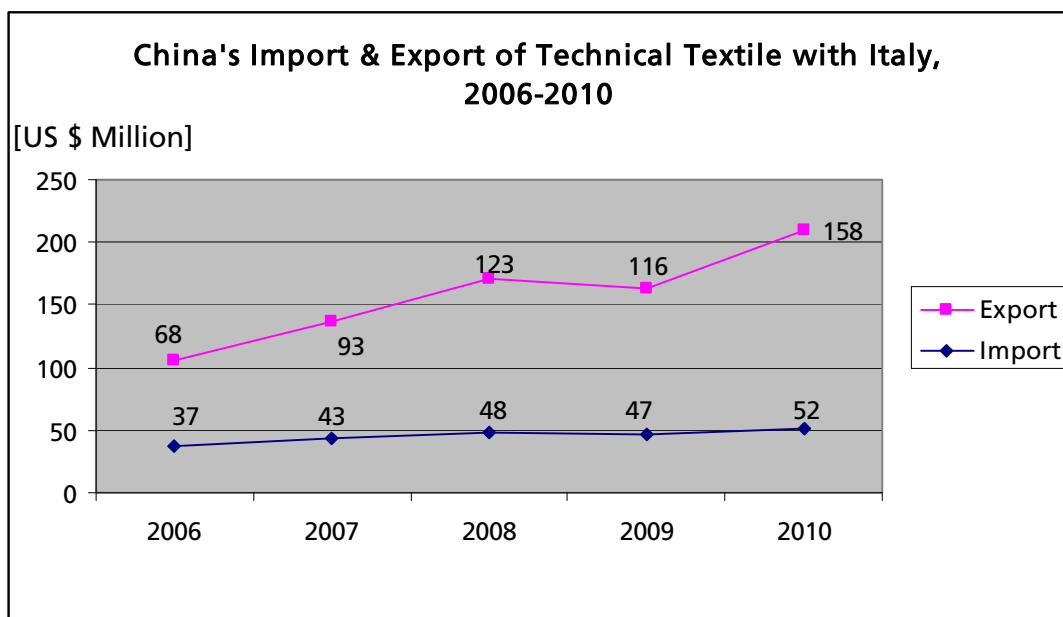
Source: World Trade Atlas

Japan, Taiwan, South Korea and the United States are the top 4 countries that *China* imported technical textiles from, accounting for about 70% of total imports in 2010 and the same positions of the four countries in 1H 2011 with 69% of total imports.

- *Italy* ranked #6, accounting for ~2% of the total imports (or US\$ 52 million) in 2010 (*Italy* ranked #7 in 2009); *Italy's* position reached #6 in 1H 2011 with US\$ 30 million imports in 1H 2011.
- Textile fabrics (not tire cord) with plastics was the largest import category, accounting for more than 40% of total imports, followed by nonwovens, which accounted for 30%.

Italy's market position

- As shown in the following chart, *China's* total imports of textiles and garments from *Italy* reached US\$ 52 million in 2010, 11% increase from 2009.
- However, imports have already reached US\$ 30 million in 1H 2011.
- Total exports to *Italy* were US\$ 158 million in 2010, a 37% increase from 2009; however exports in 1H 2011 reached US\$ 112 million.



Source: World Trade Atlas

- The largest import category of technical textile from *Italy* was “*other textile products for specific technical uses* (HS code: 5911)” - US\$ 26 million from *Italy* in 2010, accounting for ~50% of total imports from *Italy*, and US\$ 14 million from *Italy* in 1H 2011.
- “*Textile fabrics (not tier cord) with plastics* (HS code: 5903)” and “*nonwovens* (HS code: 5603)” were the 2nd and 3rd largest category imported from *Italy*.
- *Italy* had comparatively high market positions in “*other textile products for specific technical uses*” (#5); other major countries importing in this area include *Japan*, *Germany* and *South Korea*.
- The following tables show *China's* imports from *Italy* in 2010 and 1H 2011, as well as *Italy's* key competitors by customs category

Table: Italy's market position and major competitors of technical textiles in 2009 and 2010

HS code	Description	2009			2010			% Increase 2010 / 2009	Major competitors (% share of imports 2010)
		Italy's ranking	Value [US\$ M]	% share of imports	Italy's ranking	Value [US\$ M]	% share of imports		
5601	wadding; text fibber<5mm in length	# 18	0.3	0.30%	# 24	0.14	0.10%	-47.30%	Japan (22%) Thailand (19%) US (11%)
5602	Felt, whether or not impregnated	# 10	0.3	1%	# 8	0.62	1.30%	80.00%	Japan (49%) Germany (12%) US (12%)
5603	Nonwovens, whether or not impregnated	# 13	5.4	1%	# 14	7.5	0.90%	39.40%	Japan (26%) US (23%) Taiwan (12%)
5605	metalized yarn, strip	# 10	0.04	1%	# 7	0.08	1.20%	100.10%	Japan (40%) S. Korea (21%) Germany (12%)
5607	twine, cordage, ropes & cables	# 16	0.4	1%	# 14	0.8	1.40%	106.80%	Japan (22%) Taiwan (15%) S. Korea (12%)
5809	woven fabrics of metal thread & metalized yarn	# 11	0.004	1%	# 6	0.02	1.70%	506.90%	Japan (34%) S. Korea (23%) Taiwan (19%)
5902	cord fabric of high tenacity yarn	# 21	0.002	0.70%	# 24	0.01	0.00%	496.70%	S. Korea (35%) Japan (23%) Taiwan (19%)
5903	textile fabrics (not tier cord) with plastics	# 8	16	2%	# 7	15.8	1.30%	-2.80%	Taiwan (29%) S. Korea (26%) Japan (19%)
5907	textile fabric, theatrical scenery, backcloths	# 9	0.5	2%	# 8	0.37	0.70%	-31.60%	US (52%) S. Korea (14%) Taiwan (11%)
5910	Transmission or conveyor belts or belting	# 7	0.8	4%	# 7	0.8	3.20%	5.90%	Taiwan (20%) Germany (20%) Japan (17%)
5911	Other textile products for specific technical uses	# 5	23	8%	# 5	25.8	6.80%	11.70%	Japan (25%) Germany (16%) S. Korea (9%)
6306	Tarpaulins, sails, awnings, tents, etc.	# 24	0.03	0.20%	# 2	0.31	8.80%	825.90%	US (9%) S. Korea (6%) Germany (6%)
Total import of technical textiles from Italy		#7	47	2%	# 6	52.25	1.90%	10.90%	<i>Japan (23%) Taiwan (18%) S. Korea (17%)</i>

Source: World Trade Atlas

Table: Italy's market position and major competitors of technical textiles in 1H 2011

HS code	Description	2010			% Increase 2010 / 2009	Major competitors (% share of imports 2010)
		Italy's ranking	Value [US\$ M]	% share of imports		
5601	wadding; text fibber<5mm in length	# 27	0.05	0.10%	-0.30%	Japan (26%) Thailand (15%) US (10%)
5602	Felt, whether or not impregnated	# 8	0.31	1.20%	12.10%	Japan (49%) Germany (21%) S. Korea (13%)
5603	Nonwovens, whether or not impregnated	# 14	7.46	0.90%	39.40%	Japan (26%) US (23%) Taiwan (12%)
5605	metalized yarn, strip	# 10	0.02	0.70%	-8.80%	Japan (41%) Germany (14%) S. Korea (13%)
5607	twine, cordage, ropes & cables	# 14	0.37	1.20%	19.10%	Japan (23%) Taiwan (15%) US (14%)
5809	woven fabrics of metal thread & metalized yarn	# 7	0.01	0.80%	506.90%	S. Korea (54%) Taiwan (15%) France(8%)
5902	cord fabric of high tenacity yarn	# 23	0.01	0.00%	388.30%	S. Korea (35%) Japan (20%) Taiwan (19%)
5903	textile fabrics (not tier cord) with plastics	# 7	10.32	1.57%	17.27%	Taiwan (29%) S. Korea (27%) Japan (18%)
5907	textile fabric, theatrical scenery, backcloths	#9	0.22	0.80%	-4.60%	US (48%) S. Korea (20%) Taiwan (10%)
5910	Transmission or conveyor belts or belting	# 8	0.29	2.10%	-11.70%	Germany (19%) UK(19%) Japan (15%)
5911	Other textile products for specific technical uses	# 5	14.17	6.50%	-4.80%	Japan (23%) Germany (16%) S. Korea (10%)
6306	Tarpaulins, sails, awnings, tents, etc.	# 1	0.27	12.60%	389.30%	Germany (12%) Japan (7%) US (6%)
Total import of technical textiles from Italy		# 6	30.40	2.00%	4.80%	<i>Japan (22%) Taiwan (19%) S. Korea (18%)</i>

Source: World Trade Atlas

Export of technical textiles

- Exports of technical textile had a continuous increase during the past five years (from 2006-2010).
- In 2010, total exports were US\$ 8.8 billion and US\$ 5.7 billion in 1H 2011.
- As shown in the tables below, the major export destinations are *US, ASEAN, Hong Kong, Japan and South Korea*

Table: China's technical textiles export by country, 2008-2010

Rank	Country /Region	Value			% Share			% Change
		2008	2009	2010	2008	2009	2010	10/09
	World	6,286.07	6,402.59	8,842.03	100.0	100.0	100.0	38.1
1	United States	782.83	776.55	1,086.37	12.5	12.1	12.3	39.9
2	India	590.33	592.62	771.11	9.4	9.3	8.7	30.1
3	Vietnam	161.53	207.82	532.23	2.6	3.3	6.0	156.1
4	Hong Kong	444.23	404.14	461.59	7.1	6.3	5.2	14.2
5	Japan	253.90	274.67	355.05	4.0	4.3	4.0	29.3
6	Korea, South	231.03	214.65	299.13	3.7	3.4	3.4	39.4
7	Indonesia	211.45	191.80	262.49	3.4	3.0	3.0	36.9
8	Germany	204.75	193.06	252.84	3.3	3.0	2.9	31.0
9	Thailand	178.74	175.45	231.78	2.8	2.7	2.6	32.1
10	Mexico	138.20	168.07	219.99	2.2	2.6	2.5	30.9
18	Italy	123.25	115.55	157.88	2.0	1.8	1.8	36.6

Source: World Trade Atlas

Table: China's technical textiles export by country, 1H 2009-1H 2011

Rank	Country /Region	Value			% Share			% Change
		2009	2010	2011	2009	2010	2011	11/10
	World	3,084.49	4,328.57	5,681.81	100.0	100.0	100.0	31.3
1	United States	419.13	566.26	682.94	13.6	13.1	12.0	20.6
2	India	265.57	357.55	416.80	8.6	8.3	7.3	16.6
3	Vietnam	85.19	199.57	364.08	2.8	4.6	6.4	82.4
4	Hong Kong	206.63	228.74	260.41	6.7	5.3	4.6	13.9
5	Japan	136.26	175.32	239.93	4.4	4.1	4.2	36.9
6	Indonesia	95.23	130.76	202.98	3.1	3.0	3.6	55.2
7	Germany	119.69	150.40	190.80	3.9	3.5	3.4	26.9
8	Korea, South	98.44	144.10	181.34	3.2	3.3	3.2	25.8
9	United Kingdom	99.71	136.67	151.57	3.2	3.2	2.7	10.9
10	Thailand	66.90	111.90	145.37	2.2	2.6	2.6	29.9
16	Italy	62.22	85.35	112.03	2.0	2.0	2.0	31.3

Source: World Trade Atlas

- In particular, the *United States*, *India*, *Hong Kong* and *Japan* ranked top 4 in importers from *China*, accounting for about 32% of *China's* total technical textile exports
- In 2010, *Italy* ranked #18 among the countries that *China* exported technical textiles to, accounting for 1.8% of *China's* total exports with a value of US\$ 158 million, the position of *Italy* reached #16 in 1H 2011, and accounting for 2% of *China's* total exports with a value of 112 million.
- The largest category of exports were “textile fabrics (not tier cord) with plastics”, followed by “tarpaulins, sails, awnings & tents” .

KEY MARKET DYNAMICS AND TRENDS

1. *High potential demand for technical textiles*

- Technical textile industry developed relatively late in *China*, and its proportion of the overall textile sector was only 20% in 2010, which is behind the 30% proportion in Western countries.
- Technical textiles can be applied for almost every industry, but currently still many industries know little about their applications.
- Constant infrastructure construction, fast development of the automotive, aerospace and health care industries in *China* will also drive technical textile demand.

2. *Government promoting industry development*

- *China's* central government has promoted the industry development through a series of policies and guidelines including the “*Planning*”, the most important guidelines from 2009.
- The “*Planning*” emphasized that technical textile industry will be developed as a key industry in the future, and aims to increase technical textile proportion in the overall textile industry to 20% by 2011.
- The central government is also trying to improve industrial standards and quality cognizance; in May 2010, *China Technical Textile Industry Test Center* (*Guangdong* province) was established by *China Technical Textile Industry Association*, *Guangdong Nonwoven Industry Association* and *Guangzhou Fiber Products Detection Institute*.
- This test center provides test services specialized in nonwovens, textile for filter, health care textiles, textiles for automotives and geo-textile fabrics.
- The central government also plans to set up a coordination leading group crossing different departments to formulate policies that can give priorities in technical textile's procurement and other policies to connect manufacturers and potential buyers.

3. Focused development of 6 key technical textile areas

- The “*Planning*” emphasizes the promotion of technical textile applications in water conservation, agriculture, traffic facilities, architecture, health care, environment protection and new energy.
- Therefore, 6 kinds of textiles will become the key areas supported by various dedicated funds, including: 1) geotextile & synthetic materials, 2) high-efficiency environment protection textiles for filter, 3) medical textiles, 4) textile for agriculture, 5) textile for decorative furnishings, and 6) high-performance composite materials.

4. Foreign expansion of production and products in China

- High end technical textile market is dominated by foreign players especially those from *Japan* and the *US*.
- Due to high market demand for technical textiles in *China*, more and more foreign players have planned to expand their production and new products in *China*.
- E.g. *Toray*, a well known textile company from *Japan*, announced in 2010 that they would expand their polypropylene filament spun-bounded nonwovens production in *China* through investing US\$ 59 million to its subsidiary in *Nantong*.
- By March 2011, the production capacity of *Toray (Nantong) Co., Ltd.* reached 38,000 tons, up from 18,000 tons in mid 2010.
- Another example is *PGI*, in 2010, *PGI* planned to set up the most advanced and customized polypropylene spun-melt fabrics production line in *China* and also to set up an R&D center in the city of *Suzhou (Jiangsu province)*.

CONCLUSION AND SUMMARIES

- *China* is a huge market as well as the largest production base in terms of textile and garment industry; however, competition in the textile industry continues to increase.
- Therefore, many players in the industry are seeking to produce high-value added products, e.g. technical textiles, which receives significant support from the central government.
- However, as this industry developed relatively late in *China* and is still at a primary stage, most domestic players focus on the low and mid end market with weak innovation ability, although some are improving their technologies.
- High end market is dominated by foreign players and a few large domestic players.
- *China's* central government also supports the industry's development through different methods, and aims to increase proportion of the technical textile industry to 20% of the overall textile industry.
- Thus, there is a great potential market for Italian players, especially those with advanced technologies and manufacturing methods.
- Opportunities also exist for Italian players entering *China's* technical textile industry, as there is significant demand from key downstream industries such as the automotive and medical industries.
- However, it is still a challenging market, especially with competition from Japanese and US companies, many of which have established legal entities in *China* (e.g. RO⁴, JV⁵, WFOE⁶).
- A pure import strategy is difficult to sustain in the long term, and Italian companies with long term commitment to the *China* market should consider investing the time and resources to establishing a direct legal presence in *China* (if not done so already).

⁴ RO: representative office

⁵ JV: joint-venture

⁶ WFOE: Wholly foreign-owned enterprise

APPENDIX

Tariffs

HS Code	Description	VAT	ED	MFN
5601	Wadding of textile materials and articles thereof; textile fibers, not exceeding 5mm in length (flock), textile dust and mill neps	17%	16%	10%~12%
5602	Felt, whether or not impregnated, coated, covered or laminated:	17%	16%	10%
5603	Nonwovens, whether or not impregnated, coated or laminated	17%	16%	10%
5605	Metalized yarn, whether or not gimped, being textile yarn, or strip or the like of heading No. 5404 or 5405, combined with metal in the form of thread, strip or powder or covered with metal	17%	16%	5%
5607	Twine, cordage, ropes and cables, whether or not plaited or braided and whether or not impregnated, coated, covered or sheathed with rubber or plastics	17%	16%	5%
5809	Woven fabrics of metal thread and woven fabrics of metalized yarn of heading No. 5605, of a kind used in apparel, as furnishing fabrics or for similar purposes, not elsewhere specified or included	17%	16%	10%
5902	Tire cord fabric of high tenacity yarn of nylon or other polyamides, polyesters or viscose rayon	17%	16%	10%
5903	Textile fabrics impregnated, coated, covered or laminated with plastics, other than those of heading No. 5902	17%	16%	10%
5907	Textile fabrics otherwise impregnated, coated or covered; painted canvas being theatrical scenery, studio backcloths or the like	17%	16%	10%
5910	Transmission or conveyor belts or belting, of textile material, whether or not impregnated, coated, covered or laminated with plastics, or reinforced with metal or other material	17%	16%	8%
5911	Textile products and articles, for technical uses, specified in Note 7 to this Chapter	17%	16%	8%
6306	Tarpaulins, sails, awnings, tents, etc.	17%	16%	14%~16%

Remark:

- MFN: Most-favored-Nation treatment
- VAT: Value Added Tax
- ED: Export Rebates