



全員參與品質管理，提供客戶滿意產品

Supplying satisfactory products to
customers with Total Quality Management

南亞玻璃纖維布

NAN YA GLASS FABRICS



公司 A COMPANY 簡介 PROFILE

南亞塑膠公司創立於1958年，目前為我國名列前茅之民營公司。主要產製塑膠、纖維、及電子材料等產品，由於累積多年來之加工技術及不斷開發研究，產品行銷全球，深獲客戶的肯定與支持。

本公司近10年來致力於研發及技術合作，產製高附加價值產品，在一貫之產業垂直整合的公司政策下，發展電路基板上、下游之電子材料工業，幾年下來的努力，品質已受客戶肯定並在業界具舉足輕重之地位。本公司將秉持追求提高品質、降低成本、利潤回饋客戶的原則，不斷追求進步，提高競爭力。

Nan Ya Plastics Corporation was established in 1958, and is one of the largest private-owned companies in Taiwan. Its main products are plastics, fibers and electronic materials, etc. Due to the experience of accumulating processing technology and uninterrupted developmental research for years, we promote our product all over the world, and get the recognition and support from our customers.

We effort over 10 years in research and technical cooperation have resulted in high valued added products. Under the consistent company policy of industrial vertical integration, efforts have been made over many years to develop the upstream and downstream electronic materials industry of C.C.L.. This has led to the quality receiving customer approval and acquiring its proper status within the industry. We maintain the principles of seeking to improve quality, reduce costs and return the profits to the customer, at the same time pursuing progress and increased competitiveness.



南亞塑膠公司 組織表

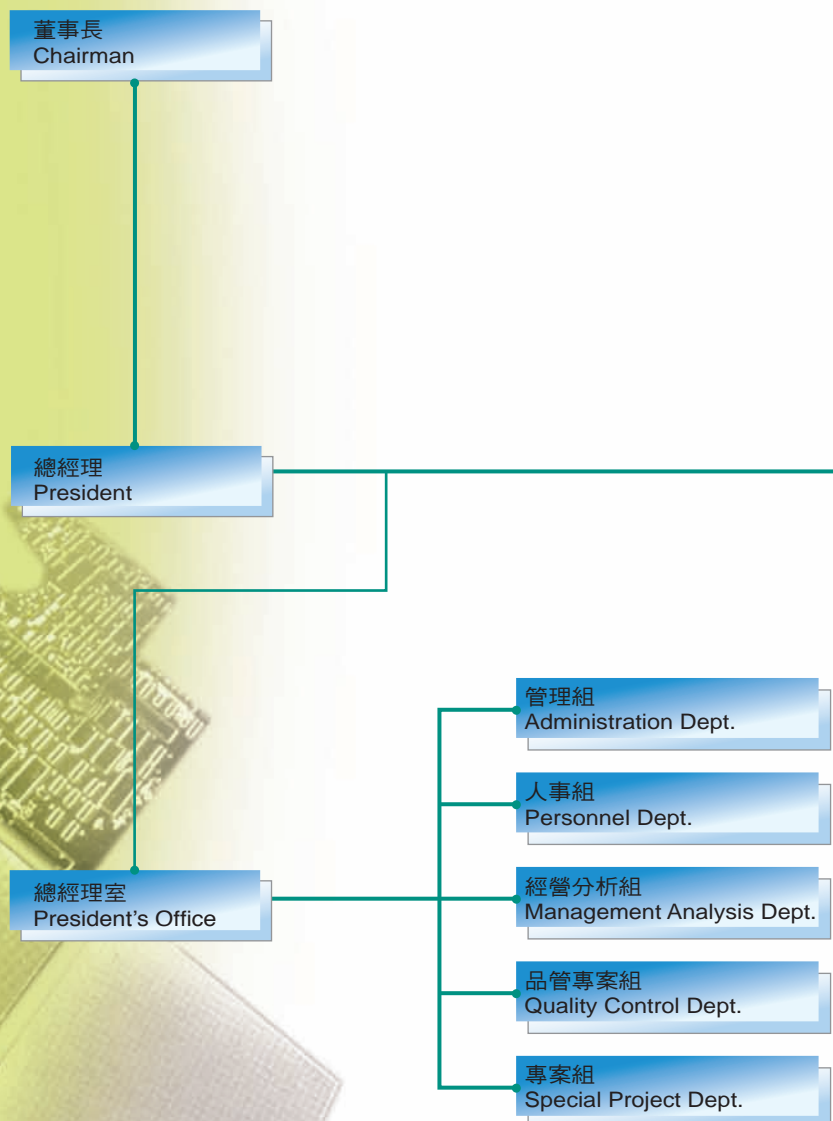
ORGANIZATION OF NAN YA PLASTICS CORPORATION

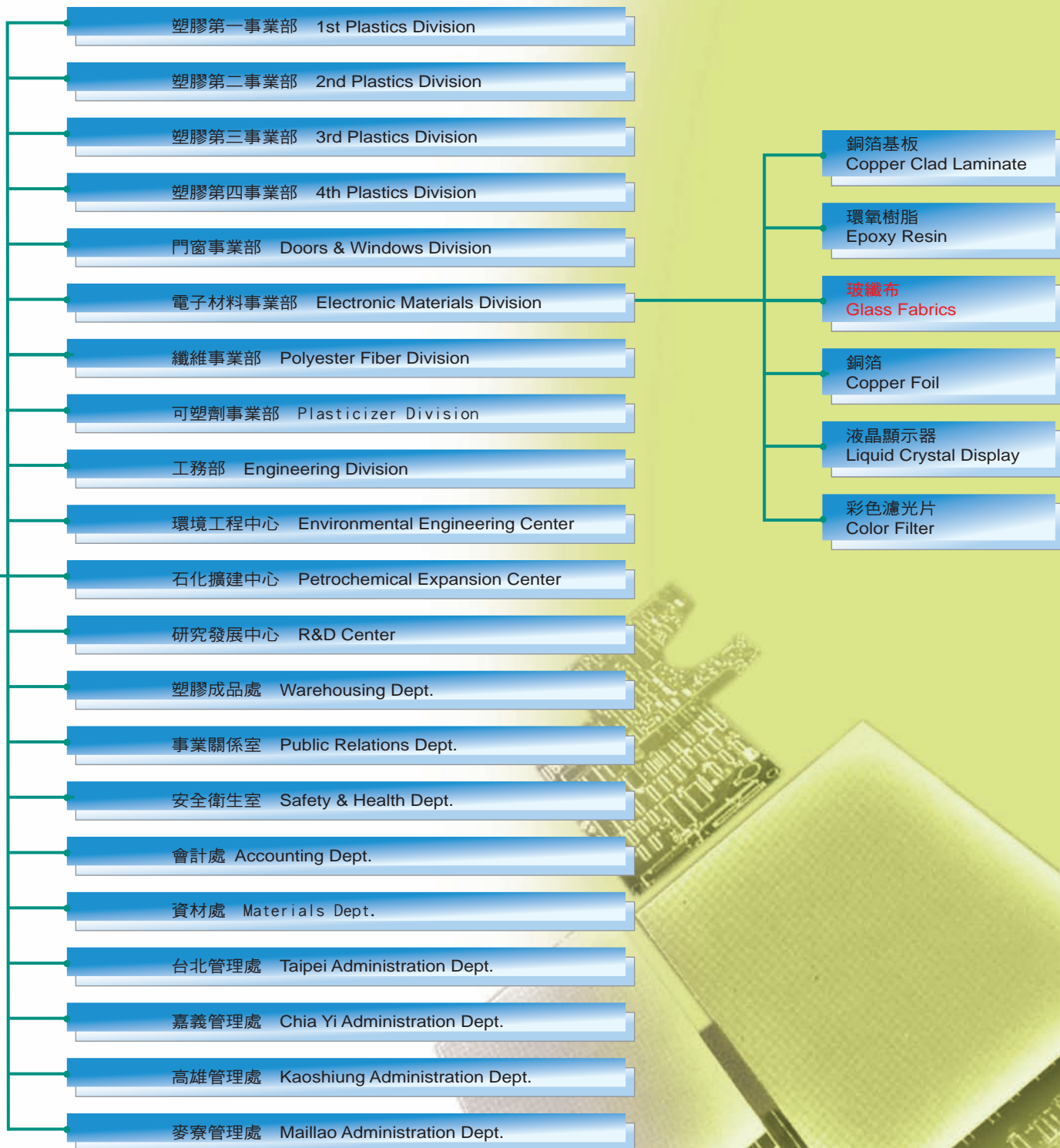
南亞塑膠公司 (2008)

- 資本額：76,235,909 (仟元)
- 總資產：374,446,256 (仟元)
- 營業額：181,653,407 (仟元)
- 員工數：13,115

NAN YA PLASTICS CORP (2008)

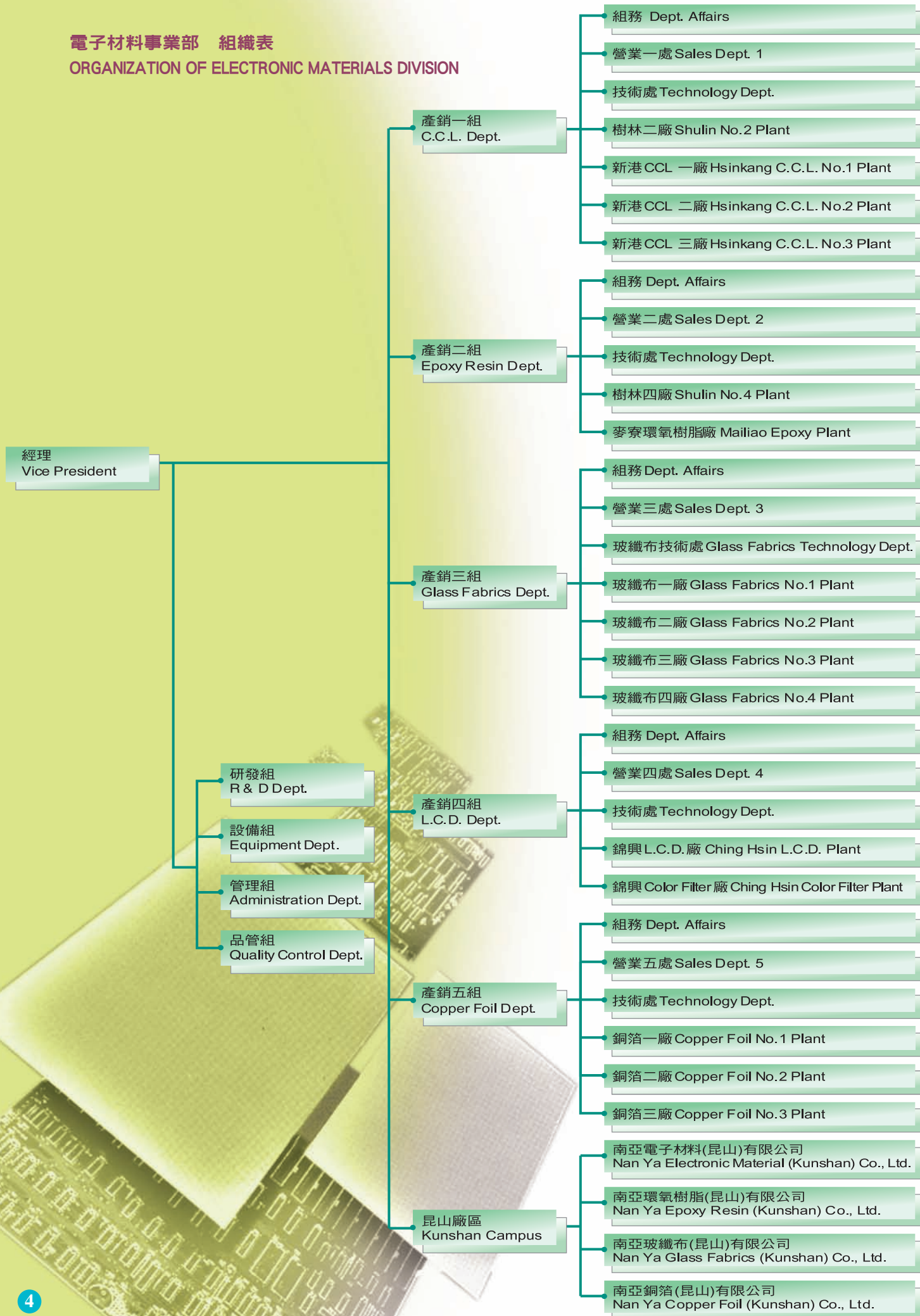
- Capital : 76,235,909 (NT\$ 1,000)
- Total Assets : 374,446,256 (NT\$ 1,000)
- Operating Revenue : 181,653,407 (NT\$ 1,000)
- Number of employees : 13,115





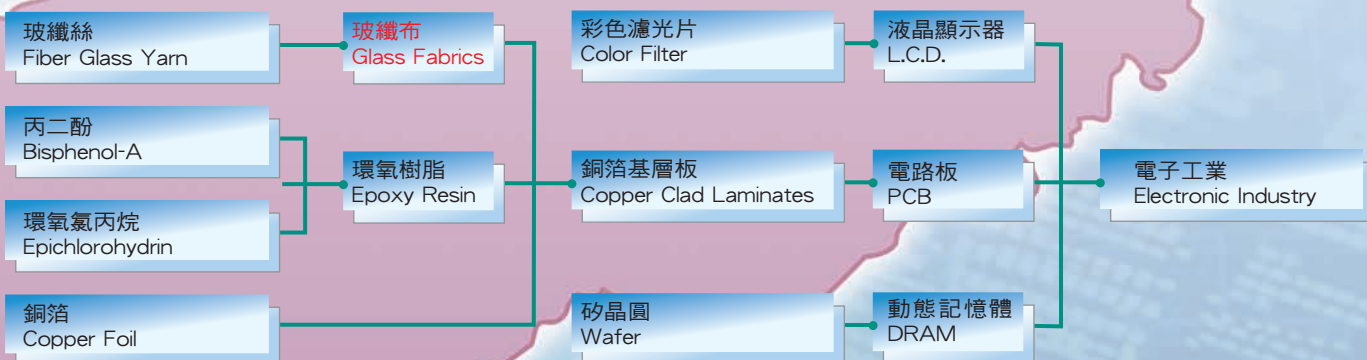
電子材料事業部 組織表

ORGANIZATION OF ELECTRONIC MATERIALS DIVISION



電子材料發展關聯圖

DEVELOPMENT OF NAN YA ELECTRONIC MATERIALS PRODUCTION



中國昆山廠 Kun Shan Campus



中國昆山玻纖布廠 Kun Shan Glass Fabrics Plant

新港中洋工業區 Chungyang Ind. park



玻纖布廠 Glass Fabrics Plant





產品簡介

本公司鑑於產業趨勢，1984年開始籌劃電路板上游相關材料的製造。玻纖布為其中一項產品。於1989年完成一廠第一期工程，產能180萬米／月，因應國內外市場需求，經10年間不斷擴充產能，目前已建立六個工廠，(台灣四個廠，昆山二個廠)總產能達4,000萬米／月。

主要產品

電子級玻纖布市場使用最廣的規格7628、2116、1080三種，另可配合客戶特殊用途，開發新產品。此三種規格為電路基板之主要原料，廣泛使用於資訊、通訊器材、航太科技儀器、消費性電子、汽車等及其他高科技電子產品的電路板原材料需求。

電子級玻璃纖維布為銅箔基板的主要原料，提供基板所需之強度、尺寸安定性、各項電氣特性等之品質要求。

本產品另可使用於絕緣板、鐵氟龍塗佈材、矽膠散熱片、隔音、防火建材等用途。

研發

- 上漿性、退漿性、布面處理等製程改善。
- 配合客戶針對不同介質厚度需求或降低成本的目的，開發新布種。
- 絕緣性與耐熱性提昇。
- 板翹與尺寸安定性能提昇。
- 薄布開發。
- 扁平化技術提昇；雷射鑽孔用玻纖布開發。
- 無中空纖維，無金屬纖維產品。

展望

2006年產能4,800萬米／月（中國昆山玻纖布三廠擴建完成）

Brief Introduction to the Products

Owing to industry tendencies, we started in 1984 to plan the manufacture of materials related to upstream of print circuit board. Glass fabrics is one of these products. The first phase project was completed in 1989, with a capacity of 1.8 million meters per month. In response to the demands of domestic and foreign markets, the capacity has been continually expanded over the past 10 years. Six factories(Taiwan-4 plants, Kun Shan 2 plant) have been established to date, with a total production of 40 million meters per month.

Major Products

The electronic glass fabrics market uses the three broadest range types, 7628, 2116 and 1080. In addition, new products can be developed to meet customers' special needs. These three types are the main raw materials for C.C.L.. They are used widely as PCB materials, such as in computer, communication equipment, aerospace technological instruments, consumer electronic goods and cars, as well as other hi-tech electronic products.

Electronic grade glass fabrics is a major raw material for copper clad laminates, and provides the laminates with the quality requirements it needs, such as strength, dimensional stability, and every special electric characteristic.

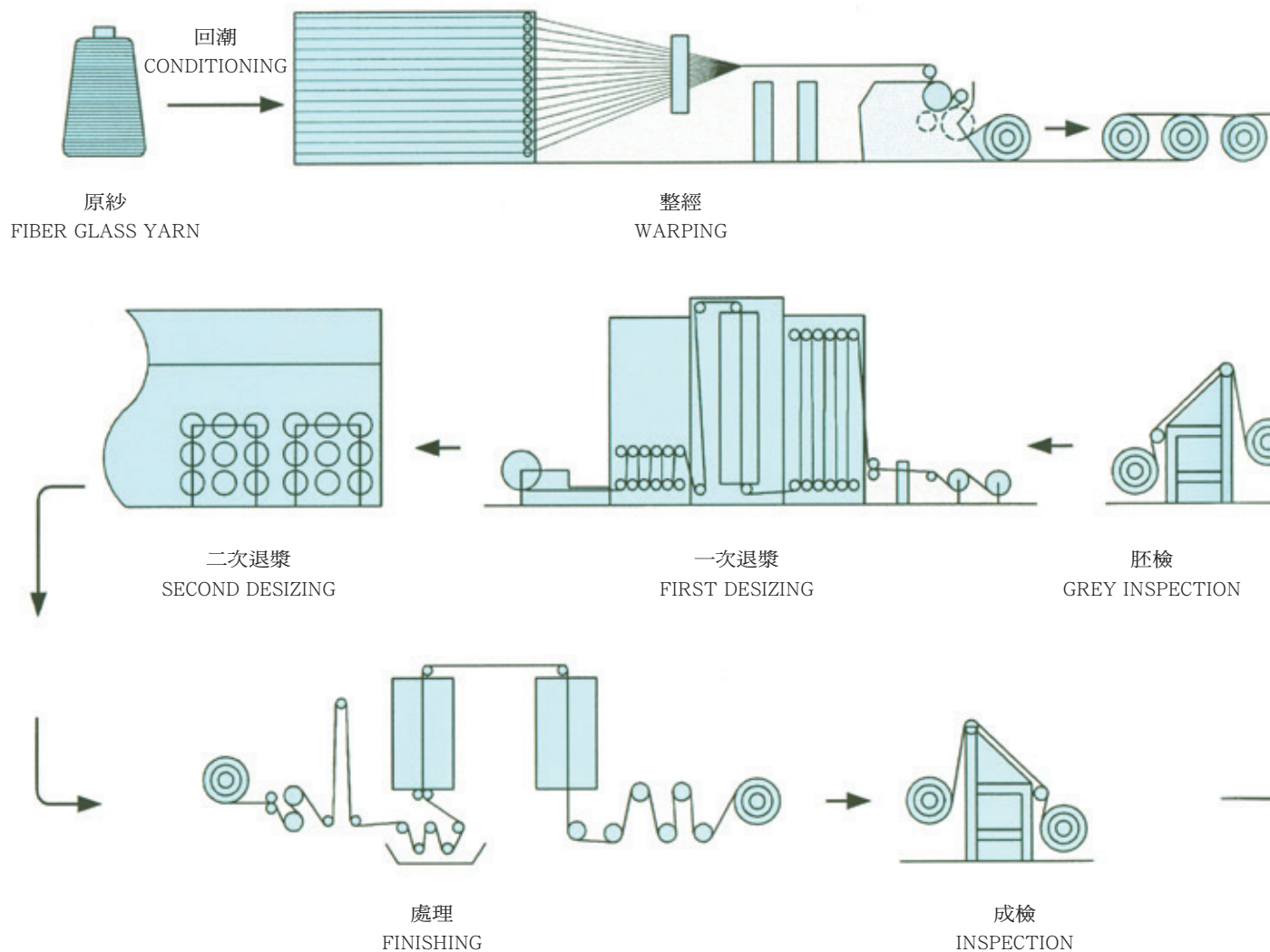
This product can also be used for building materials such as insulating boards, teflon coating tape, silicon rubber heat sink insulator, sound-proofing, and fire-proofing, etc.

R & D

- Processing improvement for sizing, desizing, finishing, etc.
- To develop new style glass fabrics for meeting customers' needs of request for thickness variety or purpose for reducing cost.
- Research for upgrading insulation and heat-resistance.
- Research for upgrading "Bow & Twist" and dimensional stability.
- Develop new thin glass fabrics.
- Improve the technology to offer an even fiber distribution with flatter yarn cross-section and laser-drill cloth.
- Glass fabrics free from the hollow-fiber and metal-fiber.

Future Prospects

Capacity of 48 million meters per month in 2008 (Including Kun-Shan glass fabrics No.3 plant of China).



整經

整經之目的係依布種的幅寬及組織要求，而排列一定數目之經紗，將經紗整經捲取於經軸上，作為漿紗前之準備。

Warping

The purpose of warping is to arrange a fixed number of warp yarns according to the requirements of width and construction of the cloth, then the warp yarns shall be reeled on the warp beam as preparation prior to sizing process.

漿紗

使經紗上漿，以避免織布時經紗與機件摩擦破損而造成毛羽或斷紗，另漿紗工程亦有併經之目的，即將數個經軸之經紗合併於一織軸上以達所需之經紗數目。

Sizing

Warp yarn shall be sized to prevent fuzzing or broken ends resulting from the friction between warp yarn and machine parts during weaving operation. Also, the yarn sizing has the purpose for yarn combination, e.g., combining the warp yarn on several warp beams into one weaving beam thus attaining to the required counts of the warp yarn.

織布

本廠使用噴氣式織布機，將緯紗連續投射與經紗交錯織合以織成要求之布種。

Weaving

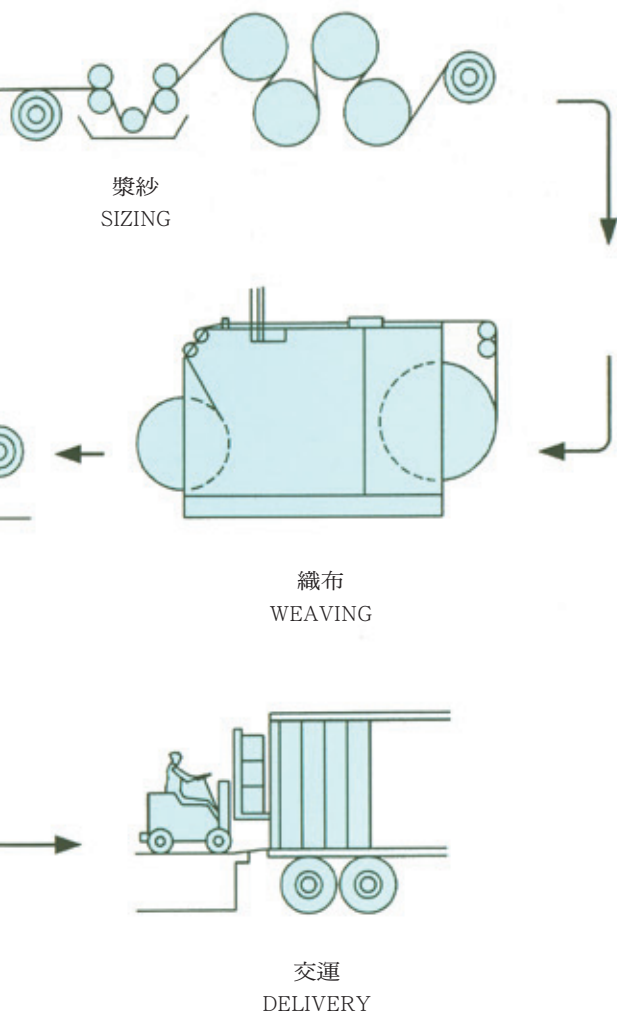
Air-jet looms are adopted by glass fabrics plant to enable the weft yarn to project continuously for cross weaving with the warp yarns for weaving the cloth that will meet the requirement of style.

一次退漿

織布完成後，漿料已無作用，在布面處理前必須將漿料去除。玻纖布係用高溫退漿法退漿，分兩次工程，一次退漿係連續工程、可除去約90%布面漿料。

First Desizing

As the sizing-agent has been useless after cloth weaving. Prior to cloth surface treatment, the sizing-agent has to be removed. For the glass fabrics, high-temperature de-sizing method is adopted in two operation. The first de-sizing is of continuous operation which is capable of removing about 90% of the sizing-agent on the cloth surface.



製程簡介

為確保產品品質與製程穩定性，玻纖布廠各段製程均採用最先進生產設備，並配合電腦 控系統，隨時可掌握設備運轉與產品品質狀況。

MANUFACTURING PROCESS IN BRIEF

In order to ensure the quality of the product as well as the stability during processing, we have applied the most advaced production equipments and the computer monitoring system, which controls the status of both equipment operation and production.

二次退漿

胚布經連續式之退漿後，再以批次方式將布捆集中入二次退漿爐悶熱退漿，使布面殘漿幾近完全去除。

Second Desizing

After being continously desizing, the cloth rolls will be got together in batch for concentrating in the second de-sizing over for heat desizing thus making the residual sizing agent on the cloth surface to be almost removed.

處理

玻纖布退漿後，布面須處理矽烷偶合劑，以增加玻纖布與樹脂間之界面強度。處理工程係將布含浸矽烷處理液，再經烘乾爐烘乾，即為成品布。

Finishing

After being desized, the surface of the glass fabrics shall be treated with silane coupling agent thus increasing the interface strength between the glass farbics and the resin. The finishing process is to immerge the cloth into the silane solution. After passing through the dryer for drying, the finished cloth can be made available.

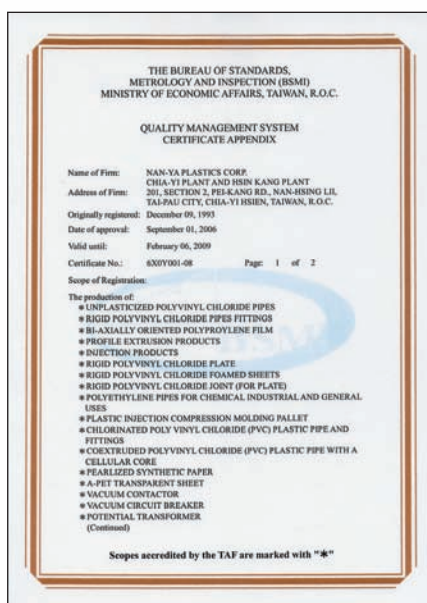




SPECIFICATION

Style	Count(per inch) Warp×Fill	Yarn Nomenclature Warp×Fill	Weight (g/m ²)	Thickness (mm)	Note
1027	74×74	C1500 1/0×C1500 1/0	19±2	0.020±0.005	
1037	70×74	C1200 1/0×C1200 1/0	24±2	0.025±0.005	
106	56×56	D900 1/0 × D900 1/0	24±2	0.03±0.01	
1067	70×70	D900 1/0 × D900 1/0	30±2	0.03±0.01	
1070	60×35	D450 1/0 × D900 1/0	34±2	0.04±0.01	
1078	54×54	D450 1/0 × D450 1/0	48±2	0.04±0.01	
1080	60×47	D450 1/0 × D450 1/0	48±2	0.05±0.01	
1086	60×61	D450 1/0 × D450 1/0	53±2	0.05±0.01	IPC style 1280
2112	40×40	E225 1/0 × E225 1/0	70±3	0.08±0.01	
2113	60×56	E225 1/0 × D450 1/0	78±3	0.08±0.01	
2313	60×64	E225 1/0 × D450 1/0	81±3	0.08±0.01	
3313	60×62	DE300 1/0 × DE300 1/0	81±3	0.08±0.01	
2125	40×40	E225 1/0 × G150 1/0	86±3	0.09±0.01	
2319	60×48	E225 1/0 × E225 1/0	93±3	0.09±0.01	
2116	60×58	E225 1/0 × E225 1/0	105±3	0.09±0.01	
2117	66×55	E225 1/0 × E225 1/0	108±3	0.10±0.01	
2155	66×55	E225 1/0 × G150 1/0	126±3	0.12±0.01	Nan-Ya style
1504	60×52	DE150 1/0 × DE150 1/0	150±4	0.14±0.02	
1506	47×45	E110 1/0 × E110 1/0	162±4	0.14±0.02	IPC style 1501
7627	44×30	G75 1/0 × G75 1/0	200±4	0.17±0.02	
7628	44×33	G75 1/0 × G75 1/0	208±4	0.18±0.02	
7630	42×35	G75 1/0 × G75 1/0	208±4	0.18±0.02	Nan-Ya style
7629	44×34	G75 1/0 × G75 1/0	210±4	0.18±0.02	
7636	44×36	G75 1/0 × G75 1/0	215±4	0.18±0.02	Nan-Ya style
7467	42×32	G67 1/0 × G67 1/0	215±4	0.18±0.02	Nan-Ya style
7567	44×32	G67 1/0 × G67 1/0	220±4	0.19±0.02	IPC style 7667
7667	44×36	G67 1/0 × G67 1/0	234±5	0.19±0.02	Nan-Ya style
7637	44×22	G75 1/0 × G37 1/0	234±5	0.22±0.02	
7638	44×26	G75 1/0 × G37 1/0	255±5	0.24±0.02	Nan-Ya style

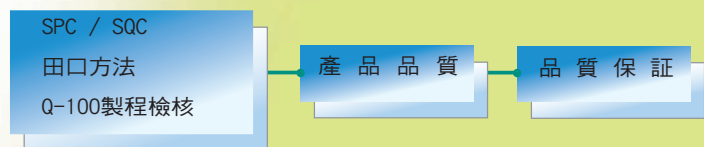




標準化：南亞管理制度

品質系統：ISO-9001

製程管制：



品質政策

「全員參與品質管理，提供客戶滿意產品。」為我們之品質政策，本公司玻纖布廠品管系統依照ISO 9002國際標準品質保證制度，並於1993年6月起先後取得英國勞氏及經濟部標準檢驗局認可登錄。本公司非常重視品質管理，嚴格要求全員品管作業。從原料進廠，各製程中的自主品質檢查至成品出廠檢驗，均實施嚴格品質管制，以期提供客戶最佳品質之產品。

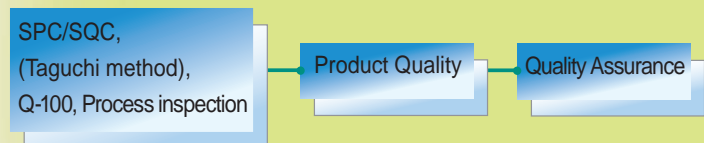
本公司俱備經驗豐富的技術人員，可隨時協助客戶解決產品使用問題及提供售後相關技術服務。

Total Quality Control (TQC)

Standardization: Nan Ya management system

Quality system: ISO-9001

Process controls:

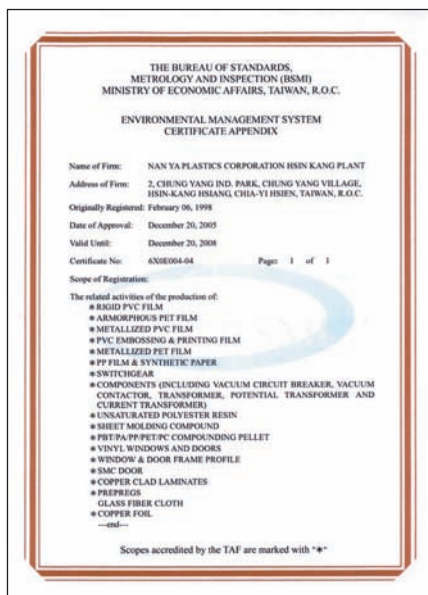


Quality Policy

"Supplying satisfactory products to customers with Total Quality Management." For our quality policy, the quality control system for Nan Ya glass fabrics plants follow the International Standardization Organization's ISO-9002 quality assurance system, and in June 1993 received registration and approval from L.R.Q.A. and National Bureau of Standards of the Ministry of Economic Affairs. We attach a great deal of importance to quality control, strictly requiring each and every staff member to be involved in the task of quality control. From the time the raw materials enter the factory, through the individual product quality checks to the testing of the finished products as they leave the factory, strict quality control is implemented in all manufacturing processes, so as to ensure the supply of products of the best possible quality for the customer.

The technical personnel of the company are able to call on a wealth of experience and can at any time assist customers in solving product use problems and supplying related post-sales technical service.





環保

本公司一向秉持工業發展與環保並重的經營理念，長久以來在污染防治上積極不斷謀求改善，並獲得良好成效，同時也累積相當豐富的防治污染經驗，因此我們的環保工作標準，不僅是做到符合國家標準，還以做到符合世界最佳標準為目標。

玻纖布廠為落實環保政策之推行，於1997年開始推動ISO14001國際標準環境管理系統，並於1998年1月取得經濟部標準檢驗局認可登錄，並以節流、減廢、監控及消除污染發生源為持續改善方向，以“零污染”、“零災害”為努力目標。

Environmental Protection

Nan Ya's managerial concept has consistently been one of attaching equal importance to both industrial development and environmental protection. We have actively and continuously sought improvement in pollution prevention for a long time, and has achieved good results. At the same time it has also accumulated quite a lot of experience in pollution protection. Thus our environmental protection working standards aim not only to meet national standards, but also to satisfy international standards.

In order to promote the implementation of an environmental protection policy, the glass fabric plant started in 1997 to push the ISO14001 international standard environmental management system, and in January 1998 was registered as having been approved by the National Bureau of Standards of the Ministry of Economic Affairs. By reducing expenditure, reducing waste, introducing supervision and controls, and eliminating sources of pollution it is continuing to improve even further, with the aim of striving towards "zero pollution" and "zero damage".



南亞塑膠工業股份有限公司
NAN YA PLASTICS CORPORATION

電子材料事業部 • ELECTRONIC MATERIALS DIVISION

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