



SHIHLIN ELECTRIC
士林電機

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配 電 盤

Switchgear & Controlgear

工廠驗證



INTEGRATION OF POWER SYSTEM



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一、公司沿革 Company History

(1) 銳意進取 力臻卓越

西元1955年成立士林電工股份有限公司，1961年改組為士林電機廠股份有限公司並與三菱電機技術合作生產重電設備。

60年來，我們亦步亦趨，穩健成長，從重電、機器、電裝到自動化作業等，在國內持續穩據要角，更致力於海外佈局與國際市場開拓，並且繼續朝向多角化、全球化的目標前進，我們將以「銳意進取、力臻卓越」時刻鞭策自己，面對未來的挑戰。

- 資本額：新台幣 52 億
- 員工數：1600 人
- 國內據點：台北、新竹、台中、台南、高雄
- 海外據點：上海、蘇州、常州、長沙、廈門、越南

(1) In Pursuit Of Growth & Excellence

Shihlin Electric Engineering was established in 1955, and renamed Shihlin Electric in 1961.

Since then, it started to produce heavy electric equipment through technical cooperation with Mitsubishi Electric. Shihlin has been playing a key role in heavy electric, automobile parts, circuit breakers and factory automation equipment for the past 60 years in Taiwan.

For globalization operation, Shihlin has started to focus on overseas markets. We are ready to face future challenges in pursuit of progress and excellence.

- Capital : NTD 520 million
- Employee : 1600 persons
- Branch office in Taiwan : Taipei; Hsinchu; Taichung; Tainan; Kaohsiung.
- Branch office in overseas : Shanghai; SuZhou; Changzhou; Changsha; Xiamen; Vietnam.



二、工廠簡介 Factory Introduction

(1) 部門介紹

士林電機配電盤由配電器部開始製造生產至今，組織不斷擴大，是一個從設計、板金、塗裝、組立一系列完整專業的配電盤製造工廠。

長期與三菱電機技術合作，從設計至製造全程規劃，品質有保障，配電盤遍及全國，甚至外銷日本、中東、東南亞、中國大陸等世界各國，不管是高科技的電子廠、或核能、火力電廠、高層大樓、商業中心及國家的重大建設或是高山上的水力電廠、氣象站都可以找到士林配電盤的蹤跡。

- 廠房面積：8800平方公尺
- 員工：150人
- 年產量：3000盤
- 月最高產能：300盤

(1) Panelboard System Division Products

From the production of Department of Power Distribution of Shihlin Electric to date, according to the continuous expansion of its organization, the Panelboard System Division of Shihlin Electric has become an integrated and professional manufacturing factory of Switchgear, including design, metalwork, coating, assembly, etc.

From design to the overall process planning, Shihlin Electric has implemented technological cooperation with Mitsubishi Electric for a long time. Its product quality is reliable, and its Switchgear products have been distributed nationwide, or even exported to Japan, Middle East, Southeast Asia, China, etc. No matter in high-tech electronic factories, or nuclear energy power plants, thermal power plants, high-rise buildings, commercial centers, and major construction projects of certain countries, or in the hydraulic power plants where located in high mountains, and weather stations, you can always find the Shihlin Switchgear there.

- Factory area : 8800 m²
- Employee : 150 persons
- Annual capacity : 3000 panel
- Monthly maximum production capacity : 300 panel



三、品質保證Quality Assurance

(1) 通過多項專業認證 品質超群深獲肯定

工廠評鑑合格項目

- 民國74年 工業局評定為配電盤一級廠
- 民國75年 商檢局評列為優良品管甲等工廠
- 民國75年 台電核品處評鑑合格
- 民國80年 榮獲經濟部品管團體獎
- 民國83年 通過商檢局ISO 9001/CNS 12681品質管理系統評鑑
- 民國87年 通過商檢局ISO 14001/CNS 14001環境管理系統評鑑
- 民國95年 通過標檢局OHSAS 18001職業安全衛生管理系統評鑑
- 民國98年 通過標檢局TOSHMS/CNS 15506台灣職業安全衛生管理系統評鑑
- 民國99年 通過全國認證基金會(TAF) ISO/IEC 17025實驗室管理系統評鑑
- 民國100年 通過經濟部高壓用電設備原製造廠家認可

定型試驗合格產品

- 13.8kV裝甲閉鎖型開關箱，通過台電國產化認證
- 23kV裝甲閉鎖型開關箱，通過台電國產化認證
- 480V馬達控制中心，通過台電國產化認證
- 火力及核能電廠所內用480V低壓負載中心開關箱，通過台電國產化認證
- 24kV級瓦斯絕緣配電盤，通過台電國產化認證
- 火力電廠用4.16kV裝甲閉鎖型配電盤，通過台灣大電力型式試驗
- 480V 6300A 85kA低電壓金屬閉鎖型開關箱，通過KEMA及台灣大電力型式試驗
- 480V 1600A 65kA低電壓金屬閉鎖型開關箱，通過KEMA及台灣大電力型式試驗
- 24kV 1250A 25kA高電壓金屬閉鎖型開關箱，通過台灣大電力型式試驗

大陸地區定型試驗合格產品

- 20kV 3150A 40kA鎧裝金屬封閉開關設備
- 20kV 1250A 25kA鎧裝金屬封閉開關設備
- 10kV 4000A 40kA鎧裝金屬封閉開關設備
- 10kV 1250A 40kA鎧裝金屬封閉開關設備
- 10kV 2500A 31.5kA鎧裝金屬封閉開關設備
- 10kV 2000A 25kA 鎧裝金屬封閉開關設備
- 低壓成套開關設備認證(全容量)



(1) Certifications & Awards

Awards

- Awarded first-class manufacturer by Industrial Development Bureau in 1985
- Awarded Top Q.A. factory by Bureau of Standard, Metrology and Inspection of Ministry Economic Affairs in 1986
- Awarded the Certification by Nuclear Energy Power Quality Control Div., TPC in 1986
- Awarded the National Q.C. Group Prize in 1991
- Awarded ISO 9001/CNS 12681 certification in 1994 by BSMI
- Awarded ISO 14001/CNS 14001 certification in 1998 by BSMI
- Awarded OHSAS 18001 certification in 2006 by BSMI
- Awarded TOSHMS/CNS 15506 certification in 2009 by BSMI
- Awarded ISO/IEC 17025 certification in 2010 by BSMI
- Awarded Original Manufacturer by Ministry of Economic Affairs in 2011

Type test Certifications

- 13.8kV metal-clad switchgear by TPC
- 23kV metal-clad switchgear by TPC
- 480V motor control center by TPC
- 480V load center for thermal power plant and nuclear power plant by TPC
- 24kV C-GIS by Taiwan power company
- 4.16kV metal-clad switchgear for thermal power plant by TERTEC
- 480V 6300A 85kA metal-enclosed switchgear by KEMA & TERTEC
- 480V 1600A 65kA metal-enclosed switchgear by KEMA & TERTEC
- 24kV 1250A 25kA metal-enclosed switchgear by TERTEC

China certificate of complete type tests

- 20kV 3150A 40kA metal-clad switchgear
- 20kV 1250A 25kA metal-clad switchgear
- 10kV 4000A 40kA metal-clad switchgear
- 10kV 1250A 40kA metal-clad switchgear
- 10kV 2500A 31.5kA metal-clad switchgear
- 10kV 2000A 25kA metal-clad switchgear
- Low voltage switchgear certification (all types)

四、產品介紹Products Introduction

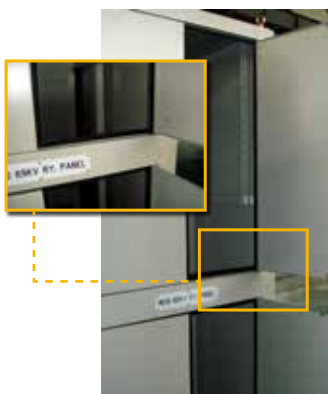
(1) 技術專業先進 產品結構設計精良

箱體結構設計

- 箱體框架採角鋼或壓延鋼板曲折成型。
- 隱藏式絞鏈、箱門止動鐵、防塵防滴橡膠條。
- 高壓箱體以接地之金屬隔離板隔成斷路器室、匯流排室、電驛儀錶室及電纜室。
- 箱體後方採可掀式後蓋板，方便電氣維修及防止拆卸後掛板之感電事故。

產品特色

- 完整的標準體系，可以配合客戶的需求，作整體的彈性規劃。
- 五萬餘盤的製造經驗，培養出熟練度高、技術力佳的技術人力。
- 空間大產能高可以在短期間大量生產高品質的配電盤。



(1) Excellent structure design

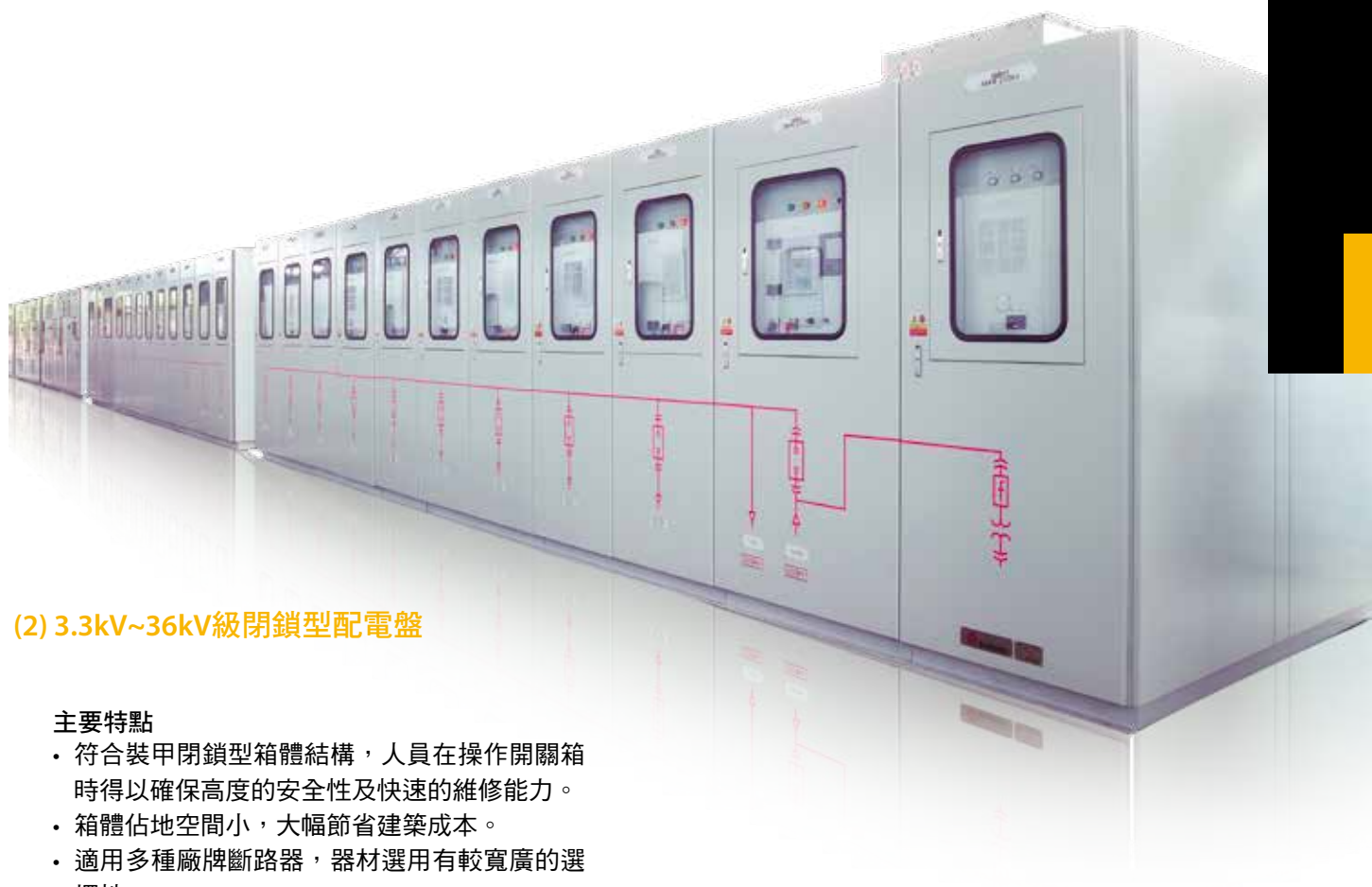
Structure of the cubicle

- Framework structured using formed steel or bent steel plate.
- Door with hidden hinge, stopper, to anti-dust & anti-dropping rubber strip.
- Cubicle is separated into circuit-breaker, Low Voltage and cable compartment.
- Hinged rear cover for easy maintenance and to avoid accidental shock.

Features

- Complete standard or customized design suitable for customer integration planning.
- Accumulating the manufacturing experience over 50000 switchgears to nurture skilled technicians.
- Roomy factory space to allow mass production in a short term.





(2) 3.3kV~36kV級閉鎖型配電盤

主要特點

- 符合裝甲閉鎖型箱體結構，人員在操作開關箱時得以確保高度的安全性及快速的維修能力。
- 箱體佔地空間小，大幅節省建築成本。
- 適用多種廠牌斷路器，器材選用有較寬廣的選擇性。
- 箱體安裝簡便進線空間寬裕，二次施工容易。

高壓閉鎖型配電盤適用下列標準

- CNS 3990、CNS 3991、CNS 15156-200、CNS 15156-1
- IEC 62271-200、IEC 62271-1
- JEM 1425
- GB 3906 (中國大陸)

(2) 3.3kV~36kV metal-clad switchgear

Features

- Metal-clad structure to provide safe personnel operation & quick maintenance.
- Little space occupied to substantially reduce the building cost.
- Compatible with a wide variety of breakers & materials.
- Adequate space for switchboard installation and power cable pulling.

Conformed with the following standards

- CNS 3990、CNS 3991、CNS 15156-200、CNS 15156-1
- IEC 62271-200、IEC 62271-1
- JEM 1425
- GB 3906 (Mainland China)



(3) 600V低壓閉鎖型配電盤

主要特點

- 安裝、維護便利；進出線空間充足，未來擴充延伸容易。
- 結構堅固、經久耐用；骨架採用3mm壓延鋼板或4mm角鐵、高鋼性盤體。
- 外形美觀；鏡面半光澤或垂紋粉體塗裝。
- 安全性高；自動防撞門檔、電氣及機械連鎖確保人員操作安全。

低壓閉鎖型配電盤適用下列標準

- CNS 13542、CNS 13543
- IEC 61439-1、IEC 61439-2
- JEM 1265
- GB 7251.1、GB 7251.12 (中國大陸)

(3) 600V LV Switchgear

Features

- Simple installation and maintenance; power cable pulling and future expansion.
- Strong and heavy-duty structure; framework is made of 3-mm bent steel plate or 4-mm formed steel.
- Beautiful appearance; Semi-gloss or grain painting by static powder coating.
- Extremely safe; Crash-proof device, electrical and mechanical interlock for personnel operation protection.

Conformed with the following standards

- CNS 13542、CNS 13543
- IEC 61439-1、IEC 61439-2
- JEM 1265
- GB 7251.1、GB 7251.12 (Mainland China)



(4) 600V 低壓馬達控制中心

主要特點

- 440V 55kW以下採抽出式單元維修保養容易。
- 組合式箱體可彈性配置及擴充。
- 抽出型採輪軌引入式，插接穩固確實。
- 採靜電粉體塗裝，堅固耐用。
- 能裝設多達6只抽出單元，箱門指示燈、開關等配置於抽出式單元維修保養容易。

低壓馬達控制中心適用下列標準

- CNS 3989
- IEC 61439-1、IEC 61439-2
- JEM 1195

(4) 600V Motor control center

Features

- Draw-out type design for 440V 55kW unit or below, ease of maintenance & no need to shut down other equipment.
- Complete assembly structure that offers flexible arrangement & expansion.
- Guiding Wheel is used for draw-out unit leading in, unit is inserted securely.
- Durable static powder coating.
- Each panel could accommodate 6 draw-out units with switches & lamps for ease of maintenance.

Conformed with the following standards

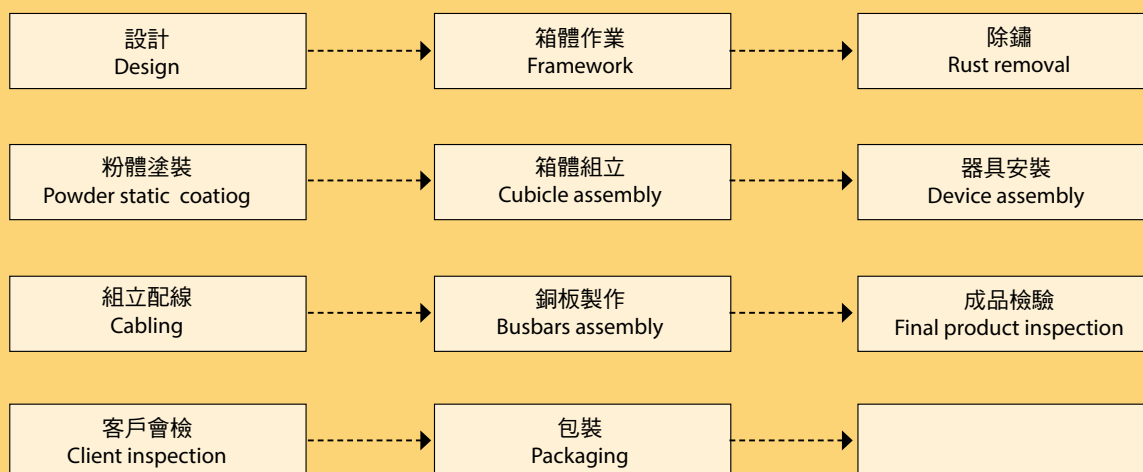
- CNS 3989
- IEC 61439-1、IEC 61439-2
- JEM 1195



自動化製造設備 Automatic Manufacturing Equipment

五、作業流程Manufacture Process

(1)一貫化生產作業流程 嚴格控管品質



六、塗裝製造設備 Powder Coating Equipment

(1) 自動化製造設備 快速精準品質穩定

自動化的板金設備

- 箱體製造全面採用電腦控制系統，利用電腦排版，配合自動倉儲作業，從排版、上料、沖孔、切割、到下料完全自動化作業，產速快、精密度高。
- CNC精密折床加工快速精準，搭配箱體製造系統一系列完整的板金加工設備。

一貫化的塗裝設備

- 一貫化自動粉體塗裝系統，速度快，品質穩定。
- 噴砂前處理，塗料密著性更好，防鏽效果更佳。
- 聚酯系粉體塗料，防刮、耐候、耐腐蝕。



連續處理系統
Automatic Conveying System



粉體塗裝機設備
Continuous Power Coating System

(1) Automatic manufacture equipment that enables high process speed, precision, and quality

Automatic manufacturing equipment

- This is a full computer control system. When the steel sheet is fed into system, the systems automatically select an optimal area and punch the steel sheet into required size. The semi-finished products are sent to the shelf directly by the automatic conveying system for temporary storage. The production process is fully automatized includes positioning, feeding, cutting, and punching, that offers which only high production speed but also high-precision products.
- The CNC bending machine with high speed and accuracy.

Continuous automatic coating system

- The continuous automatic coating system has high coating speed with good quality for better coating adhesion.
- Abrasive Blasting Pretreatment, Adhesive strength and resist rust well.
- Polyester-epoxy resin powder coatings to prevent scratch, weather damage and corrosion.



七、檢驗設備 Inspection Equipment

(1) 精密高性能的研究試驗設備 完整檢核產品

- 商頻耐壓試驗設備
- CT一次電流注入試驗
- 三相保護電驛及儀錶檢測
- 溫昇、PF等各種專用檢驗設備
- 衝擊波耐電壓試驗

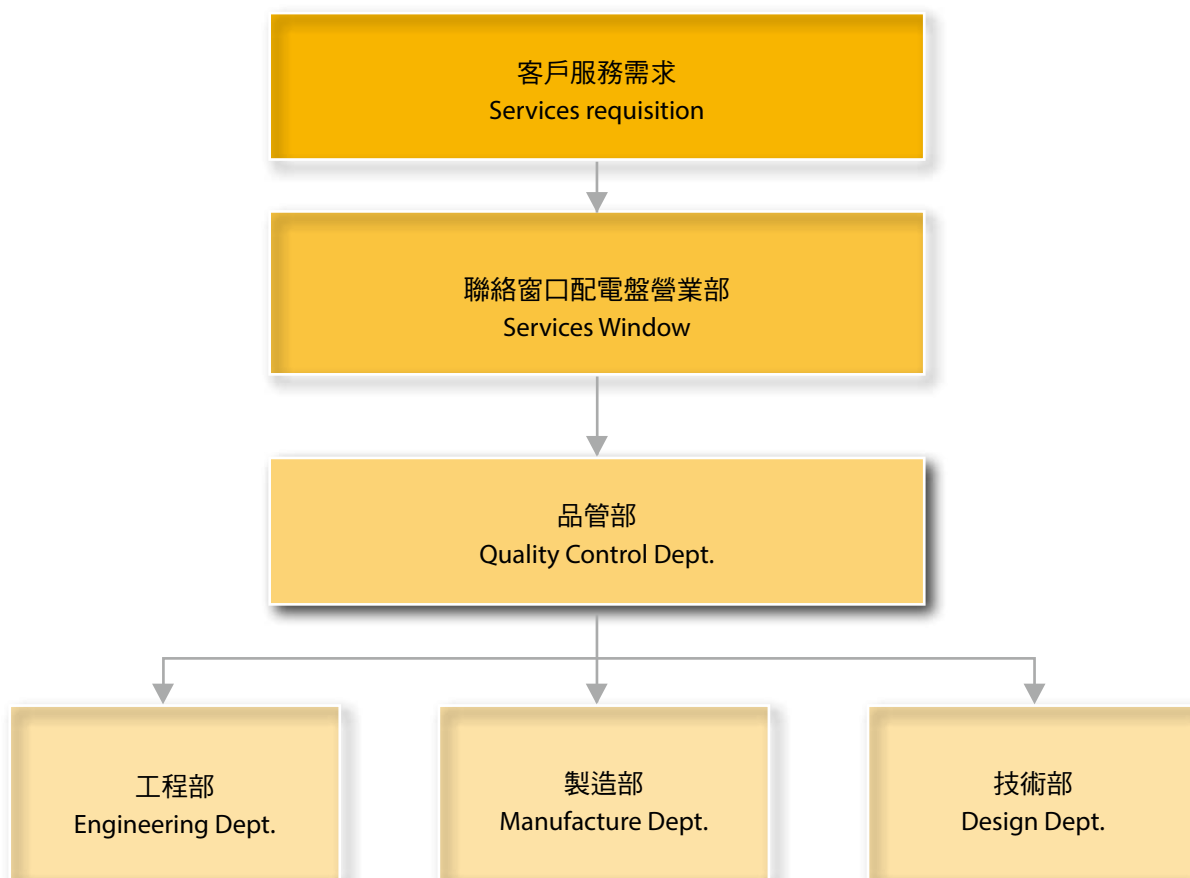
(1) High-precision research, inspection equipment

- Dielectrometer
- CT injection tests equipment
- Protection relay & Instrument test equipment
- Testing equipment specifically designed for temperature rise, Power Factor, etc.
- Impulse withstand test equipment



八、服務體系Service System

(1) 服務團隊 service team



九、榮譽事蹟 Honours



台積半導體 TSMC

十二廠工程興建 工安評比第一名

Awarded first-class factory by industrial safety and health appraisal of 12P1.

京元電子 King Yuan Electronics

興建廠房感謝狀

Certificate of Appreciation

力晶科技 Powerchip Technology Corp.

興建廠房感謝狀

Certificate of Appreciation

統寶光電 TOPPLY Optoelectronics

竹南一廠工程興建 工安評比第一名

Awarded first-class factory by industrial safety and health appraisal of Chunan P1.

奇美電子 CHI MEI Optoelectronics

奇美五廠工程興建工安評比表現優異

Awarded first-class factory by industrial safety and health appraisal of P5.

康寧顯示玻璃 Corning Display

台中Phase 3工程零災害事故

CDTT Phase 3 Expansion-Taichung 1,000,000 safe labor hours

十、主要國內客戶 Main Domestic Customers

(1) 台灣高科技產業主要承製實績

24kV以下高低壓配電盤		
力成科技	力晶科技	力鵬企業
力麗企業	大眾電腦	大潭電廠
友達光電	世界先進	台化麥寮廠
台化龍德廠	台灣光罩	日月光
台灣康寧玻璃	台灣積體電路	正新橡膠
李長榮科技	京元電子	和喬科技
奇美電子	味丹企業	明基電腦
矽品精密	矽統科技	金像電子
展茂光電	訊碟科技	統寶光電
華邦電子	華通電腦	群創光電
達基科技	瑞晶電子	廣達電腦
廣輝電子	德基半導體	聯發科技

(1) Market share in Taiwan Science-based Industrial Park

Metal-enclosed switchgear and controgear for rated voltage up to 24kV		
Acer CM Group	ACER Display Technology	ALLIED Material Technology Corp.
AU Optronics Corp.	Cheng Shin Tire	Chi Mei optoelectronics
COMPEQ Manufacturing	Dah-tarn Power Station	First International Computer
Formosa Chemicals & Fibre (Lung Der)	Formosa Chemicals & Fibre (Mai Liao)	Gold Circuit Electronics
Infodisc	Innolux Display	King Yuan Electronics
LeaLea Enterprise Corp.	Lee Chang Yung Technology	Li Peng Enterprise Corp.
MediaTek Incorporation	ASE KAOHSIUNG	Powerchip Technology Corp.
Powertech Technology Inc.	Quanta Computer	Quanta Display
Rexchip Electronics Corp.	Showa Denko	Silicon Integrated Systems
Siliconware Precision Industries	Taiwan Corning Display technologies	Taiwan MSK Corp.
TI-ACER Inc.	Toppoly Optoelectronics	TSMC
VEDAN Enterprise Corp.	Vanguard International Semiconductor	Winbond Electronics

十一、主要外銷客戶 Main Export Customers

(1) 海外地區主要承製實績

(1) Overseas market share

東芝三菱電機產業系統	TEMIC (Japan)
NKK福山製鐵所	NKK steel (Japan)
住友商事	Sumitomo Densetsu CO. LTD. (Japan)
關西科技	Kainsai TEC. (Japan)
印尼IKPP紙廠	PT. INDAH KIAT P&P CORP. (Indonesia)
正新橡膠昆山廠	Cheng shin tire(Kunshan)
正新橡膠泰國廠	Maxxis (Thailand)
正新橡膠越南廠	Maxxis (Vietnam)
味丹企業越南廠	VEDAN (Vietnam)
台化寧波廠	Formosa Chemicals & Fibre(Ningbo)
統寶光電南京廠	Toppoly optoelectronics(Nanjing)
瀚宇博德江陰廠(二,三期)	HannStar board Corp.(Jiangyin)
永信製藥昆山廠	Yung Shin pharm. Ind. (Kunshan)
榮成紙業無錫廠	Long chen paper(Wuxi)
華通電腦惠州廠	COMPEQ Manufacturing (Huizhou)
統一食品昆山廠	UNI-PRESIDENT(Kunshan)

士林電機認證的榮耀



通過TAF (全國認證基金會)

ISO 17025測試實驗室認證
成為全國各廠家試驗項目
最完備之重電產品測試實驗室

原製造廠家認證

全台第一家上市公司
通過經濟部能源局/高壓用電設備
原製造廠家認證

重電系列產品

Integration of Power System

電力高效能 · 用電更節能



電力變壓器
POWER TRANSFORMER



模鑄式變壓器 (節能環保高效率)
CAST RESIN TRANSFORMER



氣體絕緣開關
SF6 GAS INSULATED SWITCHGEAR EQUIPMENT



油浸式配電變壓器 (省能源環保型)
OIL IMMERSSED TRANSFORMER



智能型電表/電子式電度表
SMART METER / ELECTRICITY METER



電容器
HIGH/LOW VOLTAGE POWER CAPACITORS



比壓器/比流器
VOLTAGE TRANSFORMER /
CURRENT TRANSFORMER



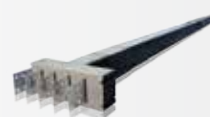
配電盤
SWITCHGEAR &
CONTROLGEAR



高壓變頻器
HV INVERTER (TIMEIC)



隔相式匯流排 (RITZ)
SOLID INSULATION SYSTEM
(RITZ)



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