勤勉立志和铅微

Diligence / Aspiration /
Creativity / Innovation

Ferrotec (China)

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上海汉虹精密机械有限公司

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杭州和源精密工具有限公司

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杭州先进石英材料有限公司

地址:杭州市滨江区滨康路668号C区1F 电话: 0571-86695021 传真: 0571-86695024 邮编: 310053 网址: www.aqmhz.com

杭州晶鑫科技有限公司

地址:杭州市萧山区杭州江东工业园区青六北路668号 电话: 0571-82905028 传真: 0571-82905758 邮编: 311222

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Shanghai Shenhe Thermo-Magnetics Electronics Co., Ltd.

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Http://www.ferrotec.sh.cn

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Hangzhou Wagen Precision Tooling Co., Ltd.

488 Shenban Road, Hangzhou, Zhejiang Province 310022, P.R. China Tel: +86-571-88141293 Fax: +86-571-88141292

Http://www.wagen.cc

Advanced Quartz Material(Hangzhou) Co.,Ltd.

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Hangzhou Solartech Co., Ltd.

668 Qinliubei Road, Xiaoshan Jiangdong Industrial Park, Hangzhou, Zhejiang 311222, P.R.China Tel: 0571-82905028 Fax: 0571-82905758

Ferrotec (Tianjin) Technology Co., Ltd

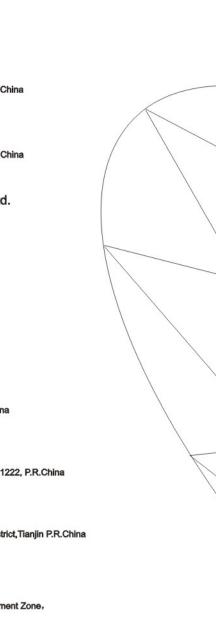
#2 Jingjun xiyuan Jingbin Industrial Park, Tianjin 301712, P.R.China Wuqing District, Tianjin P.R.China Tel: 022-22198500 Fax: 022-22198500

Ferrotec (Ningxia) Advanced Quartz Material Co.,Ltd.

Ferrotec (Ningxia) New Energy Co.,Ltd.
23、25 Guangming West Road, Yinchuan Economic and Technological Development Zone,

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Tel: 0951-2019818 Fax: 0951-5676445



FerroTec

Ferrotec(中国)

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总经理致辞

President's Address

中国融入世界经济格局的速度为世瞩目,而世界同样也在分享着中国经济成长的果实。从上个世纪90年代初发展而来,Ferrotec (中国),一如中国众多企业,在全球经济 格局一体化的大环境下,也被带入到一个全新的领域和一个前所未有的高度。

游走在中国古老的传统文明和西方先进的科技文明之间 ,这些年来,我们也一直在探索如何实现跨越式发展,以及发挥后发优势的问题。所谓"中学为体,西学为用", Ferrotec(中国)既是这一思想的积极倡导者,更是努力实践和亲身经历者。我们的文化起点源于中国,我们的核心技术来源国际高端领域,我们的经营视野展望世界全球。

我们在全心经营热电致冷材料、半导体材料及配套设备、 太阳能材料及发电配套设备,精密数控机械设备等高科技产业领域的同时,不断提升产业质量品牌及提高技术服务 能力,并努力为国内外客户提供一流服务,从而为跻身具有国际一流水准的规模型集团企业,做好积极准备。

"风物长宜放眼量",如何发展,如何更好的发展,如何和谐持续的发展······我们始终站在发展的前沿思考问题。我们视产品质量为企业发展的生命线,我们视发展的每一年 都为再创业之年。"勤勉、立志、开拓、创优"的信念,将把我们带向更加美好的明天。努力打造拥有自主知识产权的产品及全面实现Ferrotec(中国)集团转型,我们依然任 重而道远。

Whilst China is integrating into the world economy at a much admired rate, the world has, in return, benefited from the country's economic growth. Like many Chinese enterprises, Ferrotec (China) has entered uncharted waters and reached an unprecedented position within the economic matrix of the global economy since the early 1990s.

Exposed to epochs of Chinese civilization as well as to advanced Western technology, we have been exploring methods of growth and development as a nascent enterprise.

Ferrotec (China) has been living out, experiencing & advocating the motto: "Based in China, supplying to the world". China is our cultural origin. We also have state-of-the-art core technologies and we have the entire world within our business horizon.

With our expertise in high-technology industries such as thermoelectric refrigeration materials, semiconductor materials and accessories, solar power generation equipment and materials as well as numerically-controlled machinery, we ceaselessly raise our quality level and brand reputation as well as our technological and service capabilities, providing first-rate services for customers at home and abroad. With this background, we are ready to become a world-class enterprise.

On the frontiers of development, we are continually evaluating how to achieve growth and improvement as well as how to develop in a harmonious and sustainable manner.

We consider product quality as vital to our business. We think of every year as a year to start anew. We believe in "diligence, aspiration, creativity and innovation" to bring us to a brighter future, our goal is to create products with independent intellectual property rights and to fully transform ferrotec (china).



贺贤汉 Ferrotec(中国)总裁

He Xianhan Ferrotec China President

Male; Zhoushan, Zhejiang; Currently Executive Vice President of Ferrotec Inc., Deputy Director of Hangzhou Dahe Thermo-Magnetics Co.Ltd., Shanghai Shenhe Thermo-Magnetics Electronics Co.Ltd., Hangzhou Wagen Precision Tooling Co.Ltd.; Director of Shanghai Hanhong Precision Machinery Co.Ltd., Director of Advanced Quartz Material (Hangzhou) Co.,Ltd.; Director of Hangzhou Solartech Co.,Ltd.; Director of Ferrotec (Ningxia) Advanced Quartz Material Co.,Ltd. Director of Ferrotec(Ninxia) New Energy Co.,Ltd. Director of Ferrotec(Tianjin) Technology Co.,Ltd.

影包立志 単純創俊 Dilligence / Aspiration / Creativity / Innovation



前言

Preface

20世纪80年代开始,中国的改革开放为全世界众多的企业提供了一个前所未有的发展机遇。Ferrotec敏锐地洞察到中国将给未来世界的制造产业带来勃勃生机。

1992年,Ferrotec承载着中国梦想,决定将公司的制造向中国进行战略性地转移, Ferrotec 在中国从此展开了令世人瞩目的崭新篇章。

秉持"勤勉、立志、开拓、创优"的信念,坚持品质至上的理念,依托科学严谨的管理,Ferrotec在中国不断地创造着一个又一个的奇迹。

从最初的热电制冷器加工开始,经过二十年的辛勤耕耘,Ferrotec在中国如今已发展成为一个涉及多个领域的、集研发、制造和服务为一体的集团公司,不断地为全世界客户提供品质卓越的产品和服务。

China's reforms and subsequent opening to the world in the 1980's created an unprecedented opportunity for businesses worldwide. Ferrotec foresaw that China would revitalise the world's manufacturing sectors.

In 1992, Ferrotec decided to relocate its manufacturing plants to China as a strategic move, opening a monumental new chapter in its corporate history.

With a belief in "diligence, aspiration, creativity and innovation", an insistence of putting quality first alongside sound management, Ferrotec has made history in China time and time again.

After twenty years of hard work, starting with thermoelectric refrigerator processing, Ferrotec has become a multifaceted group integrating R&D, production and service in China, providing high-quality goods and services to customers all over the world.



Ferrotec(杭州)







经年累月,如水滴石穿,镌刻出享誉全球的品牌信誉。

Quality is vital to our enterprise 质量为 and is essential to our growth 企业生存之根本 质量为企业发展之灵魂

质量第一的理念, 贯穿于产品制造的每一个环节。Ferrotec(中国)专注于产品质量的持续改善与提 升,不断地满足并超越客户的需求。

The philosophy of putting quality first is realized in every process of production. Ferrotec (China) devotes itself to ceaseless improvement in product quality to exceed the customer's expectations.





真圆度检测 Roundness Test



旋盘作业 Glass Lathing



平坦度检测 EvennessTest



TE 生产现场 TE Workshop



净空房工作现场 Clean Room



七槽洗净 Seven-Tub Cleaner



数控加工中心 NC Machining Centre



FerroTec



Quality is what we use to build our reputation and customer base 以质量 树企业之信誉 以质量赢全球之宾朋





对质量坚持不懈的追求,使Ferrotec(中国)的产品和 服务享誉全球,为Ferrotec(中国)赢得了客户长期的 支持和信赖。

Constant pursuit of high quality makes Ferrotec (China)'s products and services renowned worldwide, consistently winning customers' support and trust.



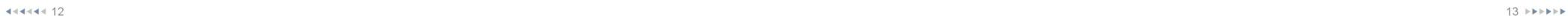












Ferrotec(上海)







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Diversified

多元化 corporate structure 的产业结构

雄厚的技术沉淀和不断的技术突破,形成了Ferrotec(中国)多元化的产业结构。

The accumulation of know-how and ceaseless technological advances have bestowed upon Ferrotec (China) a diversified corporate structure.

- 热电半导体材料和热电制冷器件
- 覆铜陶瓷基板
- 磁性流体真空传动装置及真空法兰
- 精密机械零部件加工
- 精密陶瓷
- 精密石英制品
- 金属表面处理
- 大型真空腔体
- 半导体单晶硅切片、磨光、抛光片
- 大型数控设备制造
- 太阳能单晶硅片、多晶硅片
- ◯ 单晶炉和多晶炉制造
- 太阳能电池材料制造









- Thermoelectric semiconductor materials and refrigeration
- DBC Substrate
- Vacuum feedthroughs and vacuum flanges
- Precision mechanical parts and components
- Fine ceramics
- Fabricated quartzware
- Metal surface treatment
- Large scale vacuum chamber
- Semi-grade single crystal silicon sliced wafer, lapped wafer, and polished wafer
- Large numerically controlled equipment
- O Solar-grade single crystal wafer & solar-grade multi crystal wafer
- Single and multi crystal furnaces
- Solar cell materials











Specialized industry development 专业化的产业发展理念

满足客户的需求是Ferrotec不变的追求,为客户提供更专业、更全面的产品和服务理念,使Ferrotec(中国)在热电制冷领域、半导体、光伏等领域不断发展,逐步形成了从零部件、整机研发到设计咨询以及从材料、消耗品、产品到管理咨询为一体的专业而完整的产业链。

Satisfying the customer's needs is the constant goal of Ferrotec (China). Ferrotec (China) thrives on providing ever more comprehensive products and services to its customers in the fields of thermoelectric refrigeration, semiconductor and photovoltaic supplies. The Ferrotec Corporation has gradually developed a professional and complete industry chain covering a very wide range from components to complete machine development, from materials, consumables and products to management consultation.

热电制冷产业

Thermoelectric refrigeration industry

从热电半导体材料、覆铜陶瓷基板、热电制冷器件到热电制冷单元,Ferrotec(中国)已成为热电制冷领域最专业的供应商和业界的领导者,Ferrotec的热电制冷产品在汽车、光通讯、医疗器械、仪器仪表、家电和航空航天等领域备受客户青睐。

From providing thermoelectric semiconductor materials, direct-bond copper substrates and components for thermoelectric refrigerators to supplying thermoelectric refrigerator units, Ferrotec (China) has become the most professional supplier and industry leader in thermoelectric refrigeration. Ferrotec's thermoelectric refrigeration products are highly popular in the automotive, optical communication, medical device, instruments and meters, home electric appliance, aviation and space industries.



半导体产业

Semiconductor industry

在半导体领域,Ferrotec(中国)不仅为客户提供了品质卓越的半导体硅抛光片、石英坩埚、磁性流体真空传动装置、精密石英等制品,同时也提供高精度的精密机械和精密陶瓷零部件的加工,以及零部件的化学洗净、硬质阳极氧化和电镀等服务,为半导体设备制造商提供一整套产品解决方案和配套服务。

In the semiconductor industry, apart from high-quality silicon wafers,quartz crucibles, vacuum feedthroughs,fabricated quartzware,etc., Ferrotec (China) also provides high-precision machine tooling and fine ceramics as well as chemical cleaning,hard and dization and plating services. Ferrotec offers a

complete set of solutions and services for semiconductor Equipment manufacturers.









环保产业的发展。在太阳能光伏领域,Ferrotec(中国)提供太阳能关联产业整体解决方案。
Ferrotec(China) makes ecological responsibility part of its

corporate mission, actively promoting the development of environmentally friendly industries. From materials and components to integrated systems, Ferrotec's portfolio offers a broad range of solutions for the PV industry.

Ferrotec(中国)将保护地球环境作为企业发展的使命,积极推进









光伏产业

Photovoltaic industry



表面处理服务&太阳能硅材料来料加工 Processing material supplied by clients

太阳能电池 片加工流程 ▶ 硅材料 Process Materials

产品

服务

Services

Products

S

l池片 Cells 组件 Modules

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Ferrotec(宁夏)





和姐姐多攀高峰

十年磨一剑,卓尔不群。Ferrotec(中国)坚持以质量为基础、以技术为先导的理念,汇集了材料、电子、计算机、软件、热能等各类专业人才,拥有多个领域的技术研发部门,建立了遍布全球的销售服务网络。如今Ferrotec(中国)已从最初的单一制造公司发展成为具有研发、制造、销售和服务的集团舰队。





杭州大和热磁电子有限公司 杭州先进石英材料有限公司 杭州和源精密工具有限公司 杭州晶鑫科技有限公司 上海申和热磁电子有限公司 上海汉虹精密机械有限公司 上海汉虹国际贸易有限公司 宁夏银和新能源科技有限公司 宁夏富乐德石英材料有限公司 富乐德科技发展(天津)有限公司

Ferrotec (China) branches:

Hangzhou Dahe Thermo-Magnetics Co., Ltd. (FTH). Advanced Quartz Material (Hangzhou) Co., Ltd. (AQM) Hangzhou Wagen Precision Tooling Co., Ltd. (Wagen) Hangzhou Solartech Co., Ltd.(JXS) Shanghai Shenhe Thermo-Magnetics Electronics Co., Ltd. (FTS) Shanghai Hanhong Precision Machinery Co., Ltd.(Hanhong) Shanghai Hanhong International Trading Co., Ltd. Ferrotec(Ningxia) New Energy Co., Ltd.(FTSN) Ferrotec (Ningxia) Advanced Quartz Material Co., Ltd. (AQMN) Ferrotec (Tianjin) Technology Co., Ltd. (FTST)



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杭州大和热磁电子有限公司

Hangzhou Dahe Thermo-Magnetics Co., Ltd.

杭州大和热磁电子有限公司系日本Ferrotec Corparation在中国的旗舰子公司。下设热电、真空、石英、陶瓷、光伏五大事业部。

Hangzou Dahe Thermo-Magnetics Co. Ltd is a flagship subsidiary of Ferrotec Corporation in China. It is comprised of five departments, namely thermoelectrics, vacuum technologies, quartz, ceramics and PV.

- 1、成立时间: 1992年
- 2、注册资金: 69亿日元
- 3、建筑面积: 102,005平米
- 4、员工总数: 2200人

- 1、Founded: 1992
- 2. Nominal Capital: JPY 6.9 billion
- 3、Building area: 102,005 m²
- 4. Number of employees: 2200



热电事业

Thermoelectrics

主要产品: 各种热电半导体制冷器及其组件。

Main products: Thermoelectric semiconductor refrigerators; their parts and components.





真空技术事业

Vacuum Technology

主导业务: 专业从事真空零部件、真空腔体、电子束蒸发镀 膜机等的制造、研发和销售。

Main business: Production, R&D and sale of vacuum components, vacuum chambers and deposition system.





石英事业_

Fabricated Quartzware

主导业务: 批量生产半导体制造用的各种高纯度石英管、石英舟、石英水槽、石英机加工品。

Main business: Batch production of high-purity quartz tubes, quartz carriers, quartz tanks and processed quartz productsfor the semiconductor manufacturing industry.

陶瓷事业

Fine Ceramics

主导业务: 用于精密半导体及电子加工设备的高纯度陶瓷材料与产品的开发、生产和销售。

Main business: Development, production and sale of high purity ceramic material and components used in precision semiconductors and electronic processing equipment.

光伏事业

PV

主导业务: 研发和生产硅晶太阳能电池产品。

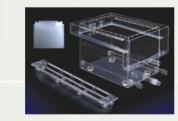
Main business: Production and R&D of silicon solar cells.

硅事业

Silicon

主导业务: 半导体制造用的高纯的单晶硅及多晶硅喷射管、舟、保温筒、内管等硅制品。

Main business: High purity silicon furnaceware for semiconductor industry, including injector, boat, pedestal, liner etc.













上海申和热磁电子有限公司 Shanghai Shenhe Thermo-Magnetics Electronics Co., Ltd.

上海申和热磁电子有限公司作为日本Ferrotec Corparation在中国的另一旗舰 子公司。下设太阳能硅片、半导体硅片、TE和表面处理四个事业部。

Shanghai Shenhe Thermo-Magnetics Electronics Co. Ltd. is another flagship subsidiary of Ferrotec Corporation in China. It comprises four departments, namely PV wafer, semiconductor wafer, thermoelectrics and surface treatment.

- 1、成立时间: 1995年
- 2、注册资金: 76.8亿日元
- 3、建筑面积: 44.151平米
- 4、 员工总数: 1180人

- 1. Founded: 1995
- 2. Nominal Capital: JPY 7.68 billion
- 3. Building area: 44,151 m²
- 4. Number of employees: 1180



TE事业

Thermoelectrics

主导业务: 热电半导体材料与覆铜陶瓷基板(DBC)两种 高科技新型材料的生产和销售。

Main business: Production and sales of novel materials. namely semiconductor refrigeration materials and SDBC.





表面处理事业

Surface treatment

主导业务: 提供精密零部件精密洗净再生和电镀服务, 主要 适用于半导体和光电等相关产业。

Main business: Plating services and the precision cleaning and refurbishment of precision parts, mainly for the semiconductor and optoelectronics related industries.





太阳能硅片事业

PV wafer

主导业务: 生产8英寸以下(含8英寸)各种规格太阳能级单晶硅棒及相应的单晶硅片和156mm*156 mm等规格的多晶硅锭及相应的多晶硅片。

Main business: Various types and specifications of solar-grade single crystal silicon ingots and single crystal wafers of 8"and below, multi crystal silicon blocks and multi crystal wafers of 156*156mm.etc.



半导体硅片事业

Semiconductor wafer

主导业务:主要生产半导体集成电路、分立器件、MEMS领域所需的单晶硅衬底片。主要品种为 N型重掺砷As、锑Sb以及P型轻掺硼B单晶,4、5、6英寸抛光片。

Main business: Semiconductor silicon wafer applied for IC, discrete device and MEMS industry. Main product is N-type As⁺, Sb⁺, and P-type B⁻, 4, 5, 6 inch polishing wafer.







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上海汉虹精密机械有限公司

Shanghai Hanhong Precision Machinery Co., Ltd.

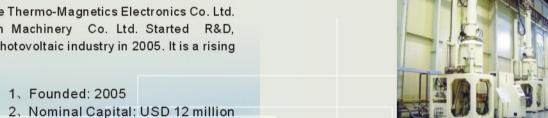
上海汉虹精密机械有限公司前身为上海申和机加工事业部,2005年起开始光伏产业 专用配套设备的研发、生产和销售。是Ferrotec(中国)近年来崛起的重要新生力量。

With the Machining Division of Shanghai Shenhe Thermo-Magnetics Electronics Co. Ltd. as its precursor, Shanghai Hanhong Precision Machinery Co. Ltd. Started R&D, manufacturing and sale of accessories for the photovoltaic industry in 2005. It is a rising force within Ferrotec (China).

ForoTec

3. Building area: 21,399 m² 4. Number of employees: 280

- 1、成立时间: 2005年
- 2、注册资金: 1200万美元
- 3、建筑面积: 21,399平米
- 4、 员工总数: 280人









太阳能装备事业

Solar Equipment

汉虹公司太阳能装备事业部成立于2006年,主要从事单晶硅炉 (用于拉制电路级和太阳能级硅单晶棒)、太阳能级多晶硅铸 锭炉、开方机等光伏产业专用制造设备的研发制造。

The Solar Equipment Division of Hanhong was established in 2006. Its main business is R&D and manufacturing of specialist equipment used in the photovoltaic industry such as silicon single crystal furnaces (to extrude circuit- and solargrade silicon crystal rods), solar-grade multi-crystal furnaces and wire saw squaring machines.





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杭州先进石英材料有限公司

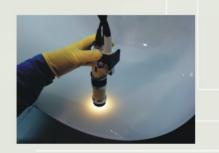
Advanced Quartz Material (Hangzhou) Co., Ltd.

杭州先进石英材料有限公司是由日本磁性技术株式会社与杭州大和热磁电子有限公司共同投资组建的中外合资企业。

本公司采用先进的国际先进加工工艺,专业生产AQM-10系列,AQM-20系列,AQM-30系列,AQM-40系列等四大系列石英坩埚,产品规格从14"-24"。

Advanced Quartz Material (HangZhou) CO., LTD. (AQM) is a joint venture corporation founded by Ferrotec Corporation, HangZhou Dahe Thermo-Magnetics Co., Ltd.

AQM having R&D, manufacturing and sales, related products: Quartz crucibles from 14" to 24". Quartz crucibles products lines are AQM-10, AQM-20, AQM-30, AQM-40 etc.



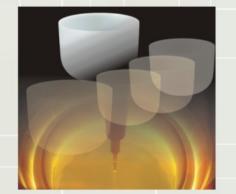
注册资本: 12.6亿日元 创立时间: 2006年11月

主要产品: 半导体、太阳能、特种玻璃用高质量石英坩埚和石英方槽。

Nominal Capital: JPY 1.26 billion Founded: November 2006

Major products: Semiconductors, photovoltaics and silicon quartz crucibles

and tanks for specialist glass material



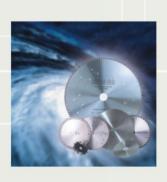


杭州和源精密工具有限公司

Hangzhou Wagen Precision Tooling Co., Ltd.

主导产品"和源"牌硬质合金锯片和金刚石刀具,广泛应用于铝合金、木材加工、家具制造、有机玻璃等行业。已有自行设计、制造常规与超薄锯片规格达3000多种,更可根据客户特殊要求进行定制加工。是中国国内唯一一家专业从事高端精密工具自主研发、生产、销售的切削工具大型企业,拥有每年四十万枚硬质合金锯片的生产能力。

The main product of Hangzhou Wagen is the Wagen carbide-tipped saw blade and PCD tools, widely used in the aluminium alloy, woodworking, furniture making and acrylic industries. It has designed and manufactured more than three thousand types of regular and ultra-thin saw blades as well as products made to order. It is the only major Chinese enterprise in the cutting tools industry that specialises in independent R & D, production and sales of high-end precision tools, with the capacity to produce four hundred thousand pieces of carbide-tipped saw blades per year.





注册资本: 5.42亿日元 创立时间: 2005年4月

主要产品:研制、开发、生产金刚石锯片、

硬质合金锯片及各类工具系列

产品。

Nominal Capital: JPY 542 million

Founded: April 2005

Major business: R&D and production of diamond saw

blades, carbide saw blades and other

tool product lines.



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杭州晶鑫科技有限公司

Hangzhou Solartech Co., Ltd.

杭州晶鑫科技有限公司是由日本Ferrotec株式会社,日本Covalent株式会社,杭州先进石英材料有限公司三方合资。主要产品: 多晶石英坩埚系列产品的研发、制造和销售。

Hangzhou Solartech Co., Ltd. (Solartech) is a joint venture of Ferrotec Corporation, Covalent Corporation and Advanced Quartz Material (Hangzhou) Co., Ltd.Major products: Development, production and sales of multi crystal quartz crucible products.

注册资本: 2000万美元 成立时间: 2010年09月

建筑面积: 28,818平米

Nominal Capital: US\$ 20 million Founded: September 2010

Building area: 28,818 m²



富乐德科技发展(天津)有限公司 Ferrotec (Tianjin) Technology Co., Ltd

富乐德科技发展(天津)有限公司的是上海申和热磁电子有限公司在中国 北方地区全额投资的一家独立公司,目前的主导业务为精密零部件的洗 净、再生服务,涉及范围包含:半导体、太阳能、TFT。

Ferrotec (Tianjin) Technology Co., Ltd, invested by Shanghai Shenhe Thermo -Magnetic Electronics Co.,Ltd, is the first manufacture basement located in Northern China area. The currently scope focus on the precision parts clearing & its recycling, mainly fields involved in Semiconductor, Solar Energy, and TFT.

注册资金: 2000万人民币成立时间: 2011年06月 厂房面积: 3,944平米 Registered: RMB 20 million Established: June, 2011 Factory Area: 3,944m²



宁夏富乐德石英材料有限公司

Ferrotec (Ningxia) Advanced Quartz Material Co., Ltd.

宁夏富乐德石英材料有限公司是杭州先进石英材料有限公司在宁夏回族自治区银川经济技术开发区投资的全资子公司。公司拥有一千级的超级净空房等国内一流的坩埚自动化生产设备,预计具有预计年产12万只单晶坩埚的产能。

Ferrotec (Ningxia) Advanced Quartz Material Co., Ltd. is located in the Yinchuan Economic and Technological Development Zone of Ningxia Hui Autonomous Region and is a wholly owned subsidiary of Advanced Quartz Material (Hangzhou) Co., Ltd. The company owns the nationwide first class automatic crucible production equipment such as Class 1,000 super clean room. The annual capacity of the company is expected to be 120,000 pieces of single crystal crucibles.



宁夏银和新能源科技有限公司

Ferrotec(Ningxia) New Energy Co., Ltd.

宁夏银和新能源科技有限公司是上海申和热磁电子有限公司在宁夏回族 自治区银川经济技术开发区投资的全资子公司。2011年10月建成投产。 具有年产600吨太阳能单晶硅锭及840吨多晶硅锭的产能。

Ferrotec (Ningxia) New Energy Co., Ltd. Is located in the Yinchuan Economic and Technological Development Zone of Ningxia Hui Autonomous Region and is a wholly owned subsidiary of Shanghai Shenhe Thermo-magnetics Electronics Co., Ltd. It is constructed and put into operation in Oct 2011 and the annual capacity is expected to be 600 tons of solar grade single crystal silicon ingots and 840 tons of multi crystal silicon ingots.

注册资金(富乐德): 5000万人民币 注册资金(银和): 1亿元人民币 建筑面积: 37,286平米

Nominal Capital (AQMN): RMB 50 million Nominal Capital (FTSN): RMB 100 million

Building area: 37,286 m²

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Dilligence / Aspiration / Creativity / Innovation



Ferrotec China

- ◆将成为Ferrotec集团最大的投资、生产与研发基地·
- ◆将致力于半导体、太阳能、热电材料和精密机械设备等高尖端技术产业领域的不断探索与进取·
- ◆还将不断调整产业结构、优化资本结构,积极介入资本市场,为公司持续发展注入新的活力…

Ferrotec China, 将腾飞于中国这片古老而神奇的土地···



Our vision

Ferrotec China has a vision to:

* Become Ferrotec's largest branch engaged in investment, design, R&D and manufacturing;

* Devote itself to the exploration of, and making progress in, semiconductors, solar energy, thermoelectric materials and precision mechanical equipment;

* Play an active role in the capital market through structural reforms and optimization for sustained corporate development.

Ferrotec will soar in this ancient land of China.



People - oriented 以人为本 development in harmony 和谐发展

Ferrotec(中国)胸怀以人为本的管理理念,努力创造和谐发展之环境,致力于营造优 秀的企业文化,实现企业与员工的共同发展。

With a people orientated management philosophy, Ferrotec (China) strives for harmonious development with a refined corporate culture that enables the corporation and its employees to grow together.





























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Creating value to 创造价值 contribute back to the society 回馈社会

Ferrotec (中国) 自创立以来,一直受到各级政府的关怀与支持; Ferrotec (中国) 也积极创造价值,回馈社会,使Ferrotec (中国) 成为Ferrotec集团中成长最快的组成部分。

Since it foundation, Ferrotec (China) has won support from many levels of government. In return it creates value to benefit society, becoming the fastest-growing member of the Ferrotec Group.





企業理念

满足客户要求 美化地球环境 给社会注入梦想和活力

Bringing Satisfaction to Customers

Caring about the Environment

Providing Dreams and Vitality to the World

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大事回顾 Chronology

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	1992年	
	01月	杭州大和热磁电子有限公司成立
	08月	大和热磁导入生产热电半导体致冷器
	1993年	
	05月	大和热磁导入生产磁性流体密封圈
	05月	大和热磁被认定为"杭州市高新技术企业"
	1994年	
	03月	大和热磁购置了杭州沈半路3200m²的新厂房,首次拥有了
	00/,	自己的生产基地
	1995年	百七的工厂 坐地
	05月	上海申和热磁电子有限公司成立
	05月	申和热磁导入生产半导体热电材料、覆铜陶瓷基板
	05月	大和热磁成立新产品开发小组,着手半导体制冷器应用产
		品的开发工作
	1996年	
	03月	大和热磁通过ISO 9002质量体系认证
	05月	申和热磁导入生产电力电子模块
	06月	申和热磁成立机加工事业部,开始单双台面研磨机的量产
	07月	大和热磁增购半山二期3000平方厂房,厂房面积增加到
		6000平米, 员工达300余人
	10月	大和热磁导入生产磁性流体惯性阻尼器
	1997年	
	04月	大和热磁精密玻璃研磨机系列产品量产化
	06月	大和热磁导入生产磁性流体真空传动装置
	1998年	八相照《城中八工》《城上》《 体兵王 区 奶 极直
	01月	大和热磁新品研发部成立
	03月	申和热磁导入生产木工机械设备系列产品
	08月	申和热磁一期厂房竣工开业
	10月	大和热磁滨江一工厂一期工程开工
	12月	组建杭州大和精密部件有限公司

1	1999年	
	04月	申和热磁通过ISO 9002质量体系认证
	2000年	
	02月	大和热磁之江高新科技园工厂竣工投产
	08月	大和热磁导入生产硬质合金锯片系列产品
	09月	汉虹 (申和机加工事业部) 第一台NC2001数控镂铣机床完成试制
	11月	大和热磁导入生产半导体石英制品、精密陶瓷部品
	12月	大和热磁在浙江大学设立为期3年的Ferrotec奖学金
	2001年	
1	03月	在浙江大学设立为期5年的Ferrotec奖学金
	03月	大和热磁通过ISO 9001国际质量保证体系认证
	04月	大和热磁通过ISO 14001国际环境管理保证体系认证
	07月	大和热磁通过EN 46001医疗器械质量保证体系认证
	08月	申和机加工事业部数控镂铣机开始量产
	10月	大和热磁导入实装基板(SMT)生产线
	12月	申和热磁二期厂房竣工投产
	2002年	
	01月	大和热磁导入生产精密钣金部件
	03月	申和热磁导入生产单晶硅和晶圆产品新闻发布会
	03月	申和机加工事业部进入数控工作母机制造行业
	05月	追加设立浙江大学Ferrotec China奖学金壹百万元人民币
	06月	杭州博日科技有限公司成立 申和热磁被认定为"上海市外商投资先进技术企业"
	06月	申和热磁获得"上海市认定企业技术中心"
	07月	大和热磁滨江工厂二期工程开工
	08月	申和热磁导入半导体洗净项目
	11月	申和热磁与上海市宝山城市工业园区签订申和三期200亩土
	(17)	地批租协议
	12月	申和机加工事业部第一台全自动硅片洗净机试制成功,正
	-/,	式进入半导体设备制造行业

1992	
Jan	Hangzhou Dahe Thermo-Magnetics Co. Ltd. is founded
Aug	Dahe (FTH) begins producing thermoelectric semiconductor
1000	refrigerating modules
1993 May	Dahe (FTH) begins producing computer seals
May	Dahe (FTH) was awarded as "High-tech Enterprises of Hangzhou"
1994	
Mar	Dahe (FTH) buys a new plant of 3200 m² in Shenban Road, Hangzhou,
1995	the first production base of its own
May	Shanghai Shenhe Thermo-Magnetics Electronics Co. Ltd. is founded
May	Shenhe (FTS) begins producing DBC substrates
May	Dahe (FTH) establishes a new product development group to work with
1996	semiconductor refrigeration applications
Mar	Dahe (FTH) obtains ISO9002 Quality Assurance System certification
May	Shenhe (FTS) begins producing electric and electronic modules
Jun	Shenhe (FTS) establishes Machinery Division, focusing on mass
	production of single- and double-surface glass-lapping machines
Jul	Dahe (FTH) buys a plant in Banshan District to reach phase 2, expanding from 3,000 m ² to 6,000 m ² in area and to 300 employees
Oct	Dahe (FTH) begins producing magnetic fluid inertia dampers
1997	
Apr	Dahe (FTH) mass-produces a precision glass grinding machinery
Jun	product line Dahe (FTH) begins producing magnetic fluid vacuum feedthrough
1998	Dane (1 111) begins producing magnetic ridid vacuum leedinough
Jan	Dahe (FTH) establishes New Products Development Division
Mar	Shenhe (FTS) begins producing a woodworking machinery product line
Aug	1st phase of Shenhe (FTS) plant in Baoshan is completed
Oct Dec	1st phase of Dahe (FTH) plant in Binjiang begins construction Hangzhou Dahe Precision Parts Co. Ltd. (FTH) is incorporated
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	BIS TO THE REAL PROPERTY OF THE PARTY OF THE

1999	
Apr	Shenhe (FTS) obtains ISO 9002 Quality Assurance System certification
2000	Siterifie (1.13) obtains 130 3002 Quality Assurance System Certification
Feb	Dahe (FTH) plant in Zhijiang High-Tech Park is completed and enters
1.60	production
Aug	Dahe (FTH) begins producing carbide-tipped saw blades
Sep	Hanhong (FTS) completes pilot production of NC2001 CNC router
Nov	Dahe (FTH) begins producing semiconductor quartzware and fine ceramics
Dec	Dahe (FTH) sets up 3-year Ferrotec scholarship at Zhejiang University
2001	Balle (1717) acts up a your constraint and action, and all more actions
Mar	Dahe (FTH) sets up 5-year Ferrotec scholarship at Zhejiang University
Mar	Dahe (FTH) obtains ISO 9001 Quality Assurance System certification
Apr	Dahe (FTH) obtains ISO 1400 1 International Environmental Management
30.00	Standard certification
Jul	Dahe (FTH) obtains EN46001 medical instruments and apparatus quality
	assurance system certification
Aug	Hanhong (FTS) begins mass-producing a CNC router
Oct	Dahe (FTH) puts first SMT line into operation
Dec	2nd phase of Shenhe (FTS) plant is completed and brought to operation
2002	
Jan	Dahe (FTH) begins producing precision sheet metal parts
Mar	Shenhe (FTS) holds press conference on silicon single-crystal ingot and
	wafer production lines
Mar	Hanhong enters the CNC machinery production industry
May	Ferrotec (China) endows Zhejiang University with an additional
	scholarship of RMB 1 million.
Jun	BIOER Technology Co. Ltd. is founded
Jun	Shenhe(FTS) was certified as "Shanghai advanced foreign invested technology enterpri
Jun	Shenhe(FTS) was certified as "Shanghai-accredited enterprise technology centers"
Jul	2nd phase of plant in Binjiang of Dahe (FTH) begins construction
Aug Nov	Shenhe (FTS) introduces semiconductor cleaning works Land rental agreement for 200 mus (approx.130,000m²) of land required
1404	for 3rd phase of Shenhe (FTS) is concluded between Shenhe (FTS) and
	Shanghai Baoshan Municipal Industrial Park Administration
Dec	Hanhong completes pilot production of first fully-automated silicon wafer
Doc	Training completes proteproduction of mistrally automated smooth water

cleaner and enters the semiconductor equipment manufacturing industry

FerroTec



大事回顾 Chronology

2003年		
	02月	杭州菱日科技有限公司锂电池生产线投产
	04月	大和热磁滨江工厂二期工程竣工
	07月	申和机加工事业部第一台亚洲最大的全自动大型喷砂机试制成功
	09月	贺贤汉总经理被授予 "全国留学回国人员先进个人"荣誉称
		号、"全国留学回国人员成就奖"、"杭州市高新区(滨江)
	000	经济发展突出贡献奖"
	09月	山村章社长被授予"浙江省西湖友谊奖"
	10月	申和热磁硅片项目正式投产
2004年	04 🗆	
	01月	Ferrotec(中国)集团公司独立经营管理事业部制方式全面
	01月	运行 申和机加工事业部第一台半导体硅片抛光机试制成功
	0171	中华机加工事业的第一百十分体 胜 7 10 20 10 10 10 10 10 10 10 10 10 10 10 10 10
2005年		
	01月	大和热磁通过TS 16949汽车行业体系认证
	02月	大和热磁导入单晶炉真空腔体及零部件项目
	04月	上海汉虹精密机械有限公司成立
	04月	杭州和源精密工具有限公司成立
	05月	大和热磁滨江工厂三期工程竣工
	07月	汉虹精机直拉式单晶炉开始量产
	10月	大和热磁导入生产石英坩埚产品
	10月	杭州先进陶瓷材料有限公司成立
	12月	大和热磁追加资本金到31.96亿日元

2006年	
01月	Ferrotec(中国)研发中心在杭州成立
02月	杭州先进陶瓷材料有限公司成立 Ferrotec(中国)培训中心在杭州成立
03月	Ferrotec(中国) 举行首届科技成果创新大会
07月	大和热磁导入生产太阳能电池系列产品
09月	贺贤汉被授予"浙江省海外留学英才奖"
11月	杭州先进石英材料有限公司成立
2007年 05月	大和热磁被授予高新区(滨江)高技能人才实训基地
08月	申和热磁投资总额达到57.8亿日元
09月	大和热磁投资总额达到69亿日元
11月	汉虹精机多晶铸锭炉投放市场
12月 2008年	申和热磁参与《国家重点基础研究发展计划》项目
03月	上海财经大学设立"帮困兴教Ferrotec China奖助学金"
	100万元。
05月	大和热磁设立浙江机电技术职业学院 "Ferrotec China奖学金"
2009年	
04月	上海汉虹综合装备设计咨询有限公司成立
04月	汉虹精机生产的具有自主知识产权的开方机在申和公司光伏材
	料事业部试运行
05月	大和热磁注册资本增至38.1亿日元,投资总额达到70.6亿日元 申和热磁注册资本增至39.8亿日元,投资总额达到71.8亿日元
10月	申和热磁多晶硅项目开始投产
10月	申和热磁被授予"上海市清洁生产示范企业"称号

2003		200
Feb	Lithium-ion battery production line enters operation	
Apr	2nd phase of Dahe (FTH) plant in Binjiang is completed	
Jul	Shenhe (FTS) completes pilot production of first fully-automated sandblaster, the largest in Asia	
Sep	General Manager He Xianhan obtains the title "China's Distinguished	
	Returnee of Former Oversea Student", and wins the "China's Returnee	
	Achievement" and "Economic Contributor of Hangzhou Hi-Tech (Binjiang)	
	District" awards	
Sep	Mr. Akira Yamamura, the board chairman of FT, was awarded the "West Lake	200
	Friendship Prize"	
Oct	Shenhe (FTS) puts crystal wafer production line into service	
2004		
Jan	Ferrotec (China) puts an independent business management system into	
	full operation	
Jan	Hanhong completes pilot production of its first polishing machine for	
	semiconductorwafer	
2005		200
2005	Deba (FTU) abtains TC46040 automative industry automassification	
Jan Feb	Dahe (FTH) obtains TS16949 automotive industry system certification	
	Dahe (FTH) introduces silicon single-crystal grower chamber and parts project Shanghai Hanhong Precision Machinery Co. Ltd is founded	
Apr Apr	WAGEN Precision Tooling Co. Ltd is founded	200
May	3rd phase of Dahe (FTH) plant in Binjiang is completed	200
Jul	Hanhong begins mass-producing a silicon single-crystal grower	
Oct	Dahe (FTH) begins producing quartz crucibles	
Oct	Advanced Ceramic Material (Hangzhou) Co. Ltd. is founded	
Dec	Capital for Dahe (FTH) increases to JPY 3.196 billion	
200	Capital for Ballo (1-111) Illio Gasos to Gr. F. G. 100 Billion	- 12

2006	
Jan	Ferrotec (China) establishes an R&D Centre in Hangzhou
Feb	Advanced Ceramic Material (Hangzhou) Co. Ltd. is founded
Mar	Ferrotec (China) establishes a Training Centre in Hangzhou
Jul	Ferrotec (China) holds its first scientific achievement and innovation
	conference
Jul	Dahe(FTH)begins producing silicon solar cells
Sep	Mr. He Xianhan was awarded the "Talented returned overseas student of Zhejiang"
Nov	Advanced Quartz Material (Hangzhou) Co. Ltd. is founded
2007	
May	Dahe (FTH) is designated Skilled HR Training Base of Binjiang High-Tech Zone
Aug	Investment in Shenhe (FTS) increases to JPY 5.78 billion
Sep	Investment in Dahe (FTH) increases to JPY 6.9 billion
Nov	Hanhong markets a multi-furnace
Dec	Shenhe (FTS) participates in a project of the National Basic Research
	Programme of China
2008	
Mar	Shanghai University of Finance and Economics sets up a Ferrotec China
	Scholarship for Needy Students with an amount of RMB 1 million
May	Dahe (FTH) Set up Ferrotec China Scolarship in Zhejiang Institute of Mechanical
2009	& Electrical Engineering
	Shanghai Hanbang Engineering Co. Ltd. (ETSE) was actablished
Apr Apr	Shanghai Hanhong Engineering Co., Ltd. (FTSE) was established (Hanhong) successfully manufactured its first wire saw squaring machine
Abi	with its own IP and trial production started in solar-grade silicon material
	division of FTS
May	Dahe (FTH) Increased capital fund so that its registered capital reached to
	JPY 3.81 billion and its total investment reached to JPY 7.06 billion
Aug	Shenhe (FTS) Increased capital fund so that its registered capital reached to
	JPY 3.98 billion and its total investment reached to JPY 7.18 billion
Oct	Shenhe (FTS) Launched the polysilicon project and started the production
Oct	Shenhe (FTS) was certified as "Shanghai environmentally friendly enterprise"

FerroTec



大事回顾 Chronology

2010年		2
02月	申和热磁被上海市电镀协会评为"2008-2009"年度上海市先进电镀企业"	
03月	大和热磁被授予"浙江省优秀创新型企业"	
03月	汉虹精机荣获上海市科学技术委员会、上海市财政局、上海市	
	国家税务局、上海市地方税务局联合颁发的"高新技术企业"证书	
03月	申和热磁太阳能多晶硅片实现量产	
04月	大和热磁追加投资:投资总额达78.6亿日元,注册资本42亿日元	
05月	申和热磁和汉虹精机在上海电力学院设立科研兴教 "Ferrotec	
	(中国) 奖学奖教金"以及"Ferrotec(上海)产学研合作基地"	
	FT(中国)总裁贺贤汉获聘该校兼职教授	
07月	汉虹精机荣获"上海市创新型企业"荣誉称号	
08月	大和热磁三期厂房建设工程正式开工	
09月	申和热磁获"2009年度上海市外商投资双优企业"荣誉	
09月	杭州晶鑫科技有限公司萧山江东开发区建设工程开工奠基典礼	
09月	FT(中国)的第三产业基地正式落户宁夏回族自治区银川市国	
	家级经济开发区	
10月	申和三期厂房建设工程正式开工	2
12月	上海申和被认定为"上海市高新技术企业"	
12月	贺贤汉总裁当选2010年上海市领军人才荣誉称号	
2011年		
04月	大和热磁追加投资:投资总额达91亿日元,注册资本47亿日元	
04月	宁夏银和新能源科技有限公司、宁夏富乐德石英材料有限公司 注册成立	

2011年		
	04月	申和热磁注册资本增至: 46.8亿日元,投资总额: 85.8亿日元
	05月	大和热磁石英事业部硅材料项目系列产品导入生产
	05月	Ferrotec (中国) 集团惠普信息化项目正式启动
	06月	富乐德科技发展(天津)有限公司注册成立
	07月	杭州晶鑫科技有限公司萧山江东工厂竣工投产典礼
	07月	由日本三井造船集团、日本FerroTec集团、申和热磁共同出资
		筹建的"上海三井机电有限公司"举行开业庆典
	08月	Ferrotec(中国)总裁贺贤汉被授予杭州市海外高层次人才引
		进计划特聘专家称号。
	09月	富乐德科技发展(天津)有限公司开业庆典
	09月	银川银河新能源科技有限公司、宁夏富乐德石英材料有限公司
		开业庆典
	09月	大和热磁追加投资。投资总额达157.1亿日元,注册资本69亿日
	09月	元。并被评为"浙江省外商独资百强企业" 申和热磁注册资本增至:76.8亿日元,投资总额:175.8亿日元
		上海申和热磁电子有限公司荣获上海市第17批企业技术中心
	ПЛ	工海中和於城屯于有限公司来狄工海市第17批正亚技术中心
2012年		
	03月	申和热磁获得上海市电镀协会颁发的"2010-2011年度先进企
		业"称号
	04月	杭州先进石英注册资本增至: 12.6亿日元
	05月	杭州晶鑫科技有限公司萧山江东二期工厂竣工典礼
	07月	杭州大和热磁电子有限公司举行开业二十周年庆典仪式

2010		2011	
Feb	Shenhe (FTS) has been rated as "Advanced Electroplating Enterprise of	Apr	linvestment to l
	Shanghai "in 2008 and 2009 by Shanghai Electroplating Association.		registered capi
Mar	Dahe(FTH) was awarded the "Outstanding innovative enterprise of Zhejiang".	May	The Quartz Bus
Mar	(Hanhong) earned "High-tech Enterprises certificate" issued by Shanghai		Series.
	Municipal Science and Technology Commission, Shanghai Municipal Bureau of	May	Ferrotec (China
	Public Finance, Shanghai State Tax Bureau and Shanghai Local Tax Bureau.	Jun	Ferrotec (Tianj
Mar	Shenhe (FTS) realized mass production of Polycrystalline Silicon Chips to be	Jul	The opening ce
	used in Solar Batteries.		Ltd. was held.
Apr	Dahe(FTH) Increased capital fund so that its registered capital reached to JPY	Jul	The opening ce
	4.2 billion and its total investment reached to JPY 7.86 billion.		Engineering &
May	Ferrotec China set up "Ferrotec China Scholarship" and "Ferrotec Shanghai	Aug	The president of
	enterprise-college-research cooperation training base" in Shanghai Institute of		Expert by Hang
	Electric Power, Mr.He Xianhan was invited to be a part-time professor.	Sep	The opening ce
Jul	(Hanhong) was awarded as "Innovative enterprise of Shanghai".	Sep	The opening ce
Aug	Dahe(FTH) begins the construction of the third plant.		(Ningxia) Adva
Sep	Shenhe (FTS) was awarded as "The double excellence joint venture enterprise"	Sep	The investment
	in 2009.		registered capi
Sep	Ground-breaking Ceremony of Hangzhou Solartech Co., Ltd.was held in		100 Foreign-In
	Xiaoshan Jiangdong Development Zone.	Sep	Investment to F
Sep	Ferrotec China settled down its third manufacturing base in Yinchuan state-level		registered capi
	Economic and Technological Development Zone in the Ningxia Hui Autonomous	Nov	Shenhe(FTS) v
	Region.		centers".
Oct	Shenhe(FTS) begins the construction of the third plant.		
Dec	Shenhe(FTS) was awarded as "High-tech Enterprises of Shanghai".	2012	
Dec	General manager He Xianhan obtains the title of "Local Leader Talent".	Mar	Shenhe(FTS)T
			the Year 2010-:
2011		Apr	The registered
Apr	Investment to FTH was added: the total investment was 9.1 billion and the		to JPY 1.26 bill
	registered capital was JPY 4,7 billion.	May	Xiaoshan Jiang
Apr	Ferrotec (Ningxia) New Energy Co., Ltd. and Ferrotec (Ningxia) Advanced Quartz		ceremony of its
	Material Co., Ltd. were set up and registered.	Jul	Dahe(FTH) had

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	Apr	linvestment to FTS was added: the total investment is JPY 4.68 billion and the registered capital is JPY 8.58 billion.
	May	The Quartz Business Division of FTH imported the Project of Silicon Material Produ Series.
	May Jun	Ferrotec (China) Group officially launched the Project of HP Informatization. Ferrotec (Tianjin) Technology Co., Ltd. was set up and registered.
	Jul	The opening ceremony of Xiaoshan Jiangdong Factory of Hangzhou Solartech Co. Ltd. was held.
	Jul	The opening ceremony of MES Ferrotec China Co., Ltd. (co-invested by Mitsui Engineering & Shipbuilding Group, Ferrotec Group and FTS) was held.
	Aug	The president of Ferrotec (China) Mr. HE Xianhan was awarded as Distinguished Expert by Hangzhou Overseas Talents Importation Program.
	Sep	The opening ceremony of Ferrotec (Tianjin) Technology Co., Ltd. was held.
	Sep	The opening ceremony of Ferrotec (Ningxia) New Energy Co., Ltd. and Ferrotec (Ningxia) Advanced Quartz Material Co., Ltd. was held.
	Sep	The investment to FTH was added: the total investment is JPY 15.71 billion and the registered capital is JPY 6.9 billion. And FTH was awarded as one of "Zhejiang's Tol 100 Foreign-Invested Enterprises".
	Sep	Investment to FTS was added: the total investment is JPY 7.68 billion and the registered capital is JPY 17.58 billion.
	Nov	Shenhe(FTS) was certified as the "17th Shanghai-accredited enterprise technology centers".
) 1	12	
	Mar	Shenhe(FTS) Thermo-Magnetics Electronics Co., Ltd. was awarded "Enterprise of the Year 2010-2011" by Shanghai Electro Plating Association.
	Apr	The registered capital of Advanced Quartz Material (Hangzhou) Co., Ltd. increased to JPY 1.26 billion.
	May	Xiaoshan Jiangdong Factory of Hangzhou Solartech Co., Ltd. had the opening ceremony of its 2nd phase.
	Jul	Dahe(FTH) had its 20th anniversary ceremony on July 18th.

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