

Review of Operations

The principal business objective for Shin-Etsu Chemical is to maintain stable growth in both sales and profits. To achieve that goal, our key strategy has been to concentrate on both stable- and high-growth fields. Materials for the semiconductor and telecommunications industries provide the engine that drives rapid growth, while steady performers such as products for construction and housing, transportation equipment, toiletries, medical and antipollution generate cash flow and help offset the effects of the cyclical fluctuations that often impact high-tech markets.

New Materials

- OPTICAL ISOLATORS
- SOI WAFERS
- SIFEL®: NEW FLUOROELASTOMER
- PELLICLES

High Growth

- OPTICAL FIBER PREFORMS

No. 1

- SYNTHETIC QUARTZ

No. 1 IN WORLD MARKET FOR PHOTOMASK SUBSTRATES AND STEPPER LENS

No. 1

- SILICON WAFERS

No. 1 IN WORLD MARKET WITH 25%* OF SHARE

- RARE EARTH MAGNETS

No. 1 IN WORLD MARKET FOR HDD

No. 1

- PHOTORESISTS

No. 1 IN WORLD MARKET FOR KRF PHOTORESISTS

- SILICONES

No. 1 IN ASIAN MARKET
No. 3 IN WORLD MARKET

No. 1

- PVC

No. 1 IN WORLD MARKET WITH 13%* OF SHARE

Stable Growth

- CELLULOSE DERIVATIVES

No. 1 IN THE WORLD MARKET FOR PHARMACEUTICAL USE

No. 1

Shin-Etsu at a Glance

Products

Major Contributors

Organic and Inorganic Chemicals



Polyvinyl chloride, Silicones, Vinyl acetate monomer, Polyvinyl alcohol, methanol, Caustic soda, Chloromethanes, Cellulose derivatives, Synthetic pheromones, Lime nitrogen, Fused phosphates, Silicon metal, Plastic products and others

MANUFACTURING AND SALES:
Shin-Etsu Chemical Co., Ltd.
Shintech Inc. (U.S.A.)
Shin-Etsu PVC B.V. (Netherlands)
Shin-Etsu VCM B.V. (Netherlands)
Simcoa Operations Pty. Ltd. (Australia)
Shin-Etsu Polymer Co., Ltd.
Nissin Chemical Industry Co., Ltd.

MANUFACTURING:
Shin-Etsu Vinyl Acetate Co., Ltd.
Kashima Vinyl Chloride Monomer Co., Ltd.

and 51 other companies

Electronics Materials



Semiconductor silicon, Organic materials for the electronics industry, Rare earth magnets for electronics industry, Photoresists

MANUFACTURING AND SALES:
Shin-Etsu Chemical Co., Ltd.
Shin-Etsu Handotai Co., Ltd.
Shin-Etsu Handotai America, Inc.

PROCESSING AND SALES:
S.E.H. Malaysia Sdn. Bhd.
Shin-Etsu Handotai Europe, Ltd. (U.K.)
Shin-Etsu (Malaysia) Sdn. Bhd.

PROCESSING:
Naoetsu Electronics Co., Ltd.

and 22 other companies

Functional Materials and Others



Synthetic quartz products (photomask substrates, optical fiber preforms), Oxide single crystals, Rare earths and rare earth magnets for general applications

OTHERS:
Export and import of goods, Export of technology and plants, Construction and plant engineering, Information processing, Other services

MANUFACTURING AND SALES:
Shin-Etsu Chemical Co., Ltd.
Shin-Etsu Quartz Products Co., Ltd.
Silica Products, Inc. (U.S.A.)

ENGINEERING:
Shin-Etsu Engineering Co., Ltd.

SALES:
Shin-Etsu Astech Co., Ltd.

and 29 other companies

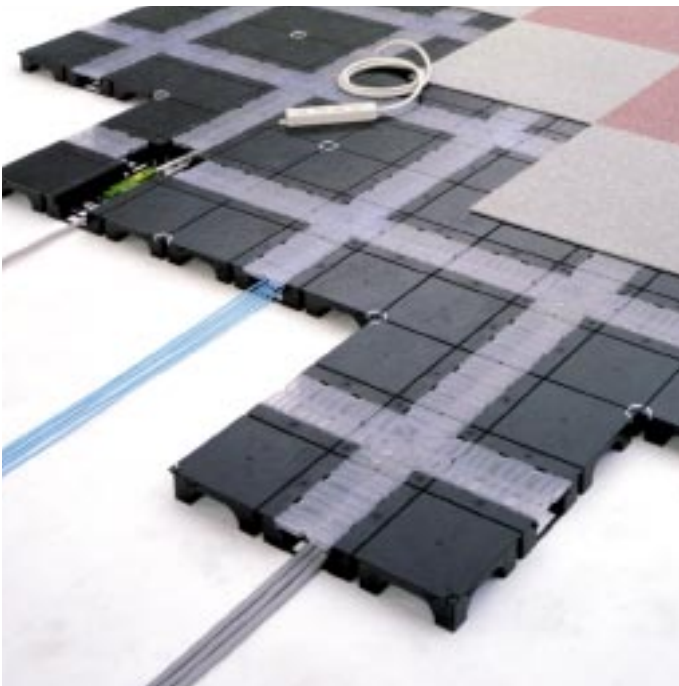
Note: The above list includes nonconsolidated subsidiaries and affiliated companies.

Organic and Inorganic Chemicals

Stable-Growth Products

Principal products in the Organic and Inorganic Chemicals business segment include polyvinyl chloride (PVC), silicones, cellulose derivatives, vinyl acetate monomer and polyvinyl alcohol (POVAL). In the fiscal year ended March 31, 2001, sales stood at ¥410,371 million, up ¥66,959 million, or 19.5%, from the previous term. Operating income reached ¥47,015 million, a gain of ¥1,853 million, or 4.1%, on the year before. Key products driving this solid growth were PVC, silicones and cellulose derivatives. Shin-Etsu Chemical has the top share of the world markets for PVC and cellulose derivatives used as pharmaceutical additives, and is the Asian market leader in silicones.

Polyvinyl Chloride



The production of floor panels for channelling computer wires is one of the new applications for PVC

Courtesy of Matsushita Electric Works, Ltd.



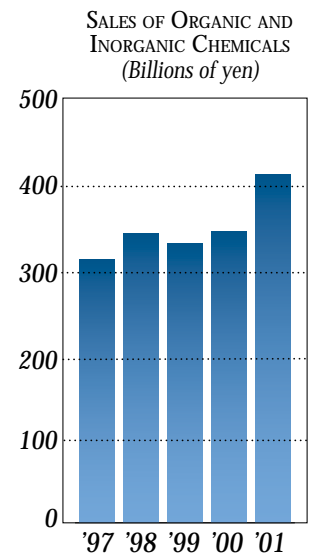
Pipes made from PVC have a wide range of uses, both industrial and domestic

As a material, PVC offers a wide range of advantages. In addition to its excellent physical properties and its contributions to the reduction of resource consumption, it is economical and easy to process. We expect this steady growth to continue for many years to come.

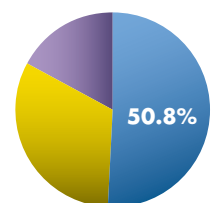
Shin-Etsu Chemical has manufacturing facilities in three key global regions: the United States, Europe and Japan. That structure reduces our exposure to economic fluctuations in any one region,

and enables stable earnings.

Shintech Inc., located in Texas, is the largest single PVC plant in the world. Shintech is currently building a second plant in Louisiana, which in December 2000 began first-phase production at 300,000 tons per year. As a result, our total capacity in the U.S., including that of the Freeport plant in Texas, has increased from 1.45 million tons per year to 1.75 million tons per



SEGMENT SALES AS A PERCENTAGE OF NET SALES



SALES BY PRODUCTS

Polyvinyl Chloride
Silicones
Other Products

Total

Billions of yen

Years ended March 31

	2001	2000
Polyvinyl Chloride	¥ 208.1	¥ 152.5
Silicones	135.2	127.5
Other Products	67.0	63.4
Total	¥ 410.4	¥ 343.4

year. Second-phase production at Shintech's Louisiana plant, with an annual capacity of 290,000 tons, is scheduled to begin in 2001. A stable supply of raw materials, large-scale state-of-the-art facilities, and marketing ability combine to give Shintech a significant edge in the marketplace. When the second Shintech plant hits full capacity, the Shin-Etsu Group will boast annual production capabilities of 3.19 million tons and solidify its position as world leader in the PVC sector.

In the first half of the year under review, Shintech enjoyed strong demand for PVC in the North American market that accompanied the impressive U.S.A. economy. Although market conditions weakened in the second half of the year, Shintech was able to operate its facilities at full capacity through its cost competitiveness and strong ties with clients worldwide, with record high profits this fiscal year.

In Europe, the recently consolidated Shin-Etsu PVC B.V. in the Netherlands, purchased from Shell Chemicals Ltd. and Akzo Nobel N.V., outperformed initial expectations.

In Japan, the operating environment remains severe due to depressed demand in a weak domestic economy and surging crude oil prices. Under these circumstances, the Company raised prices in order to improve profitability.

Silicones

In the period under review, our silicones segment recorded significant year-on-year gains in both sales and operating income. The impressive performance was largely attributable to a recovery in domestic demand, which bolstered sales of silicones intermediates in the chemicals industry as well as products for the electrical, electronics and automotive industries in the second half of the year.

Silicone is a high-performance material with diverse characteristics that has given it applications across the industrial spectrum. The silicones manufactured by the Shin-Etsu Group adds

value to more than 4,000 products in the electrical and electronics, transportation equipment, machinery, chemicals, textiles, toiletries and construction sectors. This diversity ensures a stable growth in demand, which should be supported in the future by significant growth in the rest of Asia. To respond to that increasing demand, in February 2001 the Company set up Asian Silicones Monomer Ltd., a joint venture with General Electric Company, to manufacture silicone monomer, an intermediate of silicones. The new company will build a plant that will come on stream in April 2003 with an annual siloxane capacity of 70,000 tons, making it the largest silicone monomer plant in Asia. The Shin-Etsu Group will take half of that annual output, strengthening its position as Asia's leading supplier of silicones.



The popularity of shampoos, hair rinses and cosmetics is just one of the reasons for the huge demand for the 4,000 silicone products produced by Shin-Etsu



Improving the reliability of electronic products is one of many key uses for Silicones

We also intend to maintain our edge in the markets for information technology and telecommunications applications. To respond to rising demand for mobile phones and personal computers, our subsidiary Shin-Etsu Polymer Co., Ltd., is stepping up global development of conductive silicone rubber switches. With operations commencing at new plants in Malaysia and China, the Company has bolstered its production capacity for these switches by 20%.

During this fiscal year, Shin-Etsu Chemical developed a revolutionary liquid silicone rubber, which boasts selective bonding performance. This new product bonds with thermoplastic resins, such as polyamide resins, but not with metal dies, and delivers two-color formation. After gearing up for volume production, the Company brought this offering to market in April 2001.

Cellulose Derivatives

Cellulose derivatives are environment-friendly materials that are made from natural fibers. Their diverse uses and inherent safety have given them applications in construction and civil engineering, as additives for fine ceramics, and in paper processing, pharmaceuticals and toiletries. Our cellulose derivatives operations enjoyed healthy gains in the year under review, thanks to rising demand from the pharmaceuticals market.



Cellulose derivatives are used in the production of a wide range of tablets for the pharmaceutical industry

The Shin-Etsu Group began producing cellulose derivatives in 1962, and currently has the leading market share in Japan. We also take particular pride in our world-leading share of the market for pharmaceuticals applications. In the future, we are likely to witness rising demand for cellulose derivatives applications in ceramics parts used to purify emissions from diesel vehicles.

Other Products

The Shin-Etsu Group produces vinyl acetate monomer (VAM), which is used in adhesives, paints and synthetic resins, and as a raw material for polyvinyl alcohol (POVAL). We also manufacture POVAL itself, for a broad array of applications in general adhesives, paper processing, film, textile agents, emulsifiers and other products. POVAL has earned high marks for its environment friendly characteristics, which include its water-soluble and biodegradable properties.

The Company's extensive product lineup includes many other offerings. For example, our synthetic aroma chemicals are used not only in perfumes and cosmetics but also in food flavorings. Our synthetic pheromones have been developed as agents to control the populations of harmful insects that attack cotton and fruits by disrupting the insects' mating cycle. We also produce lime nitrogen, which has won large markets for its environment-friendly properties.

The Shin-Etsu Group has earned a reputation as a pioneer in silicon chemistry. We produce silicon-derived products such as silicones, semiconductor silicon and synthetic quartz as a core business. One critical raw material for these products is silicon metal. Shin-Etsu's wholly owned silicon metal subsidiary, Simcoa Operations Pty. Ltd. in Western Australia, has an annual production capacity of 30,000 tons, giving the Company a sustainable supply of high-quality silicon metal.

Electronics Materials

High-Growth Products

Principal products in our electronics materials business segment include semiconductor silicon wafers, photoresists, epoxy molding compounds and rare earth magnets for the electronics industry. In the fiscal year ended March 31, 2001, this segment recorded sales of ¥258,746 million, rising ¥38,614 million, or 17.5%, from the previous year. Operating income reached ¥36,361 million, a gain of ¥13,017 million, or 55.8%, from the year before. This segment includes many of the products in our fastest growing areas, including silicon wafers and photoresists.



A range of electronics materials including semiconductor silicon supports the foundations of the information society

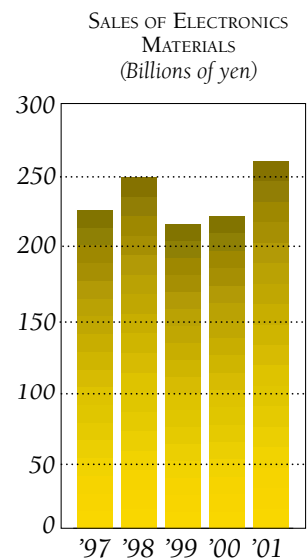
Semiconductor Silicon

The silicon wafer business is an area of rapid growth for the Shin-Etsu Group. We operate manufacturing facilities in Japan, Malaysia, Taiwan, the United States and the United Kingdom, which together produce about 25% of global output, the leading world share.

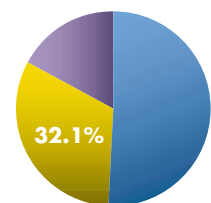
We posted gains in both sales and operating income in our silicon wafer segment in the period under review, thanks to robust demand from domestic and overseas manufacturers who are enjoying strong market conditions and

to rising investment in information technology. In addition to Japan, our performance was also strong in Southeast Asia, Europe and North America.

Both domestic and overseas device makers are keen to adopt 300mm wafers, which can be used to manufacture larger and higher performance chips, and which produce more than twice



SEGMENT SALES AS A PERCENTAGE OF NET SALES

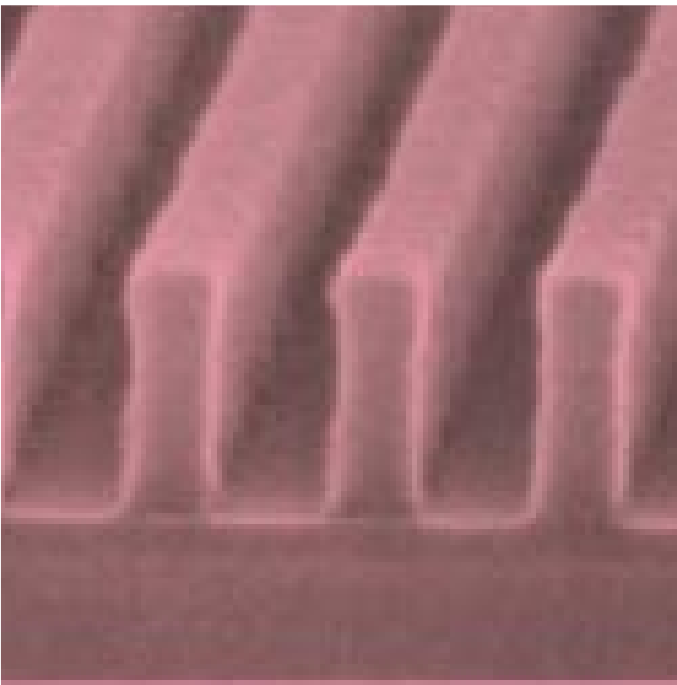


SALES BY PRODUCTS	Billions of yen	
	Years ended March 31	
	2001	2000
Semiconductor silicon	¥ 204.7	¥ 173.3
Other Products	54.0	46.8
Total	¥ 258.7	¥ 220.1

as many chips compared with the existing 200mm wafer. That means the 300mm wafer has significant advantages for device makers in terms of cost savings. A commitment undertaken in July 2000 to respond to this new demand has made us the world's first company to begin manufacturing a 300mm wafer when production started at the Shirakawa plant of Shin-Etsu Handotai Co., Ltd. (S.E.H.), in February 2001. At present, our commercial production capacity is 50,000 units per month. We are ready to move ahead with an expansion plan to meet growing demand in the future. Ultimately, the Shirakawa plant will be able to increase its monthly manufacturing capacity to 300,000 units. These initiatives will keep us at the forefront of the industry, and bolster our position as domestic and overseas market leader.

To satisfy the diverse semiconductor market requirements, S.E.H. now has a wide-ranging

product lineup, including polished, epitaxial, diffused, argon-annealed and compound semiconductor wafers. One of the new product segments S.E.H. is focusing on in coming years is Silicon On Insulator (SOI) wafers. Bonding two silicon wafers with an oxide layer in between, this product can provide an ideal solution for many semiconductor chip companies in producing devices that require high speed and low power consumption. Another type of SOI is produced by our UNIBOBD process, the technology of which has been licensed and transferred from SOITEC, a French company, to provide a "thin" device layer. Both types of SOI are definitely among the promising semiconductor materials for leading-edge devices of the present and future. In addition, S.E.H. became the second vendor of hydrogen-annealed wafers for Toshiba Ceramics Co., Ltd., in November 2000.



High-resolution KrF photoresists are indispensable in the production of semiconductor device circuits with very narrow lines

As the world-leading company in silicon wafers, S.E.H. will continue to meet the worldwide needs for silicon wafers by supplying more advanced products through its manufacturing and R&D facilities throughout the world.

Photoresists and Pellicles

Photoresists are liquids that play a critical role in semiconductor fabrication. These high-polymer materials have a property that inhibits or prevents dissolution in a solvent when they are coated on a wafer and subjected to light or radiation, since only the radiated part transforms. The Shin-Etsu Group was a late entrant in the photoresist market, arriving in 1998 with a cutting-edge photoresist that boasted compatibility with krypton fluoride (KrF) excimer lasers. However, we have since become the world's leading producer, accounting for about one-third of the global market.

Our photoresists were strong performers in the year under review, in both the domestic and

overseas markets. This was thanks to a timely increase in production in April 2000 that accurately anticipated robust growth in demand accompanying a turnaround in the semiconductor market.

To respond to future growth in demand, we are planning the construction of a new plant in Japan that will double production capacity for KrF photoresists. In addition, we are already proceeding with the research and development of next-generation argon fluoride (ArF) photoresists.

The Shin-Etsu Group has also succeeded in developing and manufacturing pellicles that offer high light permeability and durability, as well as compatibility with excimer lasers. Our pellicles also feature advanced control of impurities, an issue that becomes increasingly critical as devices become more integrated.

Epoxy Molding Compounds

Epoxy molding compounds are chip encapsulation materials that prevent semiconductor circuit leaks, protect regular and large-scale integrated circuits from humidity, and excel in heat and shock resistance. In the year under review, we enjoyed rising sales of these compounds, reflecting the strength of the semiconductor industry during the first half of the term. The Shin-Etsu Group is helping its customers develop smaller, lighter and higher performance electronics equipment, by calling on the cutting-edge technologies that the Company has accumulated through its silicone development to respond to diversifying mounting techniques and thinner, denser devices. We have also been a worldwide pioneer in introducing innovative, low-stress applications for epoxy molding compounds.



Rare earth magnets form an important component of hard disk drives

Rare Earth Magnets for the Electronics Industry

Employing technologies enabling advanced separation and purification as well as physical property control, Shin-Etsu Chemical has been able to extract high-purity rare earths. This makes us the only company in the world to manufacture high-quality rare earth magnets, starting from the refinement of principal raw materials to precision magnetic assemblies and circuits. The key area of demand for rare earth magnets lies in voice coil motors for hard disk drives, a market in which we are the world leader. In the period under review, we posted slightly higher sales of our rare earth magnets, as a recovery in demand for servers during the term offset reduced output of hard disk drives for personal computers.

Hard disk drives have hitherto been used mostly for computers, especially personal computers and servers. However, with household audiovisual equipment increasingly incorporating hard disk drives, demand for rare earth magnets should be further stimulated in the coming years.

Functional Materials and Others

Rapid-Growth Products

Our synthetic quartz products are critical to our growth strategy. Our preforms for optical fibers play a major role in fiber-optic networks, the rapid proliferation of which is providing the infrastructure to enable advances in network communications. In addition, our photomask substrates are essential components of liquid crystal displays, another high-growth technology. Our product lineup extends further to stepper lens ingots, lithium tantalate and other oxide single crystals, as well as rare earths and rare earth magnets for general industrial applications, and other products.

In the fiscal year ended March 31, 2001, strong demand for synthetic quartz enabled us to achieve sales of ¥138,368 million, up ¥23,053 million, or 20.0%, from the previous term. We also registered an operating income of ¥29,328 million, a gain of ¥10,676 million, or 57.2%, compared with the year before.

Synthetic Quartz Products

Our synthetic quartz products include preforms for optical fibers, photomask substrates

and stepper lens ingots. Demand for these products should grow strongly in the future. We also make optical isolators, which have a critical role to play in the information technology age.

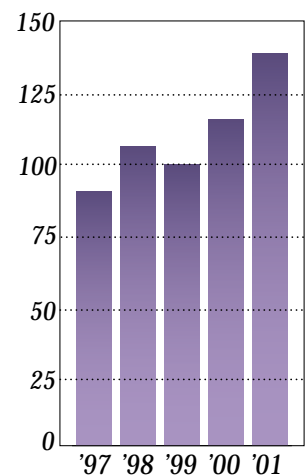
In the year under review, we registered a robust increase in sales of our synthetic quartz products to the electronics and telecommunications industries, which in turn produced a strong rise in operating income. These gains were fueled by global demand for fiber-optic networks during the period, which produced a



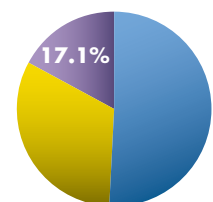
By expansion of undersea optical-fiber cable networks, global communication becomes ever easier

Courtesy of KDDI Corporation

SALES OF FUNCTIONAL MATERIALS AND OTHERS (Billions of yen)



SEGMENT SALES AS A PERCENTAGE OF NET SALES



SALES BY PRODUCTS	Billions of yen	
	Years ended March 31	
	2001	2000
Synthetic quartz	¥ 41.5	¥ 30.4
Rare earths, PBN, LT and other functional materials	32.4	27.9
Other Products	64.4	57.0
Total	¥ 138.4	¥115.3

dramatic rise in export sales of our preforms for optical fibers, an increase in sales of large mask substrates for liquid crystal displays, and a recovery in demand for semiconductor steppers.

The Shin-Etsu Group anticipates growing investment in information technology infrastructure in the coming years. To respond to the demand that this investment will generate, we are building a new plant for our preforms. Our present preform production capacity translates into 12 million kilometers of optical fibers. The completion of the new plant will



Optical-fiber cable plays a key role in broadband networks

double this capacity, and give us second position in the world market in terms of share. The

new plant will also deliver other advantages, as it will enable us to create a stable supply structure and benefit from the cost advantages represented by new technologies and expanded capabilities. Our increased capacity will give us the ability to respond quickly to rapid-growth market demand.

The Company has taken similar measures for its optical isolators, bolstering domestic production capacity in January 2001 in response to growing demand for this product in applications such as fiber-optic links. We are also leveraging our expertise in the preforms market to respond to market growth and develop new products. We have also been adding to our lineup, developing in-line isolators, attenuators and circulators. We enjoy an edge in this market, given our strength in through-process production of rare earth magnets and garnet crystals, which form the principal



Photomask substrates allow high definition of LCDs, which are becoming mainstream

components of isolators.

Using these products as its foundation, the Shin-Etsu Group is planning a sustained program of aggressive R&D and investment. Our goal is to turn our materials for the high-growth optical communications market into a key pillar of the company, on a par with our semiconductor-related operations.

Oxide Single Crystals

Rising demand for mobile phones has generated strong sales growth for our oxide single crystals, which include lithium tantalate and other materials. Although demand peaked in the second half of the term, sales for the full year under review significantly exceeded the figure for the previous year.

Rare Earth Magnets for General Applications, and Rare Earths

The year under review produced robust sales gains for our rare earth magnets, fueled by demand for optical pickups and mobile phones. Rare earth magnets are roughly ten times more powerful than ferrite magnets, which themselves have many everyday applications, and are helping manufacturers of motors and other equipment make their products smaller, lighter and more productive. Rare earth magnets are now being used in motors for electric vehicles, which are increasingly being used in environment-friendly vehicles.

We also enjoyed healthy demand for our rare earths products. Thanks to our unique refining process, our rare earths have achieved 99.9999% purity, making them ideal for

many critical applications, such as the luminescent center of lasers, phosphors for color television sets and fluorescent lamps, and oxygen sensors and ceramic condensers for automobile engines. In addition, we expect rare earths to find many more uses in the future.

SHIN-ETSU SIFEL® Liquid Fluoroelastomer

SHIN-ETSU SIFEL® is the world's first mass-produced liquid fluoroelastomer. With excellent resistance to cold, oils, solvents and chemicals, this product has found diverse applications in markets such as automobiles, aircraft, electronic components, semiconductor devices, chemical plants and optics.

Other Businesses

The Shin-Etsu Group is committed to meeting the needs of its customers worldwide, and already exports 82 technologies and facilities to 28 countries.

One of our subsidiaries, Shin-Etsu Engineering Co., Ltd., manufactures mechatronics plant equipment and systems. Demand for mechatronics systems for liquid crystal devices is growing rapidly, and Shin-Etsu Engineering is enjoying rising sales of automatic assembly systems to liquid crystal device manufacturers in Taiwan, South Korea and Japan. Our mechatronics systems are able to handle the large, cutting-edge glass substrates that enable these manufacturers to reduce costs of LCD production.



Shin-Etsu's rare earth magnets are used in the wind turbine generators in Tappisaki, Aomori Prefecture, in the northern part of mainland Japan. Our products serve to protect the environment.



A highly efficient, leading-edge automatic alignment system for LCD manufacturing is one of the best-selling products developed by Shin-Etsu Engineering