

# ANNUAL REPORT 1998



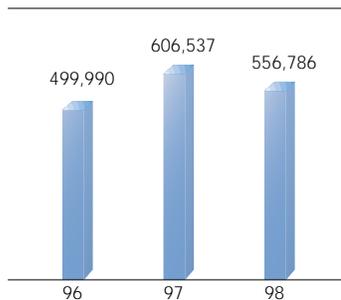
# CONTENTS

Financial Highlights.....	1
To Our Shareholders.....	2
Review of Operations.....	4
Financial Statements.....	23
Report of Independent Public Accountants .....	35
Network .....	36
Major Subsidiaries and Affiliates .....	38
Organization.....	39
Board of Directors.....	40
Corporate Data .....	41

# FINANCIAL HIGHLIGHTS

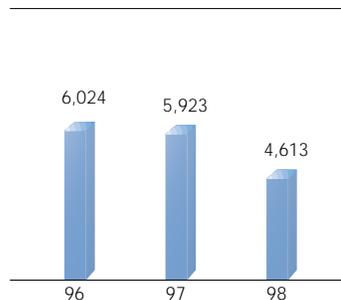
## Net Sales

(¥ Million)



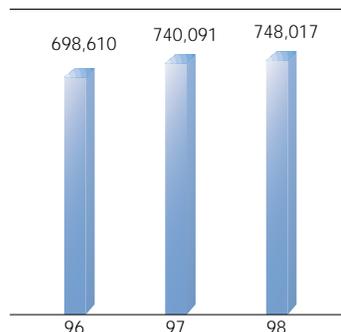
## Net Income

(¥ Million)



## Total Assets

(¥ Million)



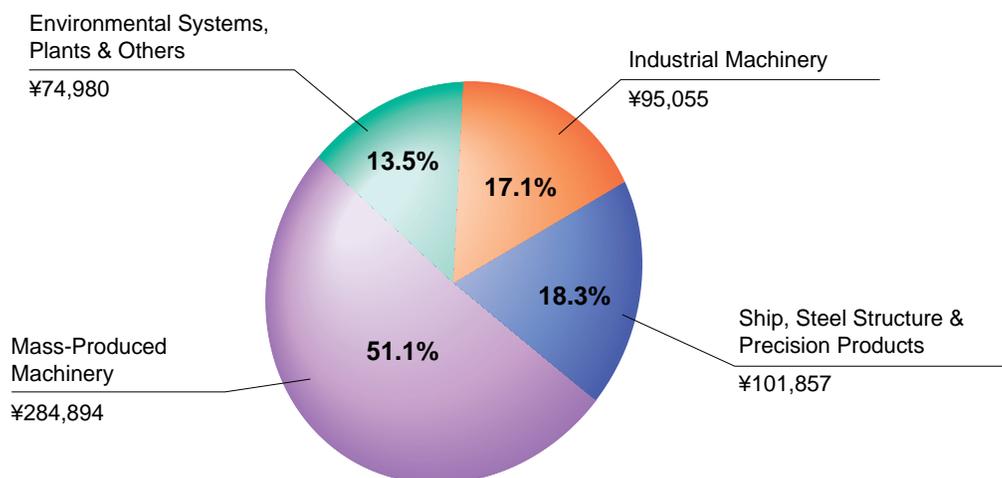
## SUMITOMO HEAVY INDUSTRIES, LTD. and Consolidated Subsidiaries Years ended March 31, 1998, 1997 and 1996

	Millions of yen (except per share amounts)			Thousands of U.S. dollars (except per share amounts)
	1996	1997	1998	1998
Net sales.....	¥ 499,990	¥ 606,537	<b>¥ 556,786</b>	<b>\$ 4,218,076</b>
Net income.....	6,024	5,923	<b>4,613</b>	<b>34,947</b>
Net income per share of common stock (*).....	10.23	10.06	<b>7.83</b>	<b>0.06</b>
Stockholders' equity.....	71,023	76,123	<b>78,909</b>	<b>597,796</b>
Total assets.....	698,610	740,091	<b>748,017</b>	<b>5,666,796</b>

(\*) Net income per share of common stock is based on the weighted average number of shares outstanding in each year.

## Net Sales by Segment (¥ Million)

1998 Net Sales ¥556,786





With the deepest gratitude to all our shareholders and customers, I am pleased to present our company's Annual Report for the fiscal year ended March 31, 1998.

While the Japanese economy remained sluggish in 1997, there were some positive signs. The yen's depreciation combined with vigorous economic growth in the United States resulted in strong export gains which moderated the continuing decline in domestic demand brought on by an increase in the consumption tax, the elimination of special tax cuts, and reduced investment in public works. Aimed at reducing the public deficit, these fiscal measures further dampened personal consumption and suppressed new capital investment. Instability in the

banking and financial sectors together with the general Asian economic crisis also had a severe impact on the Japanese economy, helping to prolong the recession and provoke a mood of pessimism among many businesses.

Despite the severity of the economic climate, Sumitomo Heavy Industries, Ltd. (SHI) forged ahead with its 1996 to 1998 middle-term management plan "CHALLENGE 98", working to strengthen our base in order to improve profitability. "CHALLENGE 98" focuses on restructuring our business with an eye on increasing our cost competitiveness, increasing emphasis on high-profit business areas, and concentrating management resources. Through "CHALLENGE 98", we are developing a new set of globally oriented management

strategies that focus on speed, efficiency, and carefully prioritized sales targets.

However, despite favorable growth in orders for Environmental Systems, Plants & Others, total orders fell 2.2% from the previous year to ¥605,909 million, largely as a result of the soft construction market which continued to have an adverse impact on the business of affiliated companies in the construction-related industry. Volume declines in all sectors also brought sales down by 8.0% to ¥556,786 million. An appraisal stock decrease in non-operating expenses resulted in net profits of ¥4,613 million.

### ● Industrial Machinery

Slowdowns in the manufacturing industry put severe pressure on this sector. To maintain a steady flow of orders, we renewed our emphasis on customer service, and reinforced our cost competitiveness and restructuring efforts. Orders for iron & steel manufacturing machines, material handling equipment and logistics & handling systems kept pace with previous years. Our customer-oriented strategy was especially successful in the area of logistics & handling systems, where we were able to secure some very large contracts.

### ● Ship, Steel Structure & Precision Products

With little activity in the shipping market and over-capacity pushing down prices for ships, there was little opportunity for us to grow this market in 1997. On the other hand, despite declining government demand, orders for bridges and steel structures increased

significantly. To improve profitability, we are continuing our program to reduce costs and increase productivity.

**●Mass-Produced Machinery**

Sales of our Cyclo® gear motor, Altax, remained strong and continued to dominate the power transmission systems market in Japan. Internationally, we established new sales offices in Italy, Switzerland and Spain, with the ultimate goal of capturing the No. 1 position worldwide.

The competitiveness of our plastic processing machines has improved dramatically, boosting sales and making these products second only to power transmission equipment in terms of profits. Customers have been especially pleased with our disc molding machine for CDs and sales have increased accordingly. At the international level, new production facilities in the United States and further expansion in Asia — including the establishment of a sales and service office in the Philippines — are further accelerating the growth of our global presence.

Our laser systems are known worldwide for their advanced technology and this past year we invested additional management resources to grow this business, improve profitability, and develop new products and new users.

Not surprisingly, the area hit worst by the recession has been construction machines. Declining public and private investment in infrastructure and facilities, together with stiffer price competition, has pushed down sales and profits in this area.

**●Environmental Systems, Plants & Others**

During FY1997, we continued to expand our business in the promising environmental field and are gaining an excellent reputation for both our advanced technology and our ability to respond quickly to customer needs. Sales in this sector continued to grow, as did orders for large-scale systems including water supply/drainage and night soil treatment plants, waste incineration plants and private power generation plants.

As globalization increases the competitive pressure on businesses around the world, success in the new global economy demands that companies maximize their efficiency and responsiveness. At SHI, we are committed to achieving a leadership position in each of the fields in which we do business. To do this, we are working to boost our competitiveness by taking advantage of the many exclusive leading-edge technologies that we have developed. At the same time, we are refining and clarifying our management strategies and business strategies, while pushing for even greater innovation, faster product development, and expansion of our global operations. To support these efforts, we are utilizing today's most advanced computer hardware and software to build a comprehensive array of information systems and training our young employees to be world-class professionals. In view of the critical

importance of having a coordinated strategy in the future, we have instituted regular corporate board meetings attended by top executives and staff not directly involved with daily business operations, and reinforced the strategy planning function of our headquarters staff. To increase management responsiveness and accelerate innovation and efficiency, we have also invested heavily in information management and communication systems. But while increased efficiencies and streamlined operations can help increase profitability, the key to our success is still customer satisfaction. To strengthen the customer orientation of our products and services, we are developing company-wide "management quality" improvement activities to instill and expand the concept of quality at all management levels.

The ups and downs of the economy make it impossible to predict how SHI will fare in the coming fiscal year, but we are confident that our efforts to improve management and to provide high-quality products to customers around the world will ensure another profitable year.

In conclusion, I would like to say once again how greatly I appreciate the support that all of you have given us over the years. I sincerely hope that you will continue to provide the same level of support in the years to come.

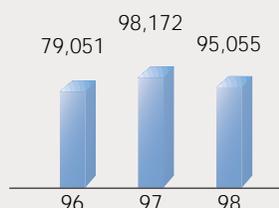


Mitoshi Ozawa,  
President

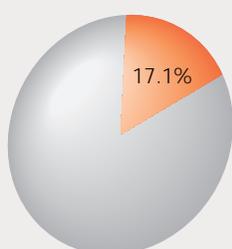
# Industrial Machinery

## Net Sales

(¥ Million)



## Share of Total Sales



## Main Products

- Iron & Steel Manufacturing Machines
- Nonferrous Anode Casting Machines
- Osprey Preforming Systems
- Forging Machines
- Material Handling Equipment
- Logistics & Handling Systems
- Automated Parking Systems
- Moving Sidewalks
- Ion Accelerators
- Cyclotrons for Medical Use
- Electron Beam Accelerators
- Magnets
- SR Ring AURORA®
- Superconducting Equipment
- Plasma Coating System for FPD (Flat Panel Display)
- Space Cryo-System
- Paper Machines
- Machine Tools
- Industrial Turbines and Pumps

The Industrial Machinery sector consists of the Machinery Group and the Machinery Sales Group. The Machinery Group handles production of the sector's main products which include: iron & steel making facilities, forging presses and material handling equipment. Other products include: logistics & handling systems, equipment for public and private facilities, quantum equipment such as accelerators and magnets used in advanced medical research and industrial applications, and paper machines and machine tools. The Machinery Sales Group is responsible for selling and marketing these products.

Major subsidiaries and affiliates include Shin Nippon Machinery Co., Ltd. which manufactures and markets industrial turbines and pumps, and Nihon Spindle Mfg. Co., Ltd. which manufactures and markets spinning machinery and environmental protection equipment.

A major part of our efforts to bring down costs in this sector and enhance our competitiveness involved increasing the level of overseas procurement and

streamlining the production process. These measures helped us secure more orders than in the previous year despite a decrease in demand for paper machines and quantum equipment. Overall, order bookings rose to ¥104,130 million in FY1997, an increase of 7.2% over the previous year. Most of these increases came in the areas of iron and steel manufacturing machines, material handling equipment, and logistics & handling systems. Sales, on the other hand, fell to ¥95,055 million, down 3.2% from the previous year largely as a result of a slump in demand for iron and steel manufacturing machines and quantum equipment.

Iron and steel manufacturing machines remain an important sector within the industrial machinery category and this year we redesigned our equipment to enhance productivity and product quality. Our medium slab continuous casting machines are setting the pace in casting technology and over the past year three of these machines went into operation in the United States at NSS/BHP Inc. and TRICO Inc.

SHI tension levelers are also rated highly in the Japanese market, where they dominate. High-speed tension levelers for high-strength thin steel sheets are one of our specialties and we supplied one of these to NKK Fukuyama Works.

In the area of forging machines, we continued our shift towards overseas manufacturing. Orders

and sales both increased despite the downturn in the Asian market, thanks to recovering demand in Europe and in the Japanese automobile industry.

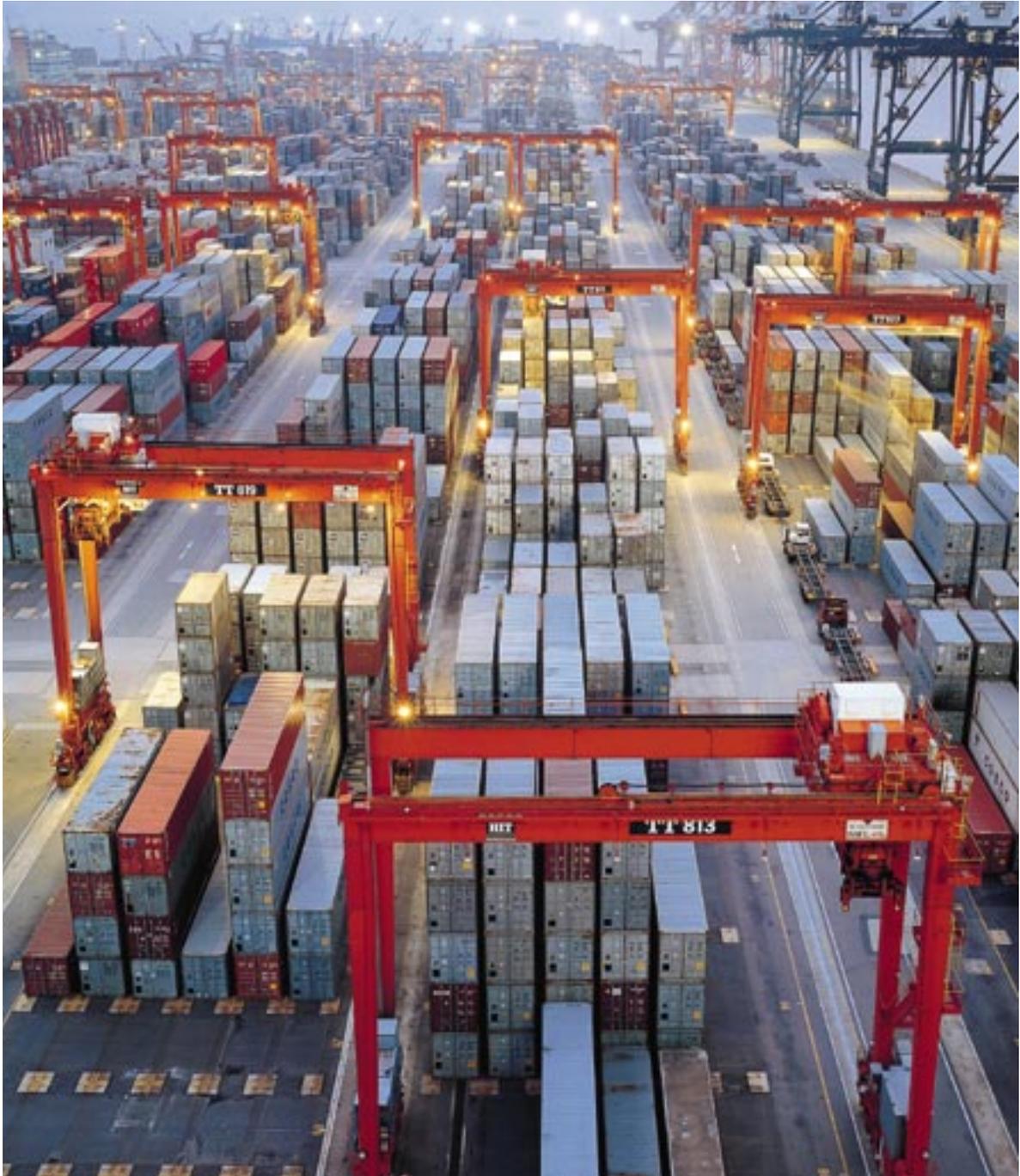
In the area of material handling equipment and logistics & handling systems, a number of high-performance systems were delivered this year including 16 transfer cranes for Hong Kong



High-speed tension leveler



Medium slab continuous casting machine



Transfer cranes



Automated storage and shipping system

International Terminals, Ltd. to which 40 transfer cranes have been already delivered. We also completed and installed a large-scale automated storage and shipping system for Asahi Breweries, Ltd. Our moving sidewalks, meanwhile, continued to gain in popularity. Our installation in the Shinjuku Metropolitan Road No. 4 underground passage was so successful that we were asked

to install another on Shinjuku-Ward Road No. 2. A moving sidewalk was also delivered to a snowboarding slope where it can be used both to ascend and descend the hill.

With the use of accelerators expanding in medical treatment and in industry, the outlook for SHI's quantum equipment sector remains positive. Our compact cyclotrons are a key component in the increasingly popular new PET medical diagnosis systems and we now hold the top market share in Japan for medical ultra-compact cyclotrons. One of these systems was delivered to a university hospital this year. The HIMAC injection system, now in operation at the Science and Technology



Medical cyclotron system "CYPRIS"

Agency's National Institute of Radiological Sciences, is Japan's largest complex beam accelerator.

Many large SHI paper making machines went into operation throughout Japan this year. Incorporating the latest high-speed, high-quality technologies, these include a compact, high-speed machine delivered to Iwaki Daioh Paper Co., Ltd. which is especially notable for its environmental benefits, as it is a resource-recycling paper machine capable of using old papers generated by a large city.



Moving sidewalk

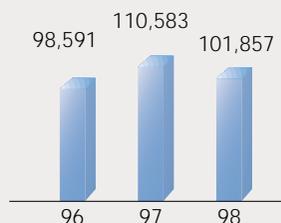


Paper making machine

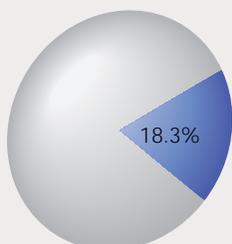
# Ship, Steel Structure & Precision Products

## Net Sales

(¥ Million)



## Share of Total Sales



## Main Products

- Ships
- Offshore Facilities
- Bridge & Steel Structures
- Water Gates
- Shield Tunneling Machines
- Pressure Vessels
- Mixing Reactors
- Special Equipment
- Precision Forgings & Castings
- Cryogenic Equipment
- XY Stages
- Defense Equipment
- Engines for Ships

The Ship Group builds a wide range of ships such as tankers, bulk carriers, naval vessels, and work vessels, as well as various marine structures.

The Steel Structure & Process Equipment Group fabricates large steel structures such as bridges, water gates, and shield tunneling machines, as well as process equipment such as reactors with agitators, mixing reactors and heat exchangers. This group also produces specialized equipment for use in aerospace applications and other high-tech fields.

The Precision Products Division handles precision forgings such as forged blades for jet engines, cryogenic equipment and defense equipment.



The Company marked its 100th Anniversary of shipbuilding

Major subsidiaries and affiliates include Sumiju Tekko Koji Co., Ltd., a contractor of bridges and steel structures and Diesel United, Ltd. which supplies engines for ships.

Overall this category performed well in FY1997, in spite of the Asian economic crisis and an oversupply of ships. A total of twelve ships were ordered, one less than the previous year, but an increase in



Double Hull Aframax Tanker "OLYMPIC SPIRIT II"



Training ship "SEIUN MARU"

orders for bridge-related products pushed total order bookings to ¥116,808 million, an increase of 1.7% over the previous year. Bridge-related sales were also up, but since 10 of the 12 ships we delivered in FY1997 were bulk carriers, overall sales fell to ¥101,857 million, down 7.9% from the previous year.

In commemoration of the 100th Anniversary of the Ship Group, SHI

decided to start the next century on a new footing by renaming the Oppama Shipyard the Yokosuka Shipyard. At the same time, efforts were made to further improve our ship technology using computer-integrated systems such as SUMIRE (Sumitomo Manufacturing Innovation and Re-Engineering).

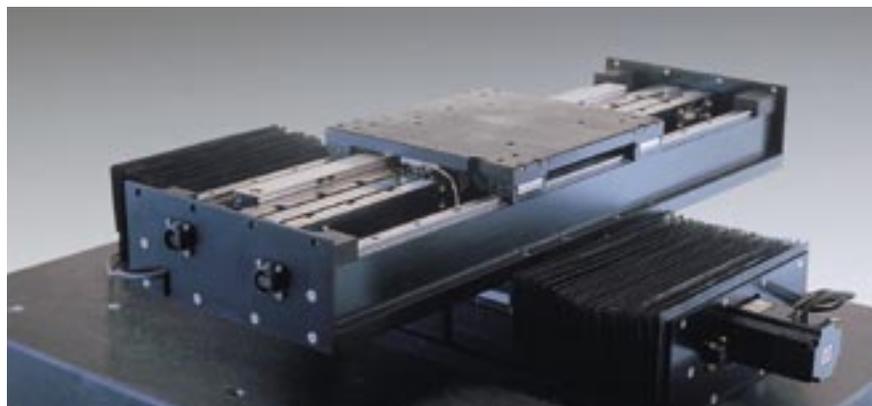
Among the ships delivered this year were several Panamax-type bulk carriers, the OLYMPIC SPIRIT II,

an Aframax tanker built for the Onassis Group's Simbel Maritime Corporation, and the SEIUN MARU, a training ship ordered by the Institute for Sea Training of the Ministry of Transport. The SEIUN MARU was built to train sailors for merchant vessels and to provide embarkation training for sailors in developing countries. The ship is also being used for research and development of ship technology.



"Akashi Strait Bridge"

With more intense price competition and declining orders in the Bridge and Steel Structures sector, SHI launched a bid to increase market share by strengthening our sales force and introducing state-of-the-art machinery and equipment to cut production costs. This year we fabricated and erected a stiffening truss for the world's longest suspension bridge, the Akashi Strait Bridge. Built for the Honshu Shikoku Bridge Authority, the Akashi Strait Bridge opened in April, 1998. And in Yokohama, we built a footbridge specially designed to blend in with the surrounding landscape.



High-precision XY stage

Besides cutting production costs and increasing sales activities, we have also succeeded in meeting customer demands for faster delivery while maintaining top quality. In the petro-chemical field, for example, we built and delivered several large reactors in succession to petroleum refining sites in Asia.

SHI is as much at home in the field of high-precision technology as it is in traditional heavy industry. Our Cryogenic Equipment and Precision Products sector introduced a family of 4 K GM cryocooler this year featuring three different levels of cooling capacity, enabling us to offer a full line of these sophisticated products. In other areas, the Ti6-4 alloy fan blade created with our high-precision forging technology was adopted in a new engine (CF34-8C) for small commercial aircraft, and we introduced a high-precision XY stage for high-precision, high-speed micro processing using a linear motor. One of these ultra-precision stage systems was supplied to Hitachi, Ltd. The new control algorithm incorporated in this system permits fast, stable measurement of more intricate patterns.

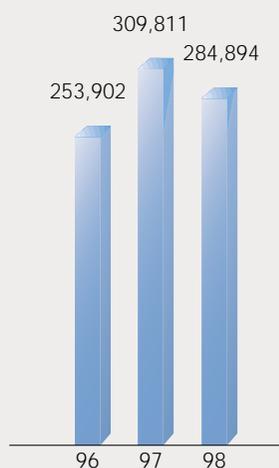


Yokohama Queen Mall Bridge

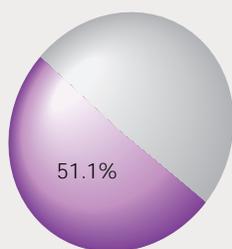
# Mass-Produced Machinery

## Net Sales

(¥ Million)



## Share of Total Sales



## Main Products

- Power Transmission Equipment
- Electrical Equipment
- Plastic Injection Molding Machines
- Laser Processing Systems
- Construction Machinery
- Forklift Trucks
- Hydraulic Motors

This sector is comprised of the Power Transmission & Controls Group which manufactures speed reducers, variators and electric control equipment; the Plastics Machinery Division which manufactures plastic processing machines and precision molding systems; and the Laser System Division which manufactures YAG lasers, excimer lasers, TEA-CO<sub>2</sub> laser processing systems and LD excitation solid lasers.

Major subsidiaries and affiliates include Sumitomo (S.H.I.) Construction Machinery Co., Ltd. which manufactures various construction machines; Sumitomo Eaton Hydraulics Company, Ltd. which handles hydraulic motors; Sumitomo Yale Company, Ltd. which manufactures and sells forklift trucks; and Sumitomo Eaton Nova Corporation which manufactures and sells ion implantation equipment. Overseas, there's Sumitomo Machinery Corporation of America and Sumitomo (SHI) Cyclo Drive Germany, GmbH which manufacture and sell transmission equipment and speed reducers, Lumonics Inc. which manufactures and sells laser equipment, and more.



Hyponic Drive®

While orders and sales increased for speed reducers and variators, plastic processing machines and laser systems, slumping demand for construction machines pushed overall order bookings for this sector down to ¥280,370 million, a decrease of 11.1% from the previous year. Sales fell to ¥284,894 million, down 8% from the previous year.

Deregulation and globalization in the power transmission and electrical equipment industries have spurred intense competition in the speed reducer and variator markets. High-performance SHI products such as the BUDDYBOX world standard series speed reducer, the ALTAX IV-PLUS compact variator series, and the AF3100α general-purpose inverter were marketed successfully. By adapting our products to meet the needs of different lifestyles, local preferences, and industrial requirements, we are confident that



High-performance inverter "AF3100α"

we will establish ourselves as a world leader in this field.

In view of this, we are planning to establish a global sales and production network to aim for the world's top market share and to facilitate greater sales expansion with on-site marketing and production.

In the area of plastic processing, we strengthened our SGM product precision high cycle lineup with a new ultra-

high cycle plastic processing machine designed especially for thin cases and containers. We also completely redesigned the SHA series to release the SHC series for the global market, improving the cycle, operability and maintenance characteristics of these products.

With new applications of plastics continuing to grow at a phenomenal rate, results in this sector were excellent. Shipments of optical disc injection molding machines reached their highest level ever and order bookings and sales of film processing machines also set a new record. We also entered the fast-growing market for pre-form PET bottle molding systems.



Laser annealing system

For the laser systems division, demand for auto parts laser welding systems remained robust in 1997 and SHI is now able to supply YAG lasers as standalone units or integrated in production systems. The Company recently introduced a new top-of-the-line YAG laser system, the MW4000 (MW-AUTO®), which boasts output



Direct clamp hydraulic injection molding machine "SH160C"



Ultra-precise high cycle injection molding machine for optical discs "SD30"



YAG laser system "MW4000"

energy of 4.5 kW, the world's highest.

The IMPACT series has also been expanded with the addition of the new LAVIA 600TW. With a drilling capacity four times faster than any existing laser systems, the LAVIA 600TW is expected to capture a large share of the market for fine viahole drilling of high-density multilayer printed circuit boards.

In the excimer laser-related field, we have developed a new processing system for surface modification called the Four Energy Share Optical System. Sales of laser annealing systems using high power excimer lasers have also begun. Aimed at the low-

temperature polysilicon TFT LCD manufacturing market, sales of these systems are expected to grow rapidly in the future as the LCD market expands.

Sumitomo (SHI) Construction Machinery Co., Ltd. was severely impacted by the changing structure of demands and keen price competition. To enable the company to survive into the 21st century, it is now being restructured with a complete overhaul of the management system designed to improve performance and boost the bottom line.

One typical example of the restructuring is the elimination of the separation between domestic and overseas organizations and a

greater commitment to implementing our global strategy. Highlights include the negotiation of a new business cooperation agreement with Case Corporation/USA in the field of hydraulic excavators and a closer relationship with our affiliate, Link-Belt Construction Equipment Company (LBCE)/USA in the field of truck cranes.

Measures are also in place to increase the efficiency and effectiveness of the sales force and to improve control procedures and management organization. The domestic manufacturing system is now under review, enabling us to get a head start on rejuvenating the construction machinery business.

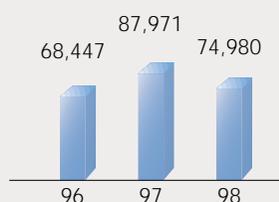


Large-size crawler crane "CT15000"

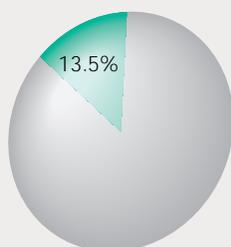
# Environmental Systems, Plants & Others

## Net Sales

(¥ Million)



## Share of Total Sales



## Main Products

- Chemical Process Equipment & Plants
- Pulp & Paper Manufacturing Machinery
- Power Generation System
- Air Pollution Control Equipment
- Municipal Water Treatment Plants
- Waste Treatment Plants
- Wastewater Treatment Plants
- Production High Separation Facilities
- Urban & Resort Development
- Marine & Leisure Equipment
- Import & Automobile Sales
- Software

This sector consists of the Engineering & Environment Group and the New Business Development Department. The Engineering & Environment Group contributes to environmental protection and energy conservation through the construction of waste incineration plants, boilers, wastewater treatment plants, night soil treatment plants, dust collectors, industrial wastewater facilities, and pulp & paper and chemical plants. The New Business Development Department handles a diverse range of businesses which do not fall within SHI's traditional core businesses, such as real estate sales and marketing, and sales and service of pleasure boats, automobiles, and other products.

Major subsidiaries and affiliates include Sumiju Environmental Engineering, Inc. which carries out maintenance and control services for environmental facilities, Lightwell Co., Ltd. which develops and markets software, and Ahlstom Sumiju K.K. which designs and sells pulp manufacturing equipment.

Far from being a drag on business and economic activity,

new international concern for protecting the environment and developing more ecologically sound products is making "green" technology one of today's hottest growth areas. In FY1997, this sector once again surpassed previous results with order bookings totaling ¥104,601 million, an increase of 13% over the previous year. Much of this increase was due to major contracts for large-scale environmental systems and plants, such as a municipal waste incineration plant, a private power generation plant for a cement company, and an ash handling system for an electric power company. Despite the increase in orders, however, sales were down since no major projects (like the municipal waste treatment plant) were completed in FY1997. Total sales for this sector were ¥74,980 million, down 14.8% from the previous year.

With the focus of environmental technology now on "zero emissions", we concentrated on the development of technology to remove hard-to-detect trace amounts of harmful substances and render them harmless.

FY1997 saw the completion of Japan's largest industrial waste treatment facility. Built for Dowa Mining Co., Ltd., this plant features a slagging rotary kiln which incinerates and melts industrial waste, reducing the volume and converting it into harmless slag. The system also features heat recovery and air pollution control, making this facility one of the most advanced

of its kind, easily meeting Japan's tough new standards for dioxin emission, as well as European flue gas regulations.

Also introduced this year was TOX-FREE, a system which removes dioxin from exhaust gas generated during waste incineration by absorbing it with activated char. Since the activated char can be reused, running costs for this system are only one fifth as



\*TOX-FREE\*, a system which removes dioxin from exhaust gas



Industrial waste treatment facility



Ash Handling System



RDF (Refuse Derived Fuel)  
boiler flue gas treatment system



Trichloroethylene removal system

much as with conventional dioxin removal systems.

Another exciting new product delivered this year was a pulse energized electrostatic precipitator. This extremely efficient dust collection system features an energy-saving design and control functions to keep the specified dust concentration at the outlet of the electrostatic precipitator. It is ideal for removing high concentrations of airborne ash at coal-burning power plants.

New water treatment systems delivered in FY1997 included a nitrogen removal system to purify public water systems

contaminated by domestic drainage systems and a wastewater treatment plant. The nitrogen removal system is part of a seepage water high-level processing plant we added to the Soga wastewater treatment plant in Chiba Prefecture. Using our original activated sludge process for denitrification, it is able to efficiently remove high levels of nitrogen components and is expected to play a major role in preserving the water quality of Tokyo Bay.

In the area of power generation systems, SHI received an order from Sumitomo Osaka Cement

Co., Ltd. for a private power generation system using a Foster Wheeler circulating fluidized bed boiler. The largest in the Japanese cement industry, this boiler makes it possible to use inexpensive, low-quality RDF (Refuse Derived Fuel) or TDF (Tire Derived Fuel) for mixed fuel burning.

In the chemical field, SHI received an order from Dainippon Ink and Chemicals, Inc. for a polystyrene plant. When completed, it will be Japan's largest and most advanced plant for the production of general-purpose grade polystyrene.



Wastewater treatment plant

# Research & Development

R&D is one of the most crucial components of SHI's success, helping to enhance the competitiveness of our products and expand our market. SHI R&D focuses not only on new product development and development of advanced technology, but also on basic technologies and the improvement of existing products and technologies.

Over the past year, SHI has continued to push forward with research in cutting-edge technology such as "Aurora® 2", ITO and superconductivity. We have also expanded our efforts in the environmental field, paying

particular attention to zero emission technology where we have achieved some very exciting results.

## **New "Aurora® 2" underway**

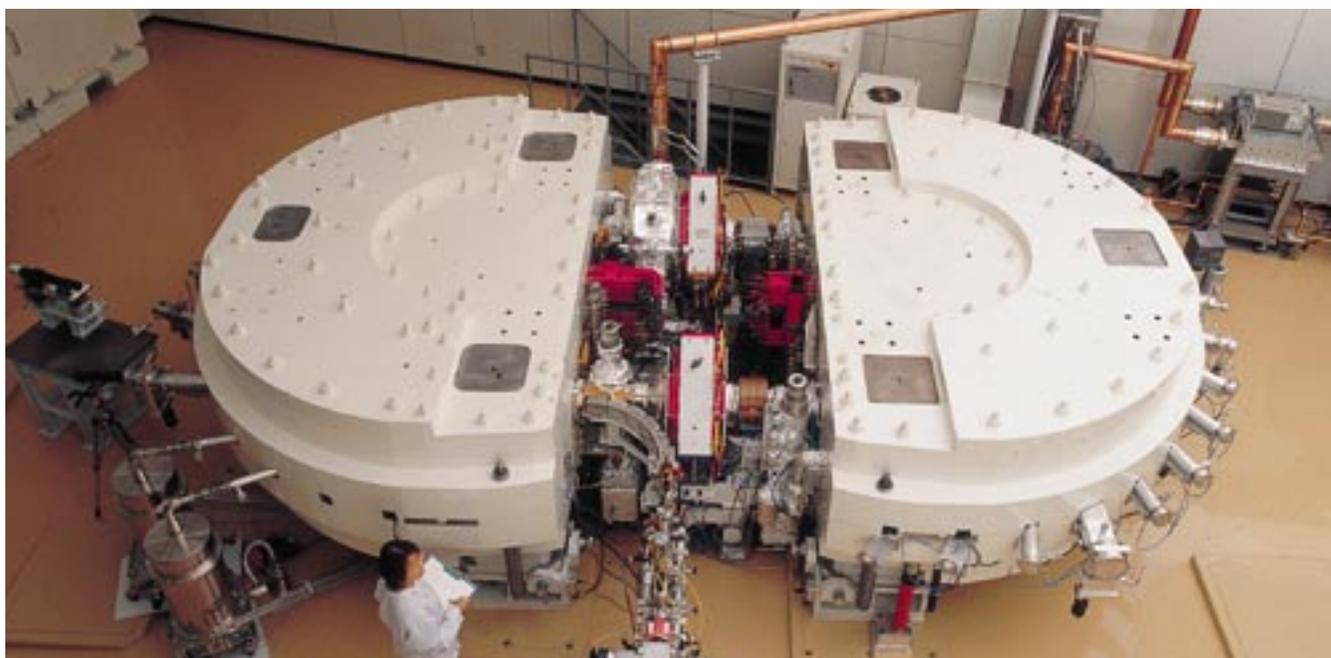
SHI continued to refine its advanced "Aurora® 2" ultra-compact Synchrotron Radiation system (SR ring) and a new version known as "Aurora® 2S" is now under development. Semiconductor industries are especially interested in this version of the popular SR ring since it is being optimized for X-ray lithography, making it an excellent candidate for advanced

micro-machining of ULSI chips with more than 1 GB of DRAM.

Performance tests of another type of SR ring — the "Aurora® 2D" — were also carried out. While maintaining the compact design of the standard "Aurora® 2" rings, the "Aurora® 2D" is able to



Compact "Aurora® 2D" with superconducting wiggler



Super-compact SR ring "Aurora® 2S"

accommodate a variety of insertion devices (IDs), making it an appropriate tool for scientific research. In our tests, we inserted a superconducting (SC) wiggler and were able to successfully inject, accelerate, and store electron beams, establishing for the first time that even compact SR rings can support SC IDs. An "Aurora® 2D" system called HiSOR which uses two undulators (rather than an SC wiggler) is now in service at Hiroshima University's Synchrotron Radiation Center.



Liquid helium-free superconducting magnet

### **Development of liquid helium-free superconducting magnet for neutron scattering experiments**

In cooperation with the Japan Atomic Energy Research Institute (JAERI), SHI developed the world's first cryocooler-cooled 10 T superconducting magnet for use in neutron scattering experiments. Consisting of an Nb<sub>3</sub>Sn coil, an NbTi coil and Bi-based superconducting bulk current leads, with 4 K Gifford-McMahon cryocoolers and a cryostat, this magnet continuously generates a magnetic field of 10 T in a 50 mm vertical room temperature bore without using liquid helium. A horizontal gap of 20 mm allows penetration of the neutron beam. Expected to contribute significantly to the advancement of JAERI research, this new superconducting magnet weighs 280 kg, and has a height of 760 mm and an outer diameter of 600 mm.

### **New ITO Ion Plating System Debuts — Cu Ion Plating System Developed**

This year, our new ITO ion plating system made its debut in a pilot manufacturing program. Based on



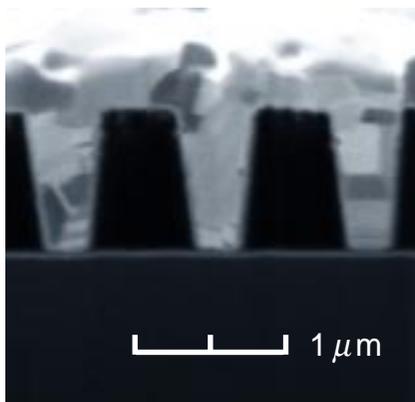
ITO ion plating system

exclusive plasma technology developed by SHI, this system is ideal for the production of Flat Panel Displays as it offers performance far superior to that of conventional sputtering equipment. Features of the ion plating system include:

- High throughput due to high deposition rate
- Good film quality, i.e. low resistivity
- Cost efficient use of source material

We are also now at work developing an advanced copper ion plating system for application in ULSI manufacturing. With the wiring pitches of ULSI chips becoming higher, the fill characteristics of grooves and contact holes are making thin-film deposition more difficult. Copper is considered a promising wiring

material for the next generation of ULSI chips since it features lower electrical resistivity and higher electro-migration resistance than aluminum alloys. Some of the major characteristics of the copper ion plating system include:



SEM image of Cu filling displayed on a PC

- High-speed film deposition
- Good filling capability for holes with high aspect ratios
- Deposition at low substrate temperatures
- Coverage of large area substrates (300 mm Si wafers)
- Low-cost source material

URT ion plating is a powerful technique for thin-film deposition and has proven promising in the application of a variety of materials. The copper ion plating system, in particular, has the potential to enable single-step deposition of copper interconnects in ULSI manufacturing.

## Development of New Thermal Treatment Technology for Municipal Solid Waste

Roughly seventy-five percent of the nearly 50 million tons of municipal solid waste (MSW) generated annually in Japan is incinerated, while the rest is dumped directly into landfills. However, a recent amendment to the Air Pollution Prevention Act requires reductions of toxic emissions from furnaces and/or incinerators — for instance, dioxin levels in gas from MSW incinerators are limited to 0.1 ngTEQ/m<sup>3</sup>. At the same time, in an effort to further conserve landfill space and to protect soil and groundwater quality, residual ash produced by MSW incinerators is supposed to be converted to insoluble slag for use as Refuse Derived Material.



Slagging rotary kiln which incinerates and melts industrial waste



Gasification reactor designed by Krupp Uhde GmbH

These new regulations have spurred intense interest in SHI's new MSW thermal treatment technology which converts residue to molten slag using waste-generated fuel gas. By effectively harnessing the potential energy of MSW, this would allow more productive use of waste while simultaneously keeping dioxin emissions at levels below those specified by the new regulations.

SHI is actively working to meet these new demands and signed an agreement with Germany's Krupp Uhde GmbH to jointly develop gasification technology which would be combined with the ash melting technology which SHI developed based on ABB Enertech's (Switzerland) Hazardous Waste Incineration Technology.

## CONTENTS

Consolidated Balance Sheets.....	24
Consolidated Statements of Income.....	26
Consolidated Statements of Stockholders' Equity.....	27
Consolidated Statements of Cash Flows.....	28
Notes to Consolidated Financial Statements.....	29

# FINANCIAL STATEMENTS

## Consolidated Balance Sheets

March 31, 1998 and 1997

### ASSETS

	Millions of yen		Thousands of U.S. dollars (Note 1)
	1998	1997	1998
<b>Current assets:</b>			
Cash and time deposits .....	¥ 35,403	¥ 41,018	\$ 268,205
Marketable securities (Notes 3 and 10).....	39,396	44,666	298,455
Trade receivables:			
Notes receivable (Note 3).....	119,117	128,007	902,401
Accounts receivable .....	146,000	152,254	1,106,061
Allowance for doubtful accounts .....	(2,405)	(2,377)	(18,220)
Inventories (Note 2).....	200,256	164,382	1,517,091
Prepaid expenses and other current assets.....	28,792	31,950	218,121
Total current assets .....	566,559	559,900	4,292,114
<b>Property, plant and equipment (Note 3):</b>			
Land.....	27,115	25,476	205,417
Buildings and yards .....	124,527	121,177	943,386
Machinery and equipment .....	173,869	168,367	1,317,189
Construction in progress.....	2,802	3,952	21,228
	328,313	318,972	2,487,220
Less accumulated depreciation .....	199,556	190,576	1,511,788
	128,757	128,396	975,432
<b>Investments, long-term loans and other assets:</b>			
Unconsolidated subsidiaries and affiliated companies (Note 10).....	25,379	19,963	192,265
Other long-term loans receivable and investments.....	7,573	10,270	57,371
Other assets .....	18,945	18,205	143,523
Allowance for doubtful accounts .....	(2,447)	(1,611)	(18,538)
	49,450	46,827	374,621
<b>Foreign currency translation adjustment .....</b>	<b>3,251</b>	<b>4,968</b>	<b>24,629</b>
	<b>¥ 748,017</b>	<b>¥ 740,091</b>	<b>\$ 5,666,796</b>

## LIABILITIES AND STOCKHOLDERS' EQUITY

	Millions of yen		Thousands of U.S. dollars (Note 1)
	1998	1997	1998
<b>Current liabilities:</b>			
Bank loans (Note 3).....	¥ 147,357	¥ 149,977	\$ 1,116,341
Long-term debt due within one year (Note 3).....	54,666	51,694	414,136
Commercial paper.....	20,000	20,000	151,515
Trade payables:			
Notes payable.....	63,115	59,484	478,144
Accounts payable.....	81,808	81,952	619,758
Advance payments received on contracts.....	95,325	89,325	722,159
Accrued expenses and other current liabilities.....	52,632	53,648	398,727
Total current liabilities.....	514,903	506,080	3,900,780
<b>Long-term debt due after one year (Note 3).....</b>	<b>143,900</b>	<b>142,223</b>	<b>1,090,152</b>
<b>Employees' severance and retirement benefits (Note 4).....</b>	<b>3,172</b>	<b>2,918</b>	<b>24,030</b>
<b>Other long-term liabilities.....</b>	<b>1,347</b>	<b>989</b>	<b>10,205</b>
<b>Minority interests.....</b>	<b>5,786</b>	<b>11,758</b>	<b>43,833</b>
<b>Contingent liabilities (Note 7)</b>			
<b>Stockholders' equity (Note 6):</b>			
Common stock, par value ¥50 per share:			
Authorized — 1,200,000 thousand shares			
Issued — 588,697 thousand shares.....	30,872	30,872	233,879
Capital surplus.....	26,752	26,752	202,667
Legal reserve.....	5,931	5,751	44,932
Retained earnings.....	15,355	12,749	116,325
	78,910	76,124	597,803
Less treasury stock at cost, 2,726 shares (2,774 shares in 1997).....	1	1	7
Total stockholders' equity.....	78,909	76,123	597,796
	¥ 748,017	¥ 740,091	\$ 5,666,796

See accompanying notes.

# FINANCIAL STATEMENTS

## Consolidated Statements of Income

Years ended March 31, 1998 and 1997

	Millions of yen		Thousands of U.S. dollars (Note 1)
	1998	1997	1998
<b>Net sales (Note 8)</b> .....	<b>¥ 556,786</b>	¥ 606,537	<b>\$ 4,218,076</b>
<b>Costs and expenses (Note 8):</b>			
Cost of sales .....	<b>460,254</b>	505,636	<b>3,486,773</b>
Selling, general and administrative expenses.....	<b>75,729</b>	78,367	<b>573,705</b>
	<b>535,983</b>	584,003	<b>4,060,478</b>
<b>Operating income (Note 8)</b> .....	<b>20,803</b>	22,534	<b>157,598</b>
<b>Other income (expense):</b>			
Interest and dividend income .....	<b>2,470</b>	3,765	<b>18,712</b>
Interest expense.....	<b>(8,455)</b>	(10,255)	<b>(64,053)</b>
Loss on devaluation of securities.....	<b>(4,123)</b>	(1,910)	<b>(31,235)</b>
Gain on sale of securities – net.....	<b>3,215</b>	329	<b>24,356</b>
Gain on sale of property, plant and equipment – net .....	<b>415</b>	34	<b>3,144</b>
Foreign currency exchange gain (loss).....	<b>540</b>	(430)	<b>4,091</b>
Other – net .....	<b>(2,070)</b>	(126)	<b>(15,681)</b>
	<b>(8,008)</b>	(8,593)	<b>(60,666)</b>
<b>Income before income taxes</b> .....	<b>12,795</b>	13,941	<b>96,932</b>
<b>Income taxes (Note 5)</b> .....	<b>9,666</b>	8,063	<b>73,227</b>
	<b>3,129</b>	5,878	<b>23,705</b>
<b>Minority interests in net income of consolidated subsidiaries</b> .....	<b>(97)</b>	(766)	<b>(735)</b>
<b>Amortization of difference between costs and net assets acquired</b> .....	<b>(14)</b>	(21)	<b>(106)</b>
<b>Equity in earnings of affiliated companies</b> .....	<b>1,595</b>	832	<b>12,083</b>
<b>Net income</b> .....	<b>¥ 4,613</b>	¥ 5,923	<b>\$ 34,947</b>

	Yen		U.S. dollars (Note 1)
	1998	1997	1998
<b>Amounts per share of common stock:</b>			
Net income.....	<b>¥ 7.83</b>	¥ 10.06	<b>\$ 0.06</b>
Diluted net income.....	<b>7.65</b>	Not diluted	<b>0.06</b>
Cash dividends applicable to the year.....	<b>3.00</b>	3.00	<b>0.02</b>

See accompanying notes.

# Consolidated Statements of Stockholders' Equity

Years ended March 31, 1998 and 1997

	Number of shares of common stock (thousand)	Millions of yen			
		Common stock	Capital surplus	Legal reserve	Retained earnings
<b>Balance at March 31, 1996</b> .....	588,697	¥ 30,872	¥ 26,752	¥ 5,751	¥ 7,649
Decrease in retained earnings due to change in consolidated subsidiaries .....	—	—	—	—	(806)
Net income .....	—	—	—	—	5,923
Bonuses to directors and statutory auditors.....	—	—	—	—	(17)
<b>Balance at March 31, 1997</b> .....	588,697	30,872	26,752	5,751	12,749
Decrease in retained earnings due to change in consolidated subsidiaries and companies accounted for by the equity method .....	—	—	—	—	(12)
Net income .....	—	—	—	—	4,613
Cash dividends paid (¥3 per share).....	—	—	—	—	(1,766)
Bonuses to directors and statutory auditors.....	—	—	—	—	(49)
Transfer to legal reserve.....	—	—	—	180	(180)
<b>Balance at March 31, 1998</b> .....	<b>588,697</b>	<b>¥ 30,872</b>	<b>¥ 26,752</b>	<b>¥ 5,931</b>	<b>¥ 15,355</b>

	Thousands of U.S. dollars (Note 1)			
	Common stock	Capital surplus	Legal reserve	Retained earnings
<b>Balance at March 31, 1996</b> .....	\$ 233,879	\$ 202,667	\$ 43,568	\$ 57,947
Decrease in retained earnings due to change in consolidated subsidiaries.....	—	—	—	(6,106)
Net income .....	—	—	—	44,871
Bonuses to directors and statutory auditors.....	—	—	—	(129)
<b>Balance at March 31, 1997</b> .....	233,879	202,667	43,568	96,583
Decrease in retained earnings due to change in consolidated subsidiaries and companies accounted for by the equity method .....	—	—	—	(91)
Net income .....	—	—	—	34,947
Cash dividends paid (¥3 per share).....	—	—	—	(13,379)
Bonuses to directors and statutory auditors.....	—	—	—	(371)
Transfer to legal reserve.....	—	—	1,364	(1,364)
<b>Balance at March 31, 1998</b> .....	<b>\$ 233,879</b>	<b>\$ 202,667</b>	<b>\$ 44,932</b>	<b>\$ 116,325</b>

See accompanying notes.

# FINANCIAL STATEMENTS

## Consolidated Statements of Cash Flows

Years ended March 31, 1998 and 1997

	Millions of yen		Thousands of U.S. dollars (Note 1)
	1998	1997	1998
<b>Cash flows from operating activities:</b>			
Net income .....	¥ 4,613	¥ 5,923	\$ 34,947
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation .....	15,767	15,272	119,447
Provision for employees' severance and retirement benefits .....	254	350	1,924
Equity in earnings of unconsolidated subsidiaries and affiliated companies .....	(1,595)	(832)	(12,083)
Decrease (increase) in minority interests .....	(5,972)	1,369	(45,242)
Bonuses to directors and statutory auditors .....	(49)	(17)	(371)
Changes in operating assets and liabilities:			
Decrease (increase) in notes and accounts receivable .....	15,144	(29,346)	114,727
Increase (decrease) in inventories .....	(35,874)	9,319	(271,773)
Increase in notes accounts payable .....	3,493	7,644	26,462
Decrease (increase) in other current assets .....	3,158	(18,015)	23,924
Increase in other current liabilities .....	4,984	26,367	37,758
Other – net .....	(3,407)	(5,531)	(25,810)
Net cash provided by operating activities .....	516	12,503	3,910
<b>Cash flows from investing activities:</b>			
Payments for purchases of property, plants and equipment .....	(15,966)	(19,654)	(120,955)
Proceeds from sale of property, plants and equipment .....	3,464	3,768	26,243
Payments for investment securities .....	(593)	(2,710)	(4,492)
Proceeds from sale of investment securities .....	3,279	1,549	24,841
Decrease in marketable securities .....	5,270	2,033	39,924
Increase (decrease) in long-term loans receivable and investments .....	348	(240)	2,636
Net cash used in investing activities .....	(4,198)	(15,254)	(31,803)
<b>Cash flows from financing activities:</b>			
Increase in long-term debt .....	56,935	40,293	431,326
Decrease in long-term debt .....	(54,482)	(35,691)	(412,742)
Decrease in bank loans .....	(2,620)	(6,141)	(19,849)
Cash dividends paid .....	(1,766)	—	(13,379)
Net cash used in financing activities .....	(1,933)	(1,539)	(14,644)
Net decrease in cash and time deposits .....	(5,615)	(4,290)	(42,537)
<b>Cash and time deposits at beginning of year .....</b>	<b>41,018</b>	<b>45,308</b>	<b>310,742</b>
<b>Cash and time deposits at end of year .....</b>	<b>¥ 35,403</b>	<b>¥ 41,018</b>	<b>\$ 268,205</b>
<b>Supplemental disclosures of cash flow information:</b>			
Cash paid during the year for:			
Interest .....	¥ 8,315	¥ 10,841	\$ 62,992
Income taxes .....	8,256	5,819	62,545

# Notes to Consolidated Financial Statements

March 31, 1998 and 1997

## 1. Significant accounting policies

### Basis of consolidated financial statements

The Company, a Japanese corporation, maintains its records and prepares its financial statements in Japanese yen in accordance with accounting principles generally accepted in Japan. The accompanying consolidated financial statements are based on the financial statements that are prepared for Japanese domestic purposes, in accordance with the provisions of the Securities and Exchange Law of Japan, and filed with the Minister of Finance of Japan.

In preparing the accompanying financial statements, certain modifications, including presentation of the statements of stockholders' equity and cash flows, have been made to facilitate understanding by readers outside Japan.

The financial statements are stated in Japanese yen. The translation of the Japanese yen amount into U.S. dollars is included solely for the convenience of readers using the prevailing exchange rate at March 31, 1998, which was ¥132 to U.S.\$1. The convenience translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be converted into U.S. dollars at this or any other rate of exchange.

### Principles of consolidation

The consolidated financial statements include the accounts of the Company and its significant subsidiaries (the "Companies"). All significant intercompany transactions and accounts have been eliminated.

Investments in 20% — 50% owned significant affiliated companies are accounted for by the equity method.

The difference between costs and net assets acquired in subsidiaries and affiliated companies, consolidated or accounted for by the equity method, are deferred and amortized over 5 years so long as the amounts are significant. In case of amounts being insignificant, such amounts are charged or credited to income as incurred.

### Marketable securities

Marketable equity securities are carried principally at the lower of moving average cost or market. Other marketable securities are carried principally at cost based on the moving average method.

### Inventories

Work in process is stated principally at cost based on specific cost basis. Finished products, semi-finished products, raw materials and supplies are stated principally at cost based on average method.

### Property, plant and equipment

Property, plant and equipment are stated at cost. Depreciation is determined by the declining balance method at rates based on estimated useful lives of respective assets.

### Allowance for doubtful accounts

The Company and domestic consolidated subsidiaries provide for doubtful accounts principally at an estimated amount of probable bad debt plus the maximum amount permitted to be charged to income under Japanese tax regulations. Foreign consolidated subsidiaries provide for doubtful accounts at an estimated amount of probable bad debt.

### Employees' severance and retirement benefits

The Company has a non-contributory funded pension plan covering all employees. In general, the plan provides for pension payments for a period of 15 years to employees leaving the Company after 20 or more years of service.

Under certain conditions, participants may elect to receive the current value of their vested benefits in a lump-sum distribution. If employees with one or more years, but less than 20 years, of service leave the Company, they receive a lump-sum distribution.

Employees of certain domestic and overseas consolidated subsidiaries are covered primarily by funded pension plans. Employees of other domestic consolidated subsidiaries are covered primarily by unfunded retirement benefit plans.

### Foreign currency translation

Cash and current receivables and payables denominated in foreign currencies are translated at the exchange rate prevailing on balance sheet date. Other assets and liabilities denominated in foreign currencies are translated at the historical exchange rate.

Long-term debt with long-term forward exchange contracts is translated at the contracted forward rate. Unrealized exchange gains on forward exchange contracts are deferred and amortized over the periods of contracts.

Financial statements of overseas subsidiaries and affiliated companies are translated into Japanese yen at the exchange rate prevailing on balance sheet date for all items except that intercompany transactions and balances are translated at the historical exchange rate. Translation differences resulting from translation of the financial statements of consolidated subsidiaries are deferred in the balance sheet and those of the companies accounted for by the equity method are included in retained earnings.

### Sales

Sales are recognized on a delivery basis.

### Selling, general and administrative expenses

The Company allocates a certain portion of selling, general and administrative expenses (expenses other than those relating to management control division which are corporate wide expenses) to work in process.

### Research and development

Research and development expenses are charged to income when incurred.

### Income taxes

Income taxes are provided in amounts currently payable based on taxable income for each period. Deferred income taxes pertaining to temporary differences between financial and tax reporting purposes are not recognized except for overseas subsidiaries.

### Bond issuance expense

Bond issuance expense is charged to income in the year incurred.

### Amounts per share

The computation of net income per share of common stock is based on the weighted average number of shares of common stock outstanding during each fiscal year.

The diluted net income per share is calculated assuming the conversion of all dilutive convertible bonds at the time of their issuance.

Cash dividends applicable to the year represent the actual amount declared as applicable to the respective years.

# FINANCIAL STATEMENTS

## 2. Inventories

Inventories at March 31, 1998 and 1997 were as follows:

	Millions of yen		Thousands of U.S. dollars
	1998	1997	1998
Finished products and semi-finished products .....	¥ 48,045	¥ 47,266	\$ 363,977
Work in process .....	142,395	106,276	1,078,750
Raw materials and supplies .....	9,816	10,840	74,364
	<b>¥ 200,256</b>	<b>¥ 164,382</b>	<b>\$ 1,517,091</b>

## 3. Bank loans, commercial paper and long-term debt

Bank loans at March 31, 1998 and 1997 consisted of short-term notes, bearing interest principally at 1.2% and 1.1% per annum, respectively. The Company has entered into a yen domestic commercial paper program with a current maximum facility amount of ¥30,000 million (\$227,273 thousand). The amount outstanding under this program is subject to variation from time to time. At March 31, 1998 and 1997, commercial paper bore an average annual interest rate of 1.03% and 0.55%, respectively.

Long-term debt at March 31, 1998 and 1997 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	1998	1997	1998
3.5% domestic mortgage bonds due in March 1998 .....	¥ —	¥ 500	\$ —
Euro-yen floating rate notes due in March 1998 .....	—	6,000	—
Euro-yen 3.4% notes due in June 1998 .....	6,000	6,000	45,454
3.9% domestic bonds due in February 2004 .....	8,000	8,000	60,606
3.0% domestic bonds due in January 2005 .....	3,000	—	22,727
U.S. dollar variable rate demand industrial development revenue bonds due in January 2008 .....	991	931	7,507
U.S. dollar variable rate demand industrial development revenue bonds due in January 2009 .....	792	745	6,000
U.S. dollar variable rate demand industrial development revenue bonds due in September 2010 .....	264	248	2,000
1.8% domestic mortgage bonds due in January 2000 .....	1,000	1,000	7,576
1.9% domestic mortgage bonds due in February 2000 .....	500	500	3,788
Euro-yen floating rate notes due in September 2000 .....	7,500	7,500	56,818
Euro-yen floating rate notes due in September 2001 .....	7,500	7,500	56,818
Euro-yen convertible bonds due in July 2001 .....	10,000	—	75,758
2.8% domestic bonds due in August 2001 .....	2,000	2,000	15,152
U.S. dollar loans from banks due serially through July 1999 with interest ranging from 6.1% to 13.5% in 1998 and 5.8% to 6.4% in 1997 .....	5,623	7,602	42,599
Loans principally from banks and insurance companies due serially through September 2014 with interest ranging from 1.2% to 7.0% in 1998 and 1.0% to 7.0% in 1997:			
Secured .....	8,928	8,057	67,636
Unsecured .....	136,468	137,334	1,033,849
	<b>198,566</b>	<b>193,917</b>	<b>1,504,288</b>
Less amount due within one year .....	54,666	51,694	414,136
	<b>¥ 143,900</b>	<b>¥ 142,223</b>	<b>\$ 1,090,152</b>

The annual maturities of long-term debt at March 31, 1998 were as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
1999.....	¥54,666	\$ 414,136
2000.....	29,203	221,235
2001.....	42,679	323,326
2002.....	32,781	248,341
2003.....	20,122	152,439
Thereafter .....	19,116	144,818

At March 31, 1998, assets pledged as collateral for bank loans, secured long-term loans from banks and insurance companies and domestic mortgage bonds were as follows:

	Millions of yen	Thousands of U.S. dollars
Notes receivable .....	¥ 4,070	\$ 30,833
Marketable equity securities, at carrying value.....	7,577	57,401
Property, plant and equipment, at cost less accumulated depreciation .....	<u>6,542</u>	<u>49,561</u>
	<u>¥18,189</u>	<u>\$137,795</u>

#### 4. Employees' severance and retirement benefits

Unamortized prior service costs under the non-contributory funded pension plan, less related balance sheet accruals, amounted to ¥46,748 million (\$354,152 thousand) at September 30, 1997, the most recent valuation date.

Total charges with respect to employees' severance and retirement benefits were ¥6,056 million (\$45,879 thousand) in 1998 and ¥5,727 million (\$43,386 thousand) in 1997.

#### 5. Income taxes

Income taxes are composed of corporation tax, inhabitants taxes and enterprise tax, which normally would result in a standard effective tax rate of approximately 52% in 1998 and 1997.

Differences between standard effective tax rate and actual effective tax rates are attributable primarily to temporary differences in recognizing revenues and expenses for financial statements and tax return purposes.

#### 6. Stockholders' equity

Under the Commercial Code of Japan, amounts equal to at least 10% of cash dividends and bonuses to directors and statutory auditors must be set up as a legal reserve until the reserve equals 25% of common stock. This reserve is not available for dividends but may be used to reduce a deficit by resolution of the stockholders or may be capitalized by resolution of the Board of Directors.

#### 7. Contingent liabilities

The Companies were contingently liable as endorsers of trade notes receivable discounted with banks in the amount of ¥1,595 million (\$12,083 thousand) at March 31, 1998. In addition, at the same date the Companies were contingently liable as guarantors of bank loans to unconsolidated subsidiaries and affiliated companies in the amount of ¥5,171 million (\$39,174 thousand) (net of guarantees by co-guarantors) and to others in the amount of ¥11,892 million (\$90,091 thousand).

# FINANCIAL STATEMENTS

## 8. Segment information

(A) The Companies' primary business activities include (1) industrial machinery, (2) ship, steel structure & other specialized equipment, (3) mass-produced machinery and (4) environmental protection facilities, plants & others.

A summary of net sales, costs and expenses, and operating income by segment of business activities for the years ended March 31, 1998 and 1997, and a summary of identifiable assets, depreciation expense and capital expenditures by segment of business activities for the years ended March 31, 1998 and 1997 is as follows:

	Millions of yen					
	Industrial machinery	Ship, steel structure & other specialized equipment	Mass-produced machinery	Environmental protection facilities, plants & others	Elimination and/or corporate	Consolidated
<b>1998</b>						
<b>I Sales and operating income</b>						
Sales:						
Unaffiliated customers	¥ 95,055	¥ 101,857	¥ 284,894	¥ 74,980	¥ —	¥ 556,786
Intersegment	210	791	251	2,706	(3,958)	—
Total	95,265	102,648	285,145	77,686	(3,958)	556,786
Costs and expenses	95,082	99,670	268,867	76,322	(3,958)	535,983
Operating income	¥ 183	¥ 2,978	¥ 16,278	¥ 1,364	¥ —	¥ 20,803
<b>II Identifiable assets</b>						
Depreciation expense	¥ 1,694	¥ 3,007	¥ 9,530	¥ 1,575	—	¥ 15,806
Capital expenditures	1,247	2,597	10,009	2,356	—	16,209
<b>1997</b>						
<b>I Sales and operating income</b>						
Sales:						
Unaffiliated customers	¥ 98,172	¥ 110,583	¥ 309,811	¥ 87,971	¥ —	¥ 606,537
Intersegment	988	131	116	1,503	(2,738)	—
Total	99,160	110,714	309,927	89,474	(2,738)	606,537
Costs and expenses	100,145	107,501	293,605	85,490	(2,738)	584,003
Operating income	¥ (985)	¥ 3,213	¥ 16,322	¥ 3,984	¥ —	¥ 22,534
<b>II Identifiable assets</b>						
Depreciation expense	¥ 2,040	¥ 3,316	¥ 9,160	¥ 863	—	¥ 15,379
Capital expenditures	1,632	2,812	14,754	1,535	—	20,733
	Thousands of U.S. dollars					
	Industrial machinery	Ship, steel structure & other specialized equipment	Mass-produced machinery	Environmental protection facilities, plants & others	Elimination and/or corporate	Consolidated
<b>1998</b>						
<b>I Sales and operating income</b>						
Sales:						
Unaffiliated customers	\$ 720,114	\$ 771,644	\$ 2,158,288	\$ 568,030	\$ —	\$ 4,218,076
Intersegment	1,591	5,993	1,901	20,500	(29,985)	—
Total	721,705	777,637	2,160,189	588,530	(29,985)	4,218,076
Costs and expenses	720,319	755,076	2,036,871	578,197	(29,985)	4,060,478
Operating income	\$ 1,386	\$ 22,561	\$ 123,318	\$ 10,333	\$ —	\$ 157,598
<b>II Identifiable assets</b>						
Depreciation expense	\$ 12,833	\$ 22,780	\$ 72,197	\$ 11,932	—	\$ 119,742
Capital expenditures	9,447	19,674	75,826	17,849	—	122,796

Identifiable assets under the elimination or corporate column primarily consist of cash and time deposits and marketable securities.

(B) Information by geographic area for the year ended March 31, 1998 and 1997 is as follows:

Millions of yen					
1998	Japan	North America	Other areas	Elimination and / or corporate	Consolidated
<b>I Sales and operating income</b>					
Sales:					
Unaffiliated customers	¥ 482,641	¥ 65,253	¥ 8,892	¥ —	¥ 556,786
Intersegment	28,239	714	1,173	(30,126)	—
Total	510,880	65,967	10,065	(30,126)	556,786
Costs and expenses	494,963	61,026	10,120	(30,126)	535,983
Operating income	¥ 15,917	¥ 4,941	(55)	¥ —	¥ 20,803
<b>II Identifiable assets</b>	¥ 641,273	¥ 56,177	11,391	¥ 39,176	¥ 748,017

Millions of yen					
1997	Japan	Overseas		Elimination and / or corporate	Consolidated
<b>I Sales and operating income</b>					
Sales:					
Unaffiliated customers	¥ 530,217	¥ 76,320		¥ —	¥ 606,537
Intersegment	18,800	3,704		(22,504)	—
Total	549,017	80,024		(22,504)	606,537
Costs and expenses	531,081	75,426		(22,504)	584,003
Operating income	¥ 17,936	¥ 4,598		¥ —	¥ 22,534
<b>II Identifiable assets</b>	¥ 606,682	¥ 69,198		¥ 64,211	¥ 740,091

Thousands of U.S. dollars					
1998	Japan	North America	Other areas	Elimination and / or corporate	Consolidated
<b>I Sales and operating income</b>					
Sales:					
Unaffiliated customers	\$ 3,656,371	\$ 494,341	\$ 67,364	\$ —	\$ 4,218,076
Intersegment	213,932	5,409	8,886	(228,227)	—
Total	3,870,303	499,750	76,250	(228,227)	4,218,076
Costs and expenses	3,749,720	462,318	76,667	(228,227)	4,060,478
Operating income	\$ 120,583	\$ 37,432	\$ (417)	\$ —	\$ 157,598
<b>II Identifiable assets</b>	\$ 4,858,129	\$ 425,583	\$ 86,296	\$ 296,788	\$ 5,666,796

Identifiable assets under the elimination or corporate column primarily consisted of cash and time deposits and marketable securities. Other areas include the United Kingdom, Germany and Singapore.

(C) Overseas sales of the Companies for the years ended March 31, 1998 and 1997

Millions of yen					
1998	To North America	To Asia	To other areas	Total	
Overseas Sales	¥ 77,896	¥ 56,540	¥ 25,156	¥ 159,592	
	14.0 (%)	10.2 (%)	4.5 (%)	28.7 (%)	
Thousands of U.S. dollars					
Overseas Sales	\$ 590,121	\$ 428,333	\$ 190,576	\$ 1,209,030	

Other areas include the United Kingdom and Germany.

Overseas sales of the Companies for the year ended March 31, 1997 was ¥178,778 million (\$1,354,379 thousand) and accounted for 29.5% of consolidated net sales. Overseas sales consist of export sales by the Company and its domestic consolidated subsidiaries as well as sales by overseas consolidated subsidiaries.

# FINANCIAL STATEMENTS

## 9. Information for certain leases

Lease payments and lease income under finance leases, which are accounted for in the same manner as operating leases, at March 31, 1998 and 1997, respectively, were as follows.

	Millions of yen		Thousands of U.S. dollars
	1998	1997	1998
Lease payments	¥ 4,470	¥ 3,851	\$ 33,864
Lease income	661	780	5,008

Future minimum lease payments as lessees and receipts as lessors, both inclusive of interest, at March 31, 1998 were ¥12,660 million (\$95,909 thousand) and ¥1,860 million (\$14,091 thousand), respectively, and amounts due within one year were ¥8,306 million (\$62,924 thousand) and ¥633 million (\$4,795 thousand), respectively.

## 10. Market value information for securities of the Company

Book value, market value and net unrealized gains of quoted securities of the Company at March 31, 1998 and 1997, respectively, were as follows:

	Millions of yen		Thousands of U.S. dollars
	1998	1997	1998
Book value:			
Current	¥ 37,396	¥ 41,940	\$ 283,303
Non-current	2,811	2,811	21,296
	40,207	44,751	304,599
Market value:			
Current	57,496	67,809	435,576
Non-current	4,017	7,378	30,432
	61,513	75,187	466,008
Net unrealized gains	¥ 21,306	¥ 30,436	\$ 161,409

## 11. Derivative transactions of the Company

The Company enters into forward currency exchange contracts and interest rate swap contracts as derivative financial instruments. The Company deals with forward currency exchange transactions to hedge exchange rate risk of monetary receivables and payables denominated in foreign currencies in order to obtain stabilized profit. Interest rate swap transactions are made in order to minimize the risk of interest rate on borrowings changing upward.

The Company deals with financial institutions with higher credit ratings as counterparty of transactions to avoid credit risk exposure. Details of transactions are reviewed and approved by responsible officials of the Company in accordance with the Company's internal regulations.

At March 31, 1998, the Company had open forward exchange contracts to sell U.S. dollars and Belgian francs equivalent to ¥6,223 million (\$47,144 thousand) in aggregate, and to buy U.S. dollars and Finnish markka equivalent to ¥1,741 million (\$13,189 thousand) in aggregate at the futures exchange rate at March 31, 1998. Net unrealized exchange loss at March 31, 1998 amounted to ¥267 million (\$2,023 thousand). At the same date the Company had interest rate swap agreements to convert interest on long-term debt of ¥7,000 million (\$53,030 thousand) from fixed to variable rate and of ¥17,000 million (\$128,788 thousand) from variable to fixed rate which resulted in an unrealized loss of ¥749 million (\$5,674 thousand).

## 12. Subsequent events

At June 26, 1998 annual meeting, the Company's stockholders approved (1) payment of a year-end cash dividend of ¥3.00 (\$0.02) per share aggregating ¥1,766 million (\$13,379 thousand) to stockholders of record as of March 31, 1998, (2) payment of bonuses to directors and statutory auditors aggregating ¥30 million (\$227 thousand) and (3) transfer to legal reserve of ¥180 million (\$1,364 thousand) from retained earnings.

At the same meeting, the Company's stockholders also approved the change in articles of incorporation of the Company, that the Company may acquire its own shares after June 26, 1998, upon resolution of the Board of Directors, within the maximum limit of (1) 58,000 thousand shares to retire such shares and to offset related purchase costs against retained earnings and (2) 82,000 thousand shares at less than ¥24,900 million (\$188,636 thousand) to retire shares and to offset costs against capital surplus.

# REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Directors of  
Sumitomo Heavy Industries, Ltd.

We have audited the accompanying consolidated balance sheets of Sumitomo Heavy Industries, Ltd. (a Japanese corporation) and subsidiaries as of March 31, 1998 and 1997, and the related consolidated statements of income, stockholders' equity and cash flows for the years then ended, expressed in Japanese yen. Our audits were made in accordance with auditing standards generally accepted in Japan and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the consolidated financial statements referred to above present fairly the consolidated financial position of Sumitomo Heavy Industries, Ltd. and subsidiaries as of March 31, 1998 and 1997, and the consolidated results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in Japan applied on a consistent basis.

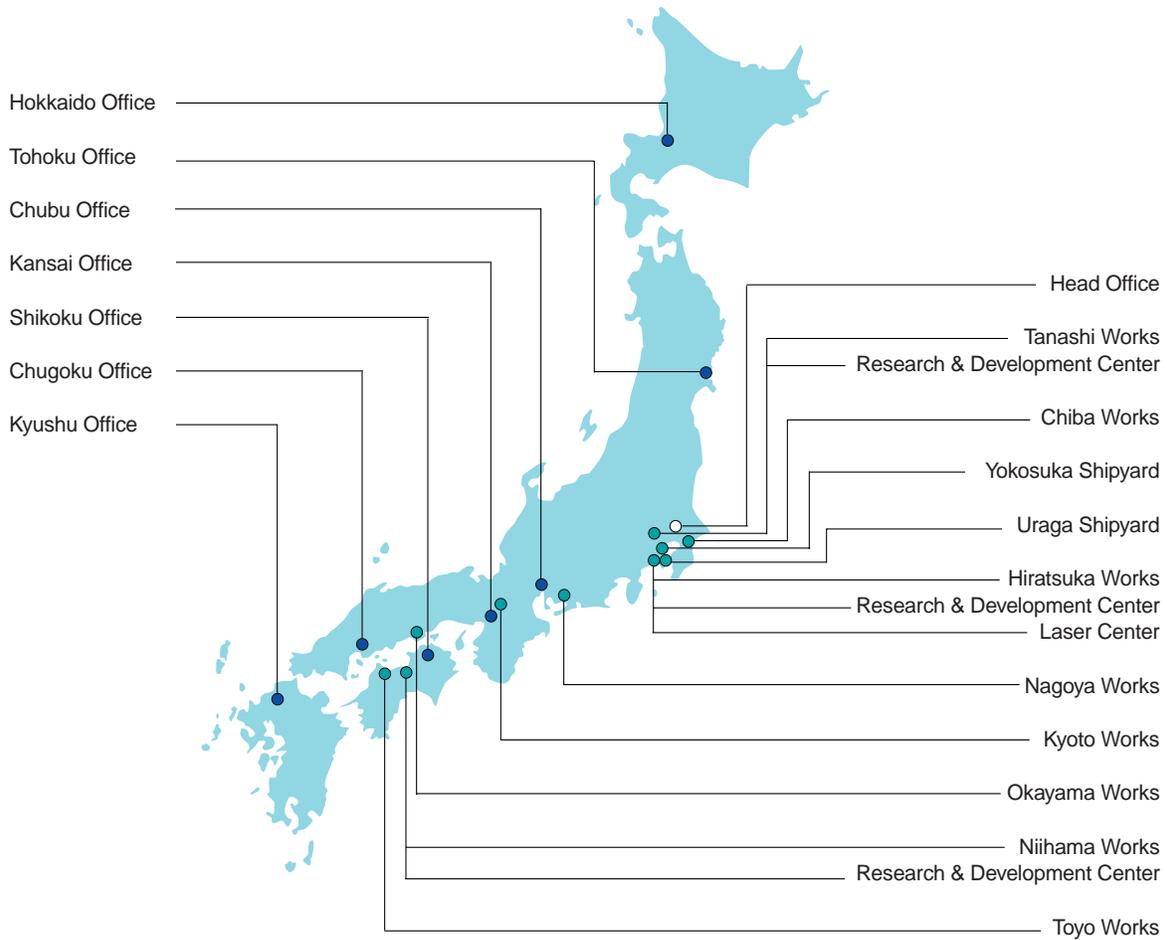
Also, in our opinion, the U.S. dollar amounts in the accompanying consolidated financial statements have been translated from Japanese yen on the basis set forth in Note 1.

Tokyo, Japan  
June 26, 1998

A handwritten signature in black ink that reads "Asahi & Co." in a cursive, flowing script.

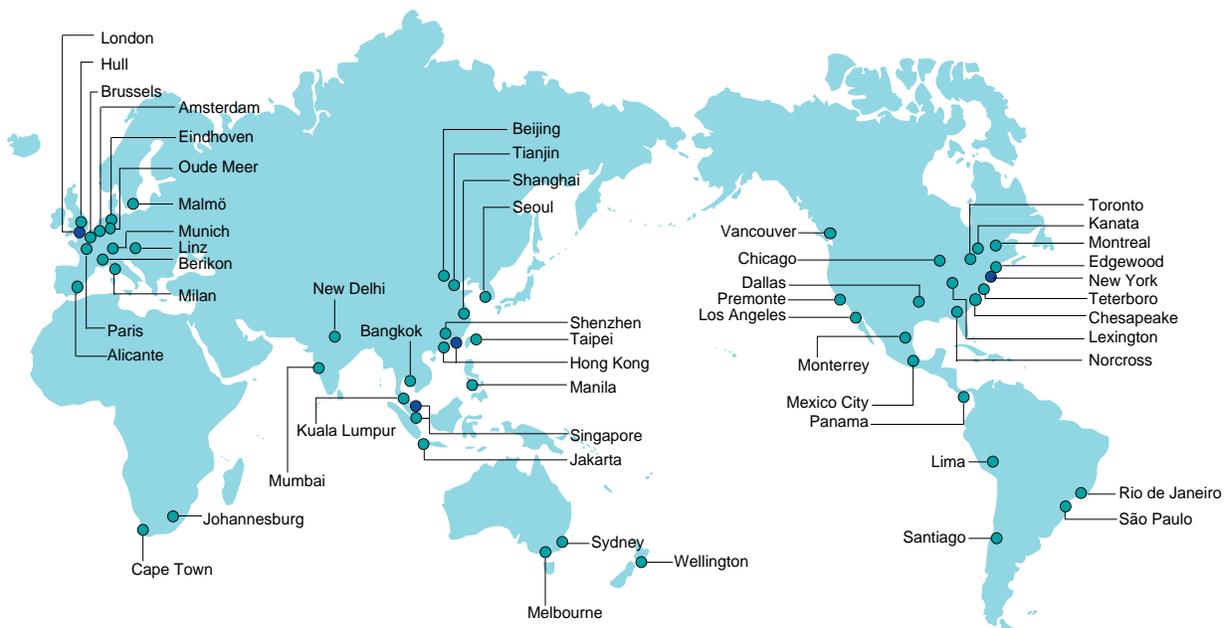
## DOMESTIC NETWORK

- HEAD OFFICE
- OFFICES
- WORKS & LABORATORIES



## OVERSEAS NETWORK

- OVERSEAS OFFICES
- OVERSEAS SUBSIDIARIES & JOINT VENTURES



### Hong Kong Office

2103A Tower 2, Lippo Centre, 89 Queensway, Central, HONG KONG

Tel: (852) 2521-8433

Fax: (852) 2840-1704

### Sumitomo Heavy Industries (U.S.A.), Inc.

666 Fifth Avenue 10th floor, New York, N.Y. 10103-1099, U.S.A.

Tel: (1) 212- 459-2477

Fax: (1) 212-459-2490

### Sumitomo Heavy Industries (Europe) Ltd.

Ibex House, 42-47 Minories, London EC3N 1DY, U.K.

Tel: (44) 171-702-1221

Fax: (44) 171-702-1025

### Sumitomo Heavy Industries (South East Asia) Pte., Ltd.

360 Orchard Road #10-04/05, International Building, SINGAPORE 238869

Tel: (65) 733-0294

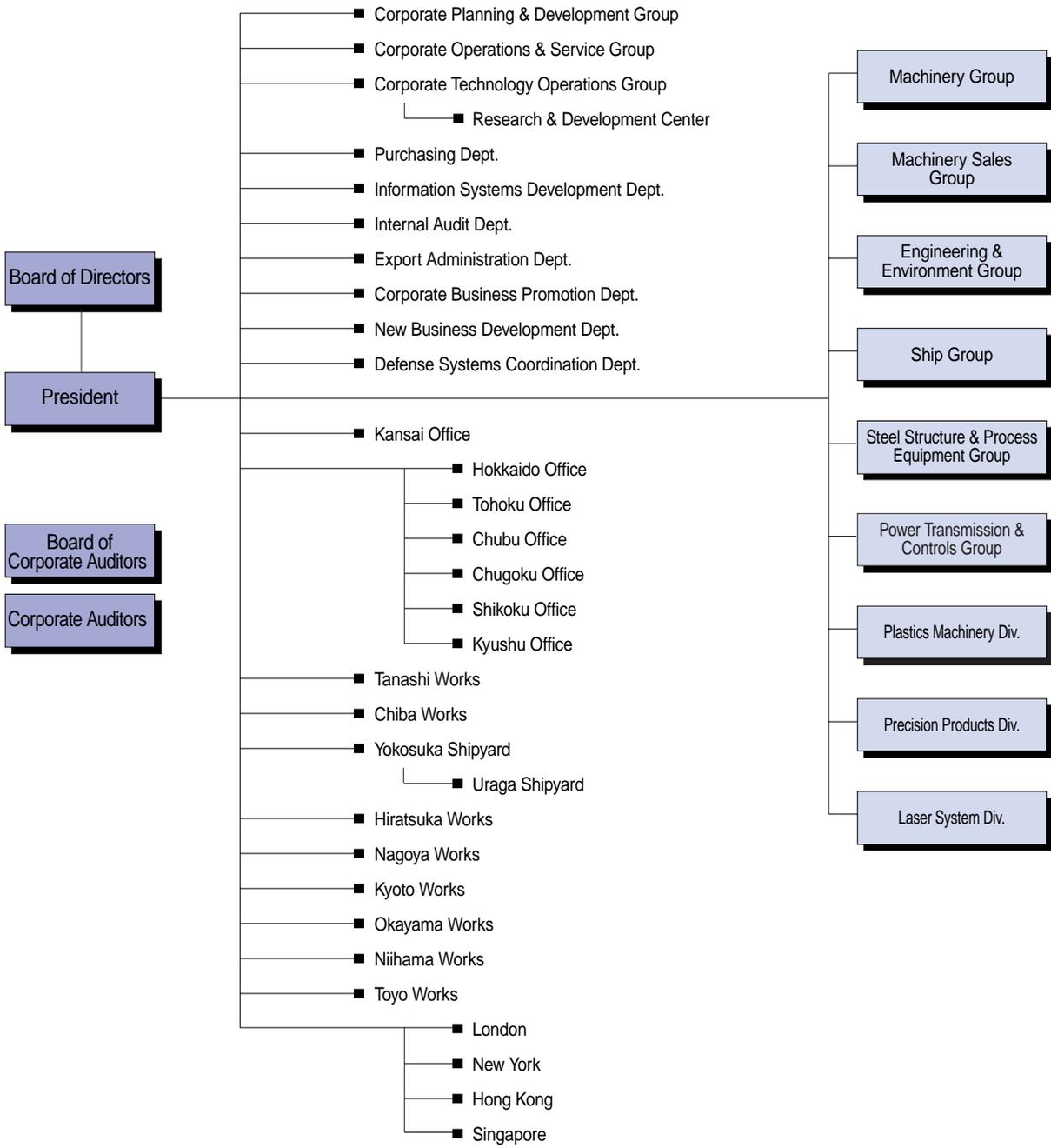
Fax: (65) 733-0441

## MAJOR SUBSIDIARIES AND AFFILIATES

	Paid-in capital	Principal business
<b>Sumitomo (S.H.I) Construction Machinery Co., Ltd.</b>	¥4,000 million	Construction machinery
<b>Sumitomo Yale Co., Ltd.</b>	¥1,000 million	Forklift trucks and logistic handling equipment
<b>Sumitomo Eaton Hydraulics Co., Ltd.</b>	¥ 825 million	Hydraulic motors, pumps and power transmission equipment
<b>Sumitomo Eaton Nova Corporation</b>	¥ 600 million	Semiconductor equipment, especially ion implantation systems
<b>Sumitomo Heavy Industries PTC Sales Co., Ltd.</b>	¥ 200 million	Power transmission equipment
<b>SHI Plastics Machinery, Ltd.</b>	¥ 300 million	Plastics machinery
<b>Nihon Spindle Mfg. Co., Ltd.</b>	¥3,276 million	Spinning machinery and environmental protection equipment
<b>Shin Nippon Machinery Co., Ltd.</b>	¥2,408 million	Turbines, pumps, fasteners and blowers
<b>Izumi Food Machinery Co., Ltd.</b>	¥ 120 million	Food processing machinery and related equipment
<b>Sumitomo Heavy Industries Foundry &amp; Forging Co., Ltd.</b>	¥ 450 million	Castings and forgings
<b>Sumiju Environment &amp; Engineering, Inc.</b>	¥ 120 million	Maintenance and operation control for environmental systems and plants
<b>Sumiju Machinery &amp; Engineering Co., Ltd.</b>	¥ 90 million	Production and installation of machinery and equipment
<b>Ahlstrom Sumiju K.K.</b>	¥ 600 million	Pulp manufacturing equipment
<b>Marine United, Inc.</b>	¥ 480 million	Design and construction of naval ships, merchant vessels and offshore structures
<b>Lightwell Co., Ltd.</b>	¥ 480 million	Software and related equipment
<b>Sumitomo Machinery Corporation of America (U.S.A.)</b>	US\$7,723 thousand	Power transmission equipment
<b>Sumitomo (SHI) Cyclo Drive Europe, Ltd. (U.K.)</b>	£6,400 thousand	Power transmission equipment
<b>Sumitomo (SHI) Cyclo Drive Germany, GmbH (Germany)</b>	DM14,000 thousand	Power transmission equipment
<b>Sumitomo (SHI) Cyclo Drive Tianjin, Ltd. (China)</b>	RMB54,000 thousand	Power transmission equipment
<b>Tatung SM-Cyclo Co., Ltd. (Taiwan)</b>	NT\$75,000 thousand	Power transmission equipment
<b>SM-Cyclo of Korea Co., Ltd. (Korea)</b>	W1,000 million	Power transmission equipment
<b>Sumitomo (SHI) Cyclo Drive South East Asia Pte., Ltd. (Singapore)</b>	S\$2,000 thousand	Power transmission equipment
<b>Sumitomo Plastics Machinery Inc. of America (U.S.A.)</b>	US\$7,000 thousand	Holding company of Sumitomo (SHI) Plastics Machinery Mfg. (USA), LLC. and Sumitomo (SHI) Plastics Machinery Mfg. (USA), LLC.
<b>Sumitomo (SHI) Plastics Machinery Mfg. (USA), LLC. (U.S.A.)</b>	US\$2,500 thousand	Manufacture of plastics machinery
<b>Sumitomo (SHI) Plastics Machinery (America), LLC. (U.S.A.)</b>	US\$2,500 thousand	Sales of plastics machinery
<b>Simtech Molding, LLC. (U.S.A.)</b>	US\$1,000 thousand	Molding and processing of plastics
<b>Link-Belt Construction Equipment Company (U.S.A.)</b>	US\$10,723 thousand	Construction equipment
<b>Radiation Dynamics Inc. (U.S.A.)</b>	US\$7,500 thousand	Electron beam accelerator
<b>Lumonics Inc. (Canada)</b>	C\$144,252 thousand	Laser processing system

# ORGANIZATION

(As of July 1, 1998)



# BOARD OF DIRECTORS



President  
**Mitoshi Ozawa**



Executive Vice President  
**Hiroyasu Taniguchi**



Managing Director  
**Yasufumi Uenoyama**



Managing Director  
**Toshisuke Kawamura**



Managing Director  
**Takaji Nakanishi**



Managing Director  
**Shuji Toyoda**



Managing Director  
**Yukihito Takahashi**



Managing Director  
**Noriyuki Yamasaki**



Managing Director  
**Yoshio Hinou**

Director  
**Harumi Ikuta**

Director  
**Eiichi Fujita**

Director  
**Kenji Haruguchi**

Director  
**Shigeya Oishi**

Director  
**Masaaki Shiba**

Director  
**Takahiko Otani**

Director  
**Naoki Takahashi**

Standing Auditor  
**Masakazu Ozaki**

Standing Auditor  
**Tsuyoshi Saito**

Auditor  
**Rentaro Kaneko**

Auditor  
**Tsutomu Nishimura**

## CORPORATE DATA

<b>Head office:</b>	Sumitomo Heavy Industries, Ltd. 9-11, Kita-Shinagawa 5-chome, Shinagawa-ku, Tokyo 141-8686, Japan Tel: +81-3-5488-8335 Fax: +81-3-5488-8056 <a href="http://www.shi.co.jp">http://www.shi.co.jp</a>	
<b>Founded:</b>	1888	
<b>Incorporated:</b>	November 1, 1934	
<b>Paid-in Capital:</b>	¥30,871,651,300	
<b>Number of Employees:</b>	5,559	
<b>Transfer Agent:</b>	The Sumitomo Trust and Banking Co., Ltd.	
<b>Stock Exchange Listings:</b>	Tokyo, Osaka, Nagoya, Kyoto, Hiroshima	
<b>Shares Outstanding:</b>	588,696,680	
<b>Number of Shareholders:</b>	82,654	
<b>Major Shareholders:</b>	The Sumitomo Trust and Banking Co., Ltd.	6.38%
	Sumitomo Life Insurance Company	5.49%
	The Sumitomo Bank, Ltd.	4.55%
	The Mitsubishi Trust and Banking Co., Ltd.	3.40%
	Nippon Life Insurance Company	3.28%
	The Toyo Trust and Banking Co., Ltd.	2.63%
	The Sumitomo Marine & Fire Insurance Co., Ltd.	2.49%
	The Industrial Bank of Japan	2.26%
	Sumitomo Corporation	1.77%
	The Yasuda Trust and Banking Co., Ltd.	1.64%

(As of March 31, 1998)

