

**Securities Code: 6302**

**The 121st Interim Business and Financial Report  
April 1, 2016 to September 30, 2016**

## **To Our Shareholders**

I would like to express our sincere gratitude for your continued support and patronage. I am pleased to present our business and financial report for the first half of the 121st fiscal year (from April 1 to September 30, 2016) as follows.

### **Business Performance and Achievements during the Half-Year Period under Review**

During the six-month period ended September 2016, the Japanese economy remained sluggish from downward pressure on corporate earnings due to the yen's appreciation. Personal consumption showed only a gradual recovery despite continued improvement in the employment and income situation, and companies took a cautious stance on capital investment. Overseas, the U.S. economy continued to recover on solid personal consumption and signs of a recovery in corporate performance, but the outlook for Europe became increasingly unclear following the Brexit vote, and the slowdown in private investment continued in China. Overall, the gradual deceleration of the global economy continued, and with risks from political turmoil in the United States and Europe and the slowing Chinese economy, a strong sense of uncertainty remains.

In light of this operating environment, the Sumitomo Heavy Industries (SHI) Group worked to increase its earnings strength through stronger marketing efforts to secure orders and sales, and ongoing initiatives to reduce costs.

As a result, orders for the first half declined 6% year on year, to ¥336.6 billion, on decreases in all segments except for Environmental Facilities & Plants. Although net sales rose in the Industrial Machinery, the Ships, and the Environmental Facilities & Plants segments, decreases in other segments resulted in an overall 1% year-on-year decline, to ¥317.8 billion.

In terms of profit, despite declines in the Precision Machinery and the Construction Machinery segments, operating income rose 1% year on year, to ¥18.6 billion, ordinary income grew 8%, to ¥18.2 billion, and net income attributed to shareholders of the parent company grew 14%, to ¥13.1 billion, as a result of increases in other segments.

Given these first-half results, we have decided to pay the interim dividend of ¥7 per share.

Looking at our accomplishments during the first half, in the energy-related field, which we have designated as a growth area and are proactively developing, the electric power plant that we delivered to a major South Korean petrochemical manufacturer with boilers that utilize tire-derived fuel and biomass commenced operations. In Japan, we received an order for what will be the country's largest, extremely highly efficient biomass high-mixed combustion power plant. It will use biomass and coal as fuel sources.

In the field of industrial machinery, our integration of Mitsubishi Heavy Industries, Ltd. subsidiary Mitsubishi Heavy Industries Machinery Technology Corporation's material handling systems business began to produce synergies and contributed to earnings. In the medical field, we moved forward in creating cutting-edge medical technologies. After obtaining the results of Japanese Phase I Clinical Trials of a boron neutron capture therapy (BNCT) system that uses an accelerator manufactured by SHI, Phase II Clinical Trials began with the aim of verifying the treatment's effect and confirming the safety of BNCT.

In the field of precision machinery, the plastic injection molding machine business began selling its next-model light guide plate (LGP) molding machines. LGP molding machines require thin-walled molding, which we have achieved with high-response and high-speed injection units, and high-rigidity and high-response clamp units that realize the "world's thinnest" thin-walled molding.

### **Progress under Medium-Term Management Plan 2016 and the New Medium-Term Management Plan**

The SHI Group formulated the Medium-Term Management Plan 2016 in May 2014, with financial targets of net sales of ¥700.0 billion, an operating income ratio of 7.5%, and ROIC\* of at least 7% for the plan's final year, the fiscal year ending March 31, 2017. Under the plan, the entire Group has been working together to achieve three basic objectives: steady growth; a return to higher levels of profitability; and persistent efforts for operational quality improvements. As a result of these efforts, the net sales target of ¥700.0 billion was achieved one year early in the second year under the plan, the fiscal year ended March 31, 2016.

Nevertheless, we have revised our consolidated forecasts for the current fiscal year, the final year under the plan, to take into account revised exchange rate assumptions reflecting the yen's appreciation, and prolonged weak market conditions for the Construction Machinery segment. We are now forecasting net sales of ¥660.0 billion, operating income of ¥43.0 billion, ordinary income of ¥40.0 billion, net income attributed to shareholders of the parent company of ¥26.0 billion, and ROIC of at least 6.6%.

The Group's operating environment has become more difficult and remains unpredictable, but by successfully implementing the measures included in the plan and bringing forward investments for growth, we will continue building a strong business foundation as we transition to the new medium-term management plan that begins next fiscal year.

Going forward, the SHI Group will continue striving to contribute to the development of society through the provision of first-class products and services. The continued support and cooperation of our shareholders is greatly appreciated.

\*ROIC (return on invested capital) is the after-tax profit margin on invested capital, showing the amount of profit generated as a percentage of invested capital (the total of shareholders' equity and interest-bearing debt), and indicating whether profitability corresponds to the cost of capital.

Shunsuke Betsukawa  
President and CEO

## Review of Operations by Segment

### **Machinery Components**

Major Products: Power Transmission Equipment, Motors

The market in Japan for large and medium-sized power transmission equipment has been somewhat weak, and with sluggish overseas markets for large models, including in Europe, orders and sales for the first half declined year on year.

(Billions of yen)

	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	54.0	50.7	-6%
Net Sales	52.3	48.9	-7%
Operating Income	3.6	4.1	+14%



### **Precision Machinery**

Major Products: Plastic Injection Molding Machines, Extrusion Laminators, Semiconductor Manufacturing Equipment, Laser Processing Systems, Cryogenic Equipment, Precision-Positioning Stages, Precision Forgings, Control System, Defense Equipment, Machining Tools

Despite a solid European market for plastic injection molding machines, demand declined in China and other markets as IT-related investments slowed, and both orders and sales were lower year on year. In other machinery, orders for semiconductor-related models were down year on year, but sales rose.

(Billions of yen)

	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	75.0	72.8	-3%
Net Sales	75.5	69.6	-8%
Operating Income	9.4	7.2	-24%



## Construction Machinery

Major Products: Hydraulic Excavators, Construction Cranes, Road Construction Machinery

In the hydraulic excavator business, although demand in China bottomed out, lower demand in Japan and North America led to a year-on-year decline in orders. Sales were also lower year on year in the construction crane business from protracted weakness in the North American market.

(Billions of yen)

	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	93.7	80.2	-14%
Net Sales	98.3	88.8	-10%
Operating Income	2.2	(0.7)	—



## Industrial Machinery

Major Products: Cyclotrons, Medical Equipment, Forging Machines, Material Handling Systems, Logistics & Handling Systems, Automated Parking Systems, Turbines, Pumps

Although orders rose in the material handling systems business from the transfer of Mitsubishi Heavy Industries' material handling systems business, overall orders declined year on year from a decrease in medical-related orders in the industrial machinery business. With a solid pace of construction in both the material handling systems and industrial machinery businesses, sales rose year on year.

(Billions of yen)

	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	47.5	47.3	-1%
Net Sales	34.9	47.5	+36%
Operating Income	2.6	4.5	+74%



## Ships

Major Products: Ships

Reflecting a sluggish market and a strong yen, there were no orders for new ships, while two vessels were delivered during the first half.

(Billions of yen)

	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	18.6	7.9	-58%
Net Sales	13.0	14.8	+14%
Operating Income	(0)	0.6	—



## Environmental Facilities & Plants

Major Products: Power Generation Systems, Boiler Systems, Industrial Waste Treatment Plants, Air Pollution Prevention Equipment, Water Treatment Systems, Chemical Process Equipment & Plants, Pressure Vessels, Stirring Tanks, Air-Conditioning Equipment, Food Production Equipment

With orders for Japan's largest biomass-fueled power generation plant as well as a large-scale ash treatment plant, orders in the energy plant business rose year on year. Orders declined year on year in the water treatment plant business because of the absence of orders for new large-scale refurbishment projects.

(Billions of yen)

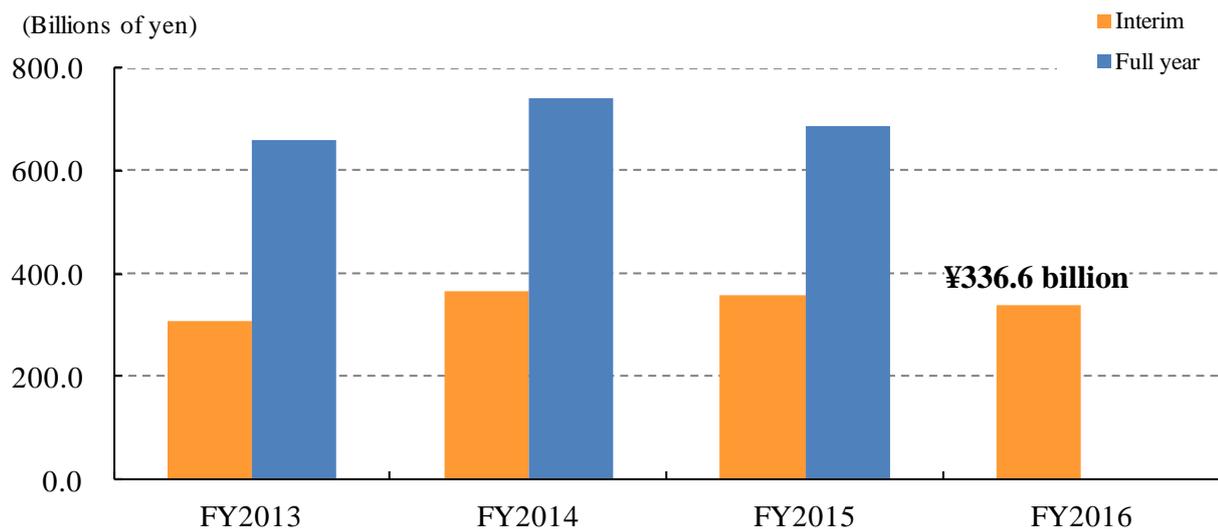
	FY2015 Interim	FY2016 Interim	Year-on-Year Change
Orders	63.0	74.0	+17%
Net Sales	42.7	44.4	+4%
Operating Income	(0.1)	2.1	—



\*Numbers less than one unit are rounded to the nearest unit.

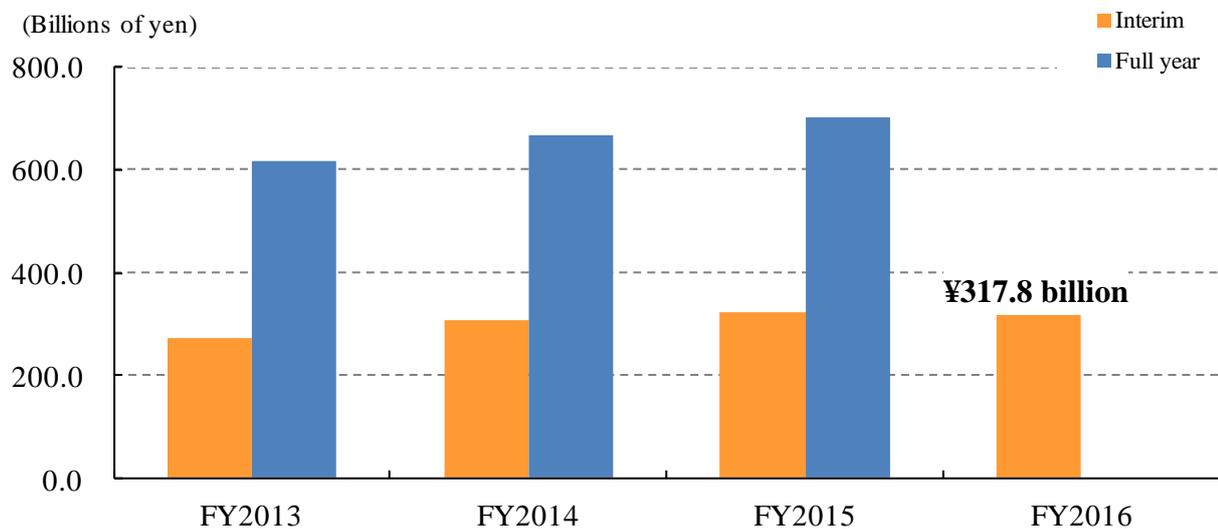
## Consolidated Financial Highlights

### Orders



Orders declined 6% year on year, to ¥336.6 billion, on decreases in all segments except for Environmental Facilities & Plants.

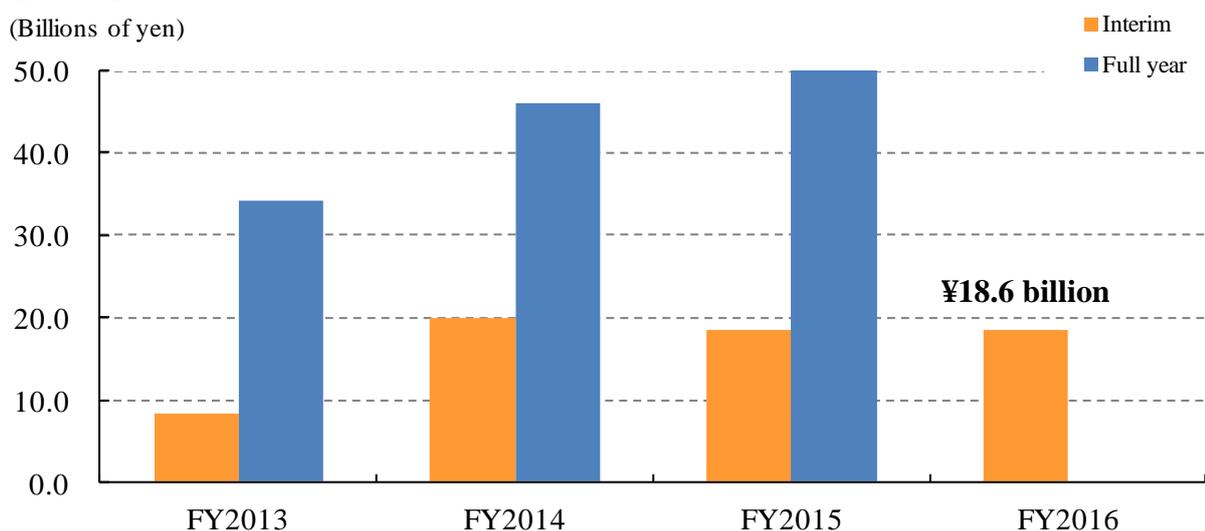
### Net Sales



Despite increases in the Industrial Machinery, the Ships, and the Environmental Facilities & Plants segments, decreases in other segments resulted in a 1% decline year on year in net sales, to ¥317.8 billion.

## Operating Income

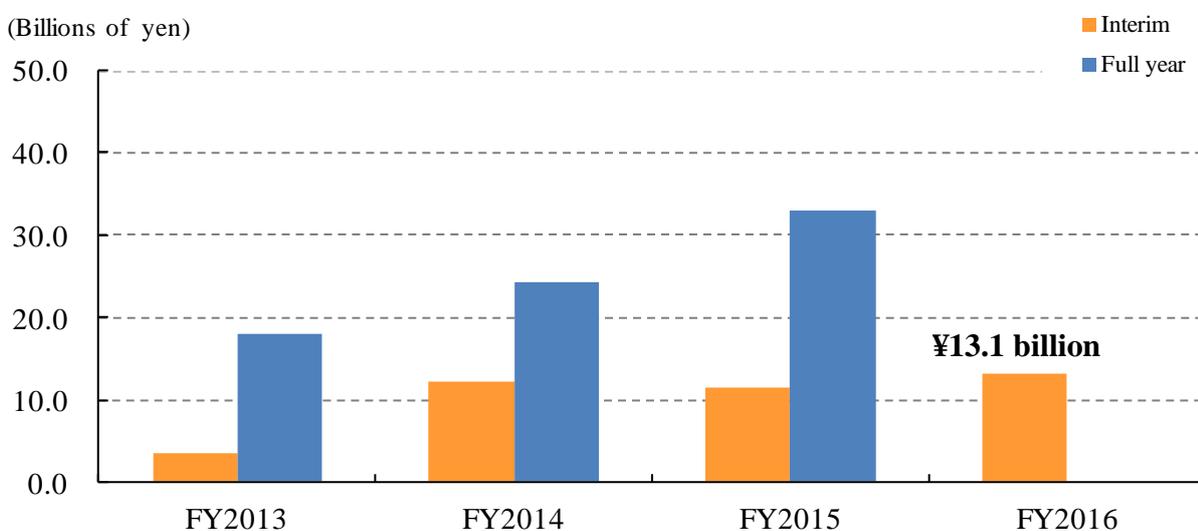
(Billions of yen)



Although operating income declined in the Precision Machinery and the Construction Machinery segments, increases in other segments led to a 1% increase year on year, to ¥18.6 billion.

## Net Income Attributed to Shareholders of the Parent Company

(Billions of yen)



With the increase in operating income, net income attributed to shareholders of the parent company grew 14% year on year, to ¥13.1 billion.

(Billions of yen)

	FY2013		FY2014		FY2015		FY2016
	Interim	Full year	Interim	Full year	Interim	Full year	Interim
Orders	306.5	658.2	365.5	740.8	356.3	685.9	336.6
Net Sales	273.0	615.3	306.3	667.1	322.5	700.8	317.8
Operating Income	8.4	34.3	19.9	46.0	18.4	50.6	18.6
Net Income Attributed to Shareholders of the Parent Company	3.4	17.9	12.3	24.3	11.5	33.1	13.1

**Interim Consolidated Financial Statements****Interim Consolidated Balance Sheet (Summary)**

(Billions of yen)

Account Items	FY2016 End of interim period (As of September 30, 2016)	End of FY2015 (As of March 31, 2016)
<b>Assets</b>		
Current assets	448.9	493.0
Cash and deposits*	60.6	70.8
Notes and accounts receivable	192.7	219.9
Inventories	152.6	156.3
Other	43.0	46.0
Fixed assets	281.0	289.9
Tangible fixed assets	221.8	227.8
Intangible fixed assets	11.1	11.2
Investments and other assets	48.2	50.9
<b>Total assets</b>	<b>729.9</b>	<b>782.9</b>
<b>Liabilities</b>		
Notes and accounts payable	127.2	142.3
Interest-bearing liabilities	55.2	68.2
Other	175.5	189.5
<b>Total liabilities</b>	<b>357.9</b>	<b>400.0</b>
<b>Net assets</b>		
Stockholders' equity	328.5	321.0
Accumulate other comprehensive income	37.8	55.7
Non-controlling interest	5.7	6.2
<b>Total net assets</b>	<b>372.0</b>	<b>382.8</b>
<b>Total liabilities and net assets</b>	<b>729.9</b>	<b>782.9</b>

\*Includes cash equivalents

**Interim Consolidated Statements of Income (Summary)**

(Billions of yen)

Account Items	FY2016 Interim period (April 1, 2016 to September 30, 2016)	FY2015 Interim period (April 1, 2015 to September 30, 2015)
Net sales	317.8	322.5
Operating income	18.6	18.4
Ordinary income	18.2	16.8
Extraordinary gains (losses)	(0.0)	(0.2)
Net income attributed to shareholders of the parent company	13.1	11.5

**Interim Consolidated Statements of Cash Flow (Summary)**

(Billions of yen)

Account Items	FY2016 Interim period (April 1, 2016 to September 30, 2016)	FY2015 Interim period (April 1, 2015 to September 30, 2015)
Cash flows from operating activities	17.8	(7.8)
Cash flows from investing activities	(10.1)	(8.2)
Cash flows from financing activities	(13.7)	(17.5)
Net increase (decrease) in cash and cash equivalents	(10.0)	(33.4)
Cash and cash equivalents at end of the period	58.6	57.7

Note: Numbers less than one unit are rounded to the nearest unit.

## **Feature**

### **Cyclo® Drives Speed Reducer**

Elevators, automated doors, and other equipment and machinery that serve as social infrastructure have an optimal speed. Speed reducers decrease the rotational speed of motors and engines to the optimal level, and this also increases the force generated by the rotation (torque).

Sumitomo Heavy Industries is Japan's largest manufacturer of speed reducers for industrial machinery in terms of sales, and is also in the top tier globally. In particular, our broad product variations give us one of the world's largest product lineups.

The Cyclo Drives Speed Reducer is one variation and one of our leading products. The product's special feature is the gear structure, which uses a unique smooth curvature called a trochoid. Compared with conventional gears, these gears are more resistant to breaking, for a long product life and the ability to support strong impact loads. Using this structure, we are also able to achieve a broader range of reduction gear ratios than conventional speed reducers of the same size.

The Cyclo Drives Speed Reducers have a long history, stemming from a technological tie-up with the German company CYCLO Getriebebau GmbH (the present Sumitomo (SHI) Cyclo Drive Germany GmbH) in 1937, and with production beginning in 1939. Throughout this history, continuous improvements have resulted in smaller Cyclo Drives Speed Reducers with greater functionality. We have also developed and are selling numerous series using the Cyclo Drives Speed Reducer structure, including the F series, a highly functional, compact model for precision control used to drive joints in robots, the compact Altax gear motor, and the Buddybox series, which uses a combination with a separate gear speed reducer to change the direction of the output shaft.



### **Uses of Cyclo® Drives Speed Reducer**

The Cyclo Drives Speed Reducers are used in a wide range of applications. The following are some of the leading uses as drive components in machinery. They are used as drive sources around the world.

General uses

- Conveyor belts
- Various equipment in water purification and sewerage treatment plants

- Ferris wheels and other amusement park rides
- Mechanized multistory parking garages
- Rolling lines in steel plants
- Mixers
- Cranes
- Pumps
- Airport boarding bridges, etc.



Precision control uses

- Joints in industrial robots
- Tool changers in machining centers, etc.



Altax® compact gear motors

- Conveyor belts
- Motorized shutters
- Small pumps
- Food processing equipment, etc.



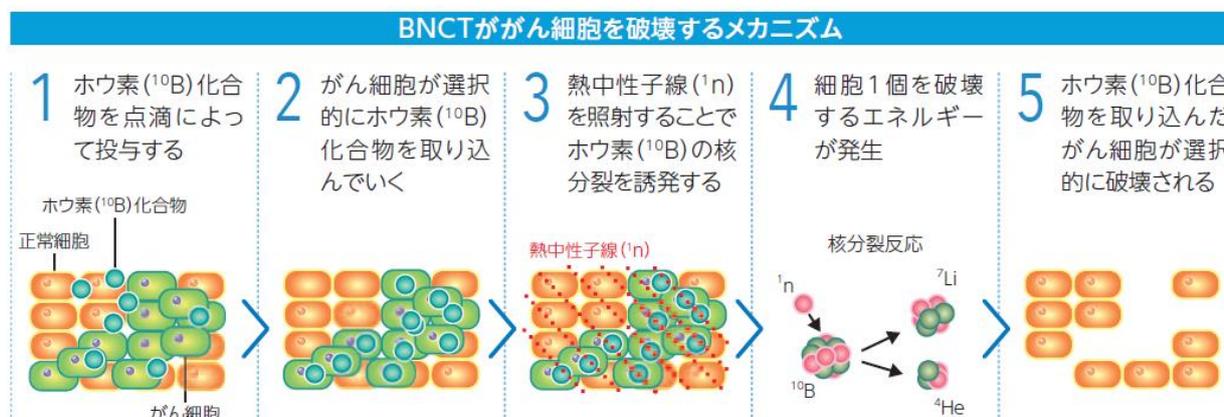
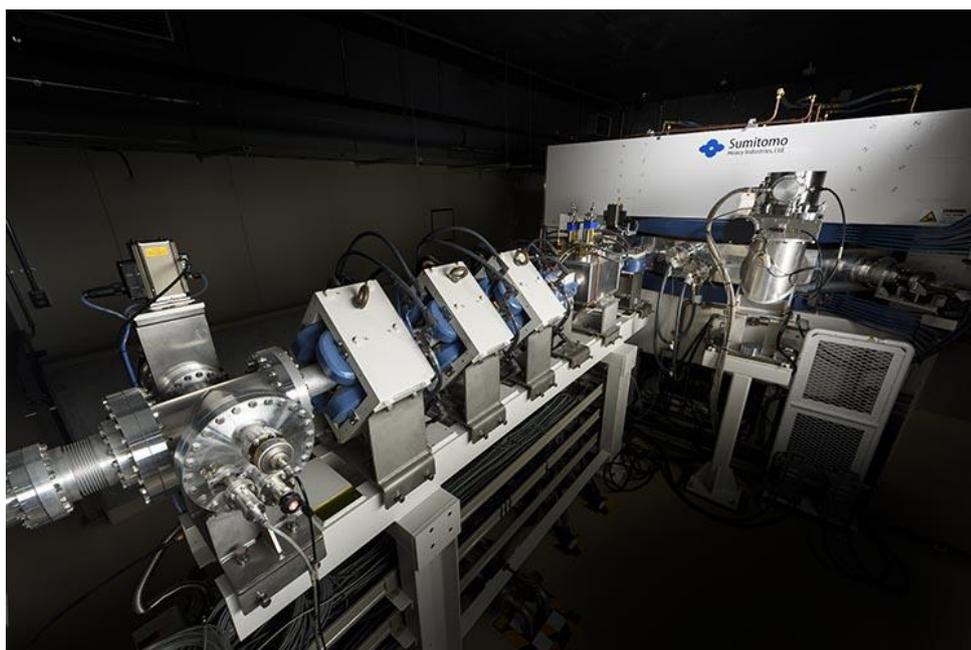
Note: Cyclo, Cyclo® Drives Speed Reducer, Altax®, and Buddybox® are registered trademarks of Sumitomo Heavy Industries, Ltd. Altax® is handled by Sumitomo Heavy Industries Gearmotors Co., Ltd.

## Feature BNCT Cancer Treatment System

This cancer treatment system, which uses a proton beam accelerator to focus the radiation beam on cancer cells with reduced side effects to healthy tissue, is gaining attention as a way to maintain a patient's quality of life.

SHI is developing systems using cyclotrons for proton beam cancer treatment system and boron neutron capture therapy (BNCT) cancer treatment system.

BNCT is a promising way to treat recurring malignant brain tumors and cancers of the head and neck, which have proven difficult to treat. Through joint research with Kyoto University, we have developed a BNCT cancer treatment system using an accelerator in place of the huge nuclear reactor that was previously required. These systems are currently installed in two facilities—the Kyoto University Research Reactor Institute and the Southern Tohoku BNCT Research Center at the Southern TOHOKU Research Institute for Neuroscience—and clinical trials are being conducted with the aim of gaining prompt approval as medical equipment.



Mechanism by which BNCT destroys cancer cells

1. A boron ( $^{10}\text{B}$ ) compound is administered via an intravenous drip
2. Cancer cells selectively capture the boron ( $^{10}\text{B}$ ) compound
3. Irradiation from a thermal neutron beam ( $^1\text{n}$ ) triggers nuclear fission in the boron ( $^{10}\text{B}$ )

4. Energy to destroy one cell is released

5. Cancer cells containing the boron ( $^{10}\text{B}$ ) compound are selectively destroyed

Note: BNCT cancer treatment system is not approved as medical equipment, and we are therefore unable to manufacture and sell the system at this time.

## Company Information (as of September 30, 2016)

### Corporate Data

- Incorporated: November 1, 1934
- Paid-in capital: ¥30,871,651,300
- Number of employees (consolidated): 19,012
- Offices
  - Head office: 1-1, Osaki 2-chome, Shinagawa-ku, Tokyo, Japan
  
  - Business offices: Chubu (Nagoya-shi)  
Kansai (Osaka-shi)  
Kyushu (Fukuoka-shi)
  
  - Plants: Tanashi Works (Nishitokyo-shi, Tokyo)  
Chiba Works (Chiba-shi)  
Yokosuka Works (Yokosuka-shi, Kanagawa Pref.)  
Nagoya Works (Ohbu-shi, Aichi Pref.)  
Okayama Works (Kurashiki-shi, Okayama Pref.)  
Ehime Works–Niihama Factory (Niihama-shi, Ehime Pref.)  
Ehime Works–Saijo Factory (Saijo-shi, Ehime Pref.)
  
  - Laboratories: Technology Research Center (Yokosuka-shi, Kanagawa Pref.)

### Directors and Auditors

Yoshinobu Nakamura, Representative Director and Chairman  
Shunsuke Betsukawa, Representative Director and President  
Shinji Nishimura, Representative Director  
Yoshiyuki Tomita, Director  
Toshiharu Tanaka, Director  
Kazuto Kaneshige, Director  
Mikio Ide, Director  
Shinji Shimomura, Director  
Susumu Takahashi, Director  
Hideo Kojima, Director  
Yuji Takaishi, Standing Corporate Auditor  
Kazumi Fujita, Standing Corporate Auditor  
Takeo Wakae, Corporate Auditor  
Tomoyuki Kato, Corporate Auditor

### Executive Officers

Shunsuke Betsukawa, President (CEO)  
Shinji Nishimura, Senior Executive Vice President  
Katsuhiko Taniguchi, Executive Vice President  
Katsuhide Yokota, Executive Vice President  
Chuck Martz, Executive Vice President  
Toshiharu Tanaka, Executive Vice President  
Yoshiyuki Tomita, Executive Vice President  
Kazuto Kaneshige, Senior Vice President  
Tetsuya Okamura, Senior Vice President  
Akio Yoshikawa, Senior Vice President  
Nobutaka Miyawaki, Senior Vice President  
Hideo Suzuki, Senior Vice President  
Shinji Shimomura, Senior Vice President  
Hiroo Morita, Senior Vice President

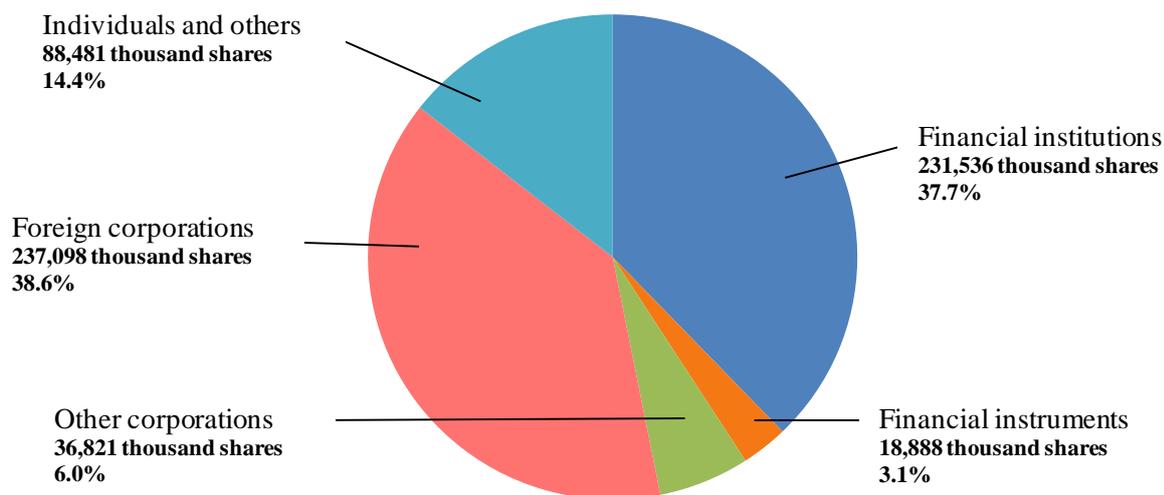
Kazuo Hiraoka, Senior Vice President  
Tatsuya Endo, Senior Vice President  
Taiji Tsuchiya, Senior Vice President  
Eiji Kojima, Senior Vice President  
Yukio Kumata, Vice President  
Isao Kono, Vice President

**Stock Information** (as of September 30, 2016)

**Stock Data**

• Total number of authorized shares:	1,800,000,000
• Total number of issued shares:	614,527,405
• Number of shareholders:	41,064

**Breakdown of Shareholders**



\*The number of shares and shareholding ratios are rounded to the nearest unit.

## Shareholder Information

Fiscal Year	April 1 each year through March 31 of the following year	
Ordinary General Meeting of Shareholders	June (every year)	
Record Dates	Ordinary General Meetings of Shareholders	March 31st
	Payment of Interim Dividends	September 30th
	Payment of Term-end Dividends	March 31st
Custodian of the Register of Shareholders and Account Manager of the Special Accounts	Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo, Japan	
Handling Office for Custodian of the Register of Shareholders	Stock Transfer Agency Business Planning Department Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo, Japan	
	[Mailing Address] Stock Transfer Agency Business Planning Department Sumitomo Mitsui Trust Bank, Limited 2-8-4, Izumi, Suginami-ku, Tokyo 168-0063, Japan	
	[Telephone Inquiries] Toll free number: 0120-782-031 Hours: 9:00-17:00 (except for Saturdays, Sundays, national holidays, and the New Year's holiday)	
	[Website] <a href="http://www.smtb.jp/personal/agency/index.html">http://www.smtb.jp/personal/agency/index.html</a>	
Method of Public Notice	All public notices of the Company shall be posted on the Company's website at <a href="http://www.shi.co.jp">http://www.shi.co.jp</a> Under unavoidable circumstances, however, such notices shall be published in the newspaper <i>Nihon Keizai Shimbun</i> .	

## Notice

### [Notification or Inquiries about Change of Address with Respect to Shares]

Shareholders who have an account with a securities company are asked to give notification or make inquiries about matters such as change of address to the securities company at which he or she has an account. Shareholders who do not have an account with a securities company are asked to call the above telephone number.

### [Special Accounts]

For shareholders who did not use the depository and book-entry transfer system (*Hofuri*) operated by the Japan Securities Depository Center prior to dematerialization of share certificates, we have opened an account (called a special account) at the transfer agent Sumitomo Mitsui Trust Bank, Limited.

Inquiries about, or notifications of, matters such as change of address with regard to special accounts should be made to the above telephone number.

### [Request for the Purchase or Sale of Shares of Less than One Unit]

Please contact the securities company at which you have an account for requests for the purchase or sale of shares of less than one unit (1,000) shares. In the case of requests regarding shares recorded in a special account, please call the above telephone number.

Sumitomo Heavy Industries, Ltd.  
Website [www.shi.co.jp](http://www.shi.co.jp)