# KAWASAKI HEAVY INDUSTRIES, LTD.

Annual Report **99**

# Profile

Founded in 1878, Kawasaki Heavy Industries, Ltd. (KHI) is a leading comprehensive manufacturer of transportation equipment and industrial goods in the world. With a broad technological base that encompasses land, sea and air, KHI manufactures ships, rolling stock, aircraft and jet engines, refuse incinerators, industrial plants, steel structures and various manufacturing equipment and systems. KHI also produces such world-famous consumer products as Kawasaki brand motorcycles and Jet Ski® personal watercraft.

## Contents



Cover: Kawasaki motorcycle W650
*(featured on page 15)*

# Financial Highlights

Kawasaki Heavy Industries, Ltd. and consolidated subsidiaries
Years ended March 31, 1999, 1998 and 1997

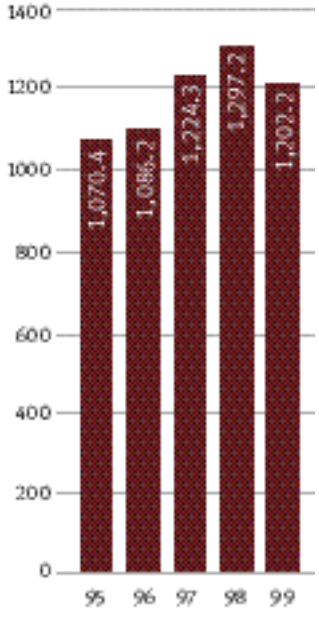
| | Millions of yen | | | Thousands of U.S. dollars |
|---|---|---|---|---|
| | 1999 | 1998 | 1997 | **1999** |
| **For the year:** | | | | |
| Net sales | ¥1,202,189 | ¥1,297,212 | ¥1,224,259 | **$9,972,534** |
| Net income (loss) | (6,132) | 18,556 | 22,572 | **(50,867)** |
| Capital expenditure | 40,428 | 42,928 | 35,130 | **335,363** |
| Depreciation and amortization | 34,607 | 32,416 | 31,245 | **287,076** |
| **At year-end:** | | | | |
| Total assets | 1,204,857 | 1,222,906 | 1,303,168 | **9,994,666** |
| Total shareholders' equity | 199,637 | 209,040 | 197,161 | **1,656,051** |
| Interest-bearing debt | 447,028 | 437,387 | 447,210 | **3,708,237** |
| **Per share amounts** (yen and U.S. dollars)**:** | | | | |
| Net income (loss) | ¥ (4.4) | ¥ 13.3 | ¥ 16.4 | **$ (0.04)** |
| Cash dividends | 6.0 | 6.0 | 7.0 | **0.05** |

*Note: The U.S. dollar amounts represent arithmetical results of translating Japanese yen to dollars on the basis of ¥120.55=$1, the rate prevailing as of March 31, 1999. These translations are solely for the convenience of the readers.*



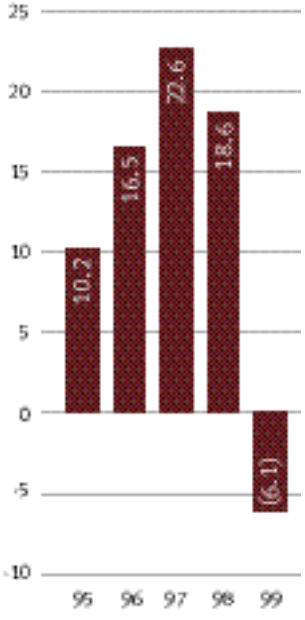
Net sales

*(Billions of yen)*



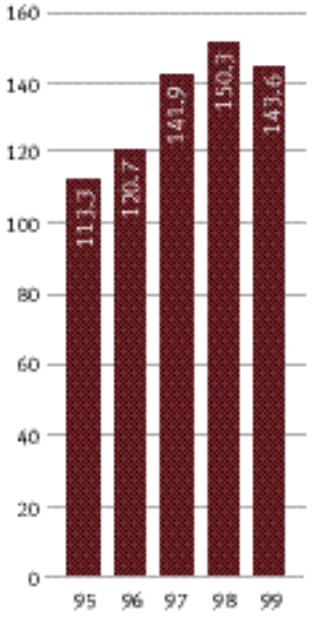

Net income

*(Billions of yen)*




Total shareholders' equity

*(Billions of yen)*



# To Our Shareholders

We are pleased to report on the business results of Kawasaki Heavy Industries, Ltd. (the "Company") and its consolidated subsidiaries (collectively, with the Company, "KHI") for the fiscal year ended March 31, 1999 ("fiscal 1999").



## OPERATING RESULTS

During the fiscal year ended March 31, 1999 ("fiscal 1999"), the Japanese economy remained mired in recession, due principally to a prolonged downturn in consumer spending, a decline in private-sector capital investment as a result of falling corporate profitability, and persistent worries about the Japanese financial system. With the effects of two large government fiscal stimulus packages not making themselves felt sufficiently, the economy shrank for the second successive year. Overseas, the picture continued to be mixed. While Western economies in the main exhibited healthy growth, prolonged economic turmoil in Asian markets caused a downturn in demand.

Despite the adverse business environment, we proactively pursued sales initiatives and developed our operations. Nevertheless, sales fell across all of our operating divisions, with total net sales amounting to ¥1,202.2 billion, a 7.3% decline over fiscal 1998. In particular, in the domestic market, custom-ordered capital goods and mass-produced industrial machinery and related products both declined, while sales of motorcycles and other items in Asian markets also suffered. Despite vigorous company-wide measures to raise our margins, the aforementioned falls in sales revenues, combined with an exceptional loss on large rolling stock orders for U.S. customers, caused profits to fall. Operating income slipped to ¥21.7 billion, and we posted a net loss for the year of ¥6.1 billion.

One of the main exceptional factors dragging us into loss in fiscal 1999 was significant manufacturing disruption on major U.S. rolling stock contracts, which was precipitated by a confluence of unforeseen events. Recognizing that the effects of this were transient, and in keeping with our policy of maintaining stable dividends, the total cash dividend for fiscal 1999 was ¥6.00 per share—the same as in the previous year—comprising final and interim dividends of ¥3.00 per share each.

## STRATEGIC FOCUS FOR THE 21ST CENTURY

As stated previously, our operating environment remains harsh, both in Japan and overseas. As the world economy rapidly becomes borderless, this is leading to intensified price competition between companies. In the face of the worldwide consolidation of entire industries—a phenomenon that puts firms' very survival at stake—companies are increasingly forming networks of global alliances.

Against this backdrop, we are redoubling our efforts to strengthen sales functions and to boost our cost-competitiveness, concentrating our efforts in areas of higher earnings potential. Further, to ensure our prosperity as a global enterprise in the upcoming century, we are implementing a number of measures designed to make radical improvements to management. As well as constructing a more efficient organizational structure, we are focusing the power of the KHI Group on boosting earnings at the consolidated level, and introducing new management methods.

Further, as part of this program, we are in the process of revising our medium-term business plan. The new plan, whose target date for completion is fiscal 2004, builds on many of the principles and aims incorporated in the original plan. These included: transforming our operations to create and develop a comprehensive systems engineering enterprise capable of taking up the challenges of the coming decades; drastically reducing our expenses, with the aim of halving total costs; and, taking

*Dr. Hiroshi Ohba*
*Chairman and CEO*

*Toshio Kamei*
*President*

fundamental measures to promote the development of our business on a global basis. In addition to these policies, the revision process involves us reviewing the mix of businesses that we are in, and increasing the speed of management decision-making. Once completed, we will actively promote the swift and accurate implementation of this plan throughout the Company.

Thus, it is our firm belief that we are steadily developing and implementing the management policies that will guide our business in the 21st century. Let us now move on to describe in more detail some of the principal measures we are taking within this program.

## NURTURING AND STRENGTHENING OUR CORE BUSINESSES

Our broad range of products gives us a big advantage, namely that cyclical variations in the earnings of our various businesses tend to complement each other. In particular, our varied product mix, good customer balance between the private and public sectors, and between domestic and overseas markets, makes it easier to balance out the effects of fluctuations in exchange rates, public investment levels, and the state of the domestic economy. We also derive operational synergies from a combination of the technological, manufacturing and sales expertise in each business. Finally, the high loyalty, transferability and quality of our employees afford us great versatility in combining the efforts of our various divisions.

Nevertheless, if we are to build on the stability we have enjoyed until now and move forward as a global enterprise combining high profitability with solid growth potential, we need to refocus management. Specifically, while taking advantage of our considerable strengths, we must proceed further with the priority investment of our management resources, to select and focus on sectors where we anticipate strong growth over the medium and long term. Using our technological competitiveness to generate high earnings, over the coming decades we must leverage the economies of scale we can enjoy from the wide scope of our business mix. We must nurture and strengthen our core businesses, focusing on those where we can expect a combination of high, stable earnings and good growth potential.

Currently, through revising the medium-term business plan, we are analyzing the market potential, earnings potential and market share, both of our existing businesses and the various candidates for new product and business development. Based on the results of this analysis, and having identified new businesses with potential, we will invest management resources on a priority basis in those existing businesses that we can expand and grow, and in new products and businesses with significant long-term potential. The overall aim is to develop our core businesses for the coming century. Moreover, by ensuring that each area effectively manages the internal balance between collaboration and competition expertly, we intend to achieve a conglomerate premium.

## REFORMING MANAGEMENT

With the rapid globalization of financial and capital markets, it is incumbent on us not only to build up our core businesses, but also to move towards a greater management emphasis on consolidated results and efficient use of shareholder capital. Only this way can we hope to gain a fitting valuation for our Company.

To date, across the entire Company, we have set financial targets for managers to achieve in order to accomplish this objective. As well as the principal yardstick, recurring profit, target indicators have included net sales, the level of orders and various balance sheet items. As we stated before, if we are to successfully focus on and develop our core businesses, it is vital that we evaluate all of them from the perspective of their return on capital. Accordingly, from this year (fiscal 2000), we will be measuring all these indicators at the consolidated level. Further, in addition to the usual numerical targets, we have added an extra measure of profitability, namely return on invested capital, which we define as the ratio of EBIT (earnings before interest and tax) to the sum of shareholders' equity and interest-bearing debt. Through this system, which makes each division accountable for raising earnings while helping to shrink the balance sheet, we aim to boost the efficient use of capital throughout the Company. By focusing on this task, we hope to raise our long-term growth potential and thus enhance shareholder value.

## EFFECTING DRASTIC COST REDUCTIONS

Today's global market is characterized by fierce competition between firms, with the result that producer price deflation is gradually eroding margins. To strengthen and enhance the value of our core businesses, cost reduction is an inevitable necessity. We are in the midst of a drastic program of cost cutting designed to reduce our cost base significantly.

We have set ourselves a notional target of cutting our costs in half. The purpose of this 'goal' is not the actual number itself, but the recognition that attaining a reduction of the order of 50% necessarily entails a paradigm shift in our thinking. Our ultimate goal is to redesign and rebuild from the ground up all of our design and manufacturing processes. By approaching our design and manufacturing processes from such a business process re-engineering standpoint, and painstakingly evaluating all aspects of our operations to eradicate all surplus product and process-related expenses, we aim to significantly reduce the total costs of these operation areas.

In particular, reducing the costs involved in our business processes is essential to the success of the

program. With this in mind, we are also reviewing how we operate, and our use of information technology. We aim to overhaul all of our business processes, resulting in dramatically improved efficiency.

Alongside this initiative, we are also slimming down our head office functions to enable swift decision-making within the organization, partly by delegating greater responsibility to individual product divisions. By reviewing our Company structure, we aim to end up with a 'small but strong headquarters' and a more efficient organization.

## PROMOTING THE GLOBALIZATION OF OUR OPERATIONS

With worldwide competition increasing in intensity, we need to boost our international competitiveness by globalizing our business. In line with this goal, we must further develop our overseas operations, both in terms of investing in local manufacturing bases and increasing the level of overseas procurement activities. As well as boosting our presence in foreign markets, we need to strengthen our entire global network.

Motorcycles were the first of our major product categories that we began making overseas. Since then, we have greatly expanded the scope of our offshore manufacturing operations in the United States, Europe and Asia to include ships, rolling stock, construction machinery, hydraulic machinery, marine propulsion systems, industrial robots, and steel structures. We intend to build further on this base by expanding the number of overseas production bases, principally for motorcycles, mass-manufactured industrial goods and related products, and by manufacturing more products for overseas markets locally.

To promote this localized approach and increase the ties linking our Japanese and overseas operations, we are seeking to apply the engineering expertise we have accumulated in Japan, as well as Japanese production technology, to these local manufacturing operations. This process is designed to ensure that production costs are in line with market prices, and also to improve quality control systems, so that output is always of a high quality. As a company, the forces driving our competitiveness are our technical prowess and our manufacturing technology—and this will continue to be the case. As our prime location for technological development, Japan will rightly continue to play the key role in our operations as the main center of our state-of-the-art technological development efforts.

As we have described above, to develop our business as a global enterprise over the coming decades, we are committed to resolutely developing our management abilities, all the while seeking to enhance shareholder value. We would therefore ask our shareholders for their continued understanding and support as we take up the challenges before us.

June 1999

*Dr. Hiroshi Ohba - Chairman and CEO*

*Toshio Kamei - President*

# Concern for the Environment

With the dawn of the new millennium imminent, our coexistence with the environment is perhaps the single most important issue facing mankind. Today, in countries around the world, the quest for sustainable development is leading scientists and engineers to take on the intensifying challenge of balancing the demands posed by modern economies with the need to protect the natural environment.



## Awareness of global environmental issues

Having first established an environmental management department as far back as 1972, KHI has been concerned with the environment from an early stage. Today's realities are, however, making KHI still more aware that its development as a sound, global enterprise in the coming decades is critically dependent on the Company's attitude towards the environment. In short, a company that does not take care of the environment will simply not survive. With this imperative in mind, KHI is expanding the scope of its environment-oriented activities on a variety of fronts.

One example of these activities is the Company-wide introduction of environmental management systems based on the international standards stipulated in the ISO 14001 protocols. This initiative aims to lower environmental risks and promote ongoing improvement in management practices to ensure that concern for the environment continues to be one of KHI's foremost priorities. Growing beyond creation and introduction of such systems, which are now in various stages of securing third-party certification, all KHI divisions have instituted regular internal environmental audits.

## A structured and planned approach

The basic rationale guiding KHI's development of its environmental management systems was formulated in a fundamental planning document, first produced in fiscal 1995, which provided an overview of all the Company's aims and activities directed at environmental protection.

The basic thinking that underpinned the first stage of this plan, which covered the three years spanning fiscal 1995-97, was one of coordinating independent action throughout the Company to tackle environmental problems proactively. The three main thrusts of the initiative were to institute preventive measures to stop pollution at its source, to initiate programs aimed at maintaining the natural environment, and to encourage collaboration with local organizations to promote more effective environmental protection. In terms of specific environmental criteria, this stage of the plan focused on six principal goals:

1. Develop and establish sound, effective environmental management systems.
2. Develop a comprehensive pollution prevention program.
3. Promote energy-saving measures.
4. Conserve resources and promote recycling measures.
5. Reduce or eliminate use of specified CFCs.
6. Accelerate research and development work on environment-related products and technologies.

The second stage of this plan, which covers the three years spanning fiscal 1998-2000, builds on the achievements of the first stage. It defines that environmental protection as one of the most important issues now facing the Company's management and stresses that the need for all KHI's divisions to tackle environmental issues proactively is more pronounced than ever. As a manufacturer of fundamental industrial products with wide-ranging operations covering land, sea and air, KHI must naturally observe all aspects of environmental legislation as it develops its businesses worldwide.

The new plan also stipulates that, as part of the creation of a society with recycling at its core, KHI must work to convert waste products into reusable materials, and to promote the effective use of energy. The plan also commits the Company to increasing its social contribution by accelerating the development of new products and technologies designed with the demands of environmental protection in mind. Another new initiative of this plan is to use KHI's ISO 14001-related environmental management systems activities as an effective tool for building more powerful environmental protection programs.

To oversee environment-related activities throughout KHI, a new Environmental Management Department was established in April 1999. This group is now working to ensure that at every level of the Company, and in every field in which KHI operates, the Company's operations are managed with due consideration to environmental protection.

## Working towards ISO 14001 accreditation

As of the end of March 1999, KHI had gained ISO 14001 certification at three sites in Japan. The first to be awarded certification was the Nishi-Kobe Works of the Precision Machinery Division, in February 1998, and second was the Industrial Robots Division, in October 1998, followed by the Environmental Plant Division in March 1999. These three divisions commenced their drive towards certification in fiscal 1998 through the establishment of internal environmental ISO progress committees and other measures and have since served as leaders in the accreditation process throughout KHI.

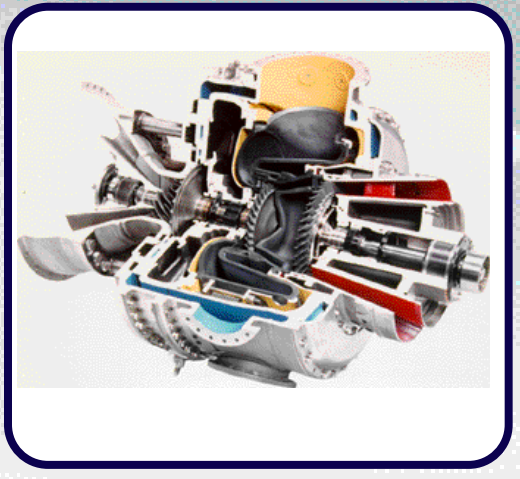
Following the example of the three leading divisions, all of remaining KHI divisions are currently moving to begin the accreditation process, taking into account the unique features of their business areas and the special needs of their customers. The aim is for all the principal domestic divisions to have successfully gained ISO 14001 recognition by the end of March 2002.

## Creating products that are kind to the environment

KHI operates as a comprehensive plant engineering firm, and, as such, produces a wide variety of products that benefit the environment. KHI is an active developer of new environment-friendly technologies that reduce pollution from waste disposal plants and help promote the recycling of materials. In the environmental equipment field, the company has been responsible for a variety of innovations:

1. Gasifying melting incineration systems: the next generation of municipal refuse incinerators
2. Ash melting systems: reducing refuse volume while converting wastes to usable resources and non-polluting substances
3. Fly ash processing systems: helping to eliminate dioxins and other pollutants
4. Flue gas processing facilities: curbing dioxin, HCl, SOx and NOx pollution
5. Refuse-derived fuel (RDF) production plants: transforming wastes into fuels
6. Liquefaction systems for waste plastic: creating liquid fuels

A pilot plant for gasifying melting incineration system in Sodegaura, Chiba Prefecture, has been in operation since April 1998.



This 300 kW ceramic gas turbine generator, developed under a contract with New Energy Development Organization (NEDO) of Japan, promises to boost energy efficiency substantially. In tests, this unit has produced thermal conversion ratios in excess of 42%—more than double conventional equivalents.

KHI is committed to playing its part to protect the environment in every way possible. This means getting fully involved in saving energy, conserving resources, reducing the impact on the environment, in constructing functional recycling systems, and working towards a society that is free of the scourge of waste gas emissions.



Last year saw the completion of two pilot plants in this area. The first, a gasifying melting refuse incinerator, can convert municipal refuse directly into industrial slag while effectively suppressing production of toxic dioxins. This is made possible by using a conversion process that takes place at 500°C and under a pressure of 85 atm. The high-pressure, high-temperature steam produced drives turbines that can generate electric power with an overall conversion efficiency in excess of 30%. In combination, these benefits make this plant a ground–breaking achievement.

The other pilot plant, constructed jointly with another firm, is a waste plastic liquefaction plant, which is capable of recycling the waste plastic elements in household refuse into kerosene and other light-oil fractions of high enough quality to be used as fuels.

In the power plant field, KHI is supplying high-efficiency, low-NOx combined-cycle power plants. KHI has also developed proprietary boiler technology that ensures ultra-low levels of NOx waste pollutants in power generation and industrial processes (see page 18 and 19). In the industrial gas turbine field, KHI is developing a new kind of ceramic turbine generator that produces very low levels of NOx emissions. In tests conducted in 1998, this turbine achieved the world's highest-ever recorded thermal conversion efficiency.

As a motorcycle manufacturer, KHI formulated its own plan to reduce the environmental impact of motorcycles back in 1994, and has steadily upgraded its environmental protection program ever since. In February 1998, the Consumer Products division launched a fresh initiative to increase the recycling of used Kawasaki motorcycles. The division has subsequently continued to expand the scope of its activities targeted at enhancing environmental protection. Based on these plans, the division is currently working towards several goals, which include two specific numerical targets:

1. Achieve 90%+ recyclability for all new vehicles by the end of fiscal 2003.
2. Keep the small amount of lead metal used in new motorcycles in absolute terms at 1996 levels.

To meet targets such as these, KHI has instituted a prior evaluation system to assess the environmental risks posed by products throughout their lifecycle.

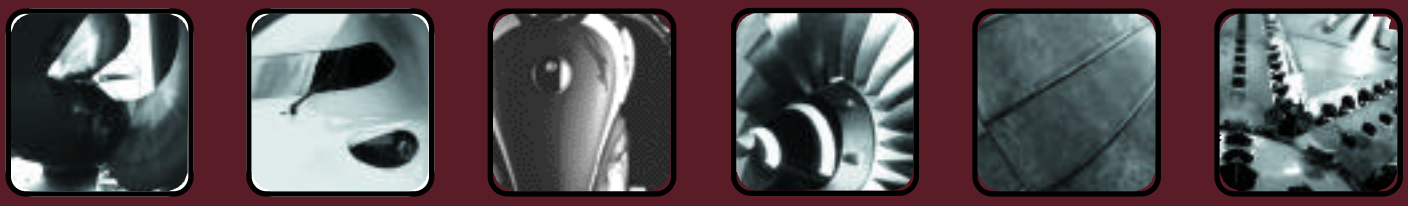
## Future outlook

The Earth Summit convened in 1992 in Rio de Janeiro marked the start of a new age of environmental awareness. Today, nearly a decade on, the seriousness of various environmental problems of global proportions—such as global warming—has become apparent, and there is a pronounced and accelerating trend towards concerted international efforts to tackle these problems. In addition, being a 'good corporate citizen' now means being obliged to take positive action on environmental issues.

KHI is committed to playing its part to protect the environment in every way possible. This means getting fully involved in saving energy, conserving resources, reducing the impact on the environment, in constructing functional recycling systems, and working towards a society that is free of the scourge of waste gas emissions. By doing so, KHI is not only fulfilling its obligations to its shareholders and business partners, but is also making a valuable contribution to the global community. KHI is committed to earning the trust and support of society by continuing to ensure that all corporate activities are compatible with the protection and preservation of our irreplaceable environment.

# Outline of Kawasaki Global Operations





**Transportation Equipment**
Ships
Rolling Stock
Consumer Products

**Aerospace**

**Industrial Equipment**
Plant Engineering
Machinery & Steel Structures

**Main Products**

LNG carriers
LPG carriers
Container ships
VLCCs and other types of tankers
Bulk carriers
High-speed vessels (Jetfoils, Jet Piercers)
Submarines
Maritime application equipment



# Ships

KHI has a long history in shipbuilding extending back over a century. Today, having developed a wealth of innovative technologies to make ships larger, faster and more automated, KHI ranks as one of the world's leading shipbuilding firms. The Company's advanced shipyards are capable of building a wide variety of ships, from large vessels such as LNG or LPG carriers, VLCCs (very large crude-oil carriers) and container ships, to the ultrahigh-speed passenger ship, the Kawasaki Jetfoil. Supported by high-level production technology and management expertise, the Sakaide Works is the site for the construction of large vessels. At the Kobe Works, KHI makes submarines and smaller, special-purpose vessels for the Japan Defense Agency and other customers.

During fiscal 1999, KHI received orders for nine vessels, including three LPG carriers and four VLCCs. A total of ten ships were delivered to customers during the year, including one LNG carrier and three container ships.

Since the latter part of 1998, the Sakaide Works has introduced continuous production of double-hull VLCCs. KHI has also successfully developed a new structural formula for the hulls of ships that is both innovative and unique within the industry. This strengthens hulls while simultaneously reducing the amount of reinforcing materials required during construction. The new method has thus boosted both quality and productivity.

KHI's joint venture in Nantong, Jiangsu Province, China, completed its new shipbuilding dock in May 1999, at which time a ceremony was held to mark the commencement of operations. Currently this shipyard is constructing its first vessel, a bulk carrier, which is due to be delivered at the end of 1999.

The world shipbuilding industry is facing a supply-demand imbalance, particularly as a consequence of the recent downturn in the Asian economy. In response, KHI is striving to reduce materials costs and raise productivity to boost cost competitiveness. At the same time, KHI is continuing to develop new, advanced products and technologies that will serve to differentiate the Company from its competitors.

**“Alnoof” Container Ship**
Capable of single-man operation, the Alnoof, ordered by the United Arab Shipping Company, is a state-of-the-art container ship of the Panamax type, with a maximum capacity of 3,800 containers.


**“Al Wakrah” LNG Carrier**
A 135,000 $m^3$ capacity makes the Al Wakrah the world’s largest LNG carrier. Supplying Japanese electric utilities from Qatar, the vessel features a special thermal insulation panel designed by KHI that enhances the efficient transportation of cargo.

**Chinese Joint Venture Launches First Vessel**
KHI’s joint venture in Nantong, Jiangsu Province, China, launched its first vessel on May 8, 1999.

**Main Products**

Electric cars (including Shinkansen)

Electric and diesel locomotives

Passenger coaches

Integrated transit systems

Monorail cars

Platform screen doors



# Rolling Stock

Since it first began producing rolling stock in 1906, KHI has accumulated a wealth of experience and technological expertise in this field. Over the years, KHI has been responsible for the design and construction of a large number of trains, many of which enjoy a significant place in Japanese railway history.

KHI's Hyogo Works features an online production control system and the latest robotics. As well as car-rotating jigs that greatly facilitate welding and outfitting operations, the plant makes use of automatic robot welding and many types of numerical control devices.

The latest technology is also employed at KHI's rolling stock R&D center. As well as a climate-testing laboratory that can recreate every kind of weather condition to test suitability for different climates, KHI makes use of special load-testing facilities and bogie-rotating test stands that can assess the performance of rolling stock by simulating speeds of up to 420 km/h. At the design stage, KHI uses CAD/CAM processes to tailor the projected design to diverse individual customer requirements, and then test the strength and integrity of the resulting structure on computer. This kind of technological prowess has enabled KHI to maintain its position as Japan's top rolling stock manufacturer, leading the way in the development of the latest trains, notably the new generation of Shinkansen bullet trains.

KHI has also been proactive in pushing into overseas markets. In the United States, KHI has been supplying the New York City Transit Authority (NYCTA) with subway cars over many years. KHI has received orders for next-generation subway cars from the NYCTA in each of the past two fiscal years, bringing the cumulative number of cars ordered to over 1,000. In conjunction with the Hyogo Works, Kawasaki Rail Car, Inc., the Company's U.S. rolling stock manufacturing subsidiary, is in the final stages of assembling large orders of bi-level passenger coaches for U.S. customers.

Partly due to increasing environmental concerns, railways are currently being reconsidered in the United States as one of the more effective means of urban mass transit—a trend that is expected to boost future demand. For this reason, KHI is focusing its overseas sales efforts on the U.S. market, while also working to improve manufacturing efficiency through further development of its system of shared responsibility between the U.S.-based and domestic production sites.

KHI aims to develop its rolling stock business further by increasing its systems integration expertise, to enable it to supply a wider range of rolling stock and associated systems both at home and abroad, and thereby burnish its reputation as a comprehensive rolling stock supplier.

**Series 700 Shinkansen Bullet Train**
Jointly developed with Japan Railways (JR) West and JR Central, the 700-series *Nozomi* Shinkansen bullet train boasts enhanced passenger comfort and an advanced, streamlined profile that reduces wind noise. It went into service in March 1999.

**Bi-Level Passenger Coaches for U.S. Market**
These bi-level passenger coaches went into service in Long Island, New York, in October 1998.

**Series 285 Express Train**
Jointly developed with JR West and JR Central, the *Sun Rise* bi-level express train features sleeper coaches with individual compartments suitable for one or two passengers, together with other luxurious features such as lounges and shower rooms.

**Main Products**

Motorcycles

All-terrain vehicles (ATVs)

Jet Ski® personal watercraft

General-purpose gasoline engines

Brush cutters

Transmissions



# Consumer Products

KHI's Consumer Products enjoy a wide customer base throughout the world. Particularly overseas, the Kawasaki brand name is intimately associated with motorcycles and enjoys high recognition. Other popular consumer products are Jet Ski® watercraft, which KHI was the first firm in the world to commercialize successfully. In recent years, KHI has also become well-known for ATVs (all-terrain vehicles) and the MULE, a multi-purpose four-wheeled vehicle.

A global network of 16 manufacturing bases and over 6,000 dealerships supplies KHI products around the world. Of these, the most long-lived overseas manufacturing operation is the Lincoln plant in Nebraska managed by Kawasaki Motors Manufacturing Corp., U.S.A., which this year celebrated the 25th anniversary of breaking ground at the site. When it commenced operations back in 1975, the Lincoln plant was the first Japanese-owned motorcycle factory in the United States. It was producing motorcycles before any other Japanese motor vehicle maker had established any local U.S. manufacturing operations. Today, as well as large-displacement motorcycles destined for the U.S. market, the plant is a worldwide supply base for Jet Ski® watercraft, ATVs, and MULE multi-purpose four-wheeled vehicles. Production capacity has also been expanded to incorporate manufacturing facilities for industrial robots.

During fiscal 1999, the economic slump in Thailand, Indonesia and other parts of Southeast Asia had a negative impact on sales of motorcycles in these markets. However, this was offset by strong demand in Europe and North America. Sales of super-sports motorcycles such as the new ZX-6R and the ZX-9R models grew substantially, while good sales progress was also made with ATVs and MULE multi-purpose four-wheeled vehicles in Canada and the United States. Moreover, having commenced operations in October 1998, production at KHI's manufacturing joint venture for motorcycle engines on Hainan Island in China is progressing smoothly.

The motto of the Consumer Products Division is 'Let the good times roll!' Based on this notion of providing consumers with personal transportation products that afford great satisfaction and enjoyment, KHI will continue to develop new products, while striving to expand its global sales and manufacturing network.

**Kawasaki W650**
With its elegant lines and powerful SOHC air-cooled twin-cylinder engine, the W650 road sportsbike is engineered down to the finest detail to combine riding pleasure with mesmerizing beauty. Its styling and unique, throaty growl have won many fans around the world.

**Kawasaki Ninja ZX-9R**
Supreme in its class, this classic 900cc road sports model has awesome power and enhanced maneuverability to provide the ultimate riding experience.

**KVF400 All-Terrain Vehicle**
Fitted with a continuously variable transmission, the KVF400 is a first-class sports or utility vehicle. With a torquey response and excellent maneuverability, it is ideally suited for hunting or trail riding, and can also be used in agricultural applications.

**Main Products**

T-4 intermediate jet trainers

CH-47, OH-1 and BK117 helicopters

Component parts for B777 and B767 passenger airplanes

Missiles

Electronic equipment

Space equipment

Jet engines

Gas turbines



# Aerospace

Aerospace promises to be one of most knowledge-intensive industries in the upcoming century. As a manufacturer of aircraft and engines in both defense and commercial aviation, KHI is at the forefront of the Japanese aerospace industry, and is developing a wide range of business in these important fields.

KHI has been the prime contractor in designing and manufacturing a number of projects for the Japan Defense Agency, including the P-3C anti-submarine warfare patrol airplane, the T-4 intermediate jet trainer and the CH-47J large transport helicopter. In 1997, KHI completed development work on OH-1 light observation helicopter prototypes, and the model went into mass production in 1998. In the same year, KHI's highly experienced helicopter development team received the Howard Hughes Award from the American Helicopter Society for their work on the OH-1, into which they have incorporated a variety of technical innovations. This was the first time that this prize had been awarded to a team from outside the United States.

In the commercial aviation field, KHI supplies component parts for the B777 and B767 passenger airplanes developed jointly with The Boeing Company. KHI has also jointly developed the BK117 twin-engine helicopter with MBB (currently Eurocopter Deutschland GmbH). This is the very first helicopter to be developed solely in Japan, and is now being manufactured for customers around the world.

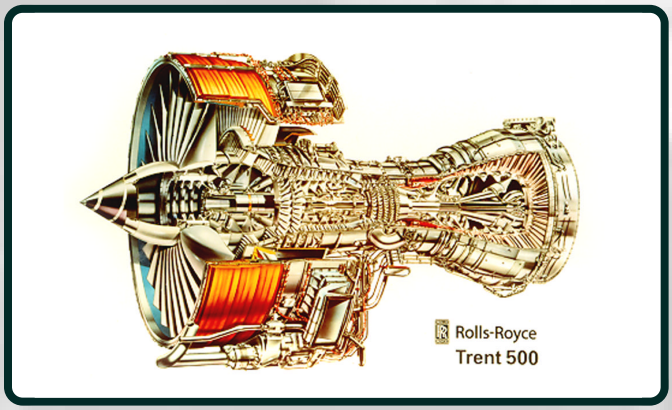
In the jet engine business, in addition to the production of gas turbine engines for naval vessels and military aircraft, KHI is also involved in the international joint development and manufacture of V2500, RB211/Trent and PW4000 turbo-fan engines for passenger aircraft. To further develop the civilian jet engine side of its business, in December 1998, KHI entered into a joint development and production program with Rolls-Royce for the new Trent 500 engine model.

In fiscal 1999, KHI's aerospace-related sales dropped below the level of the previous year principally due to a drop-off in sales to the Japan Defense Agency. The level of orders also fell, reflecting weaker demand in both the defense and commercial aviation sectors.

Having emerged just this century, aerospace is still a relatively new business. With the invention of the jet engine, aircraft have become larger and increasingly more sophisticated, and the spectrum of applications in both the defense and commercial aviation markets has broadened. KHI has also deepened its exposure to aerospace through involvement in various space programs. Looking to the future, KHI intends to continue developing its technological expertise to lead the way ahead into the next century.

**T-4 Intermediate Jet Trainer**
The T-4 intermediate jet trainer has been highly praised for its use in training Japanese fighter pilots in tactical operations. It also makes regular appearances at aerial demonstrations.

**BK117 Helicopter**
Packed with advanced features such as a GPS-based navigation system and fly-by-wire controls, the BK117 helicopter is used in a wide range of applications, from carrying personnel to fire-fighting and police operations.




**Trent 500 Turbo-Fan Engine**
KHI is part of the international development team for the Trent 500 next-generation turbo-fan aircraft engine, which will be used in Airbus A340-500 and A340-600 aircraft.

**Main Products**

Steel making, cement, chemical and other industrial plants

Power plants

Boilers

Ash handling equipment

Municipal refuse incineration plants

Bulky refuse crushing and screening plants



# Plant Engineering

In April 1999, in a major reorganization of its plant engineering operations, KHI brought together into one unit all of its sales, engineering support and other functions for industrial plants, power plants and environment-related products. This will enable KHI to improve the speed and breadth of response it can make to customers to meet all their general engineering needs. The move will also allow KHI to develop further as a comprehensive supplier of industrial and power plants, as well as waste disposal and other environment-related facilities.

In the industrial plant sector, KHI designs and builds factories for steel, cement, chemicals and other key industrial products. KHI's technological expertise has been the main factor in its involvement in a large number of such projects both at home and abroad. During fiscal 1999, the division received orders from the United States for cattle-feed and food additive production plants, and from Taiwan and Kenya for zinc galvanizing plants. In Japan, the year saw the delivery of a steelmaking plant to a domestic steel manufacturer.

In the power plant sector, the main thrust of KHI's business is a technical tie-up with ABB (currently ABB Alstom Power) for combined-cycle power plants (CCPP). During fiscal 1999, KHI received an order from a domestic steel manufacturer for a high-efficiency 90 MW cogeneration power plant. By operating using only blast furnace gases with a low calorific value, these power generation systems can achieve total thermal conversion efficiencies of around 50%. This order represents Japan's first such cogeneration system.

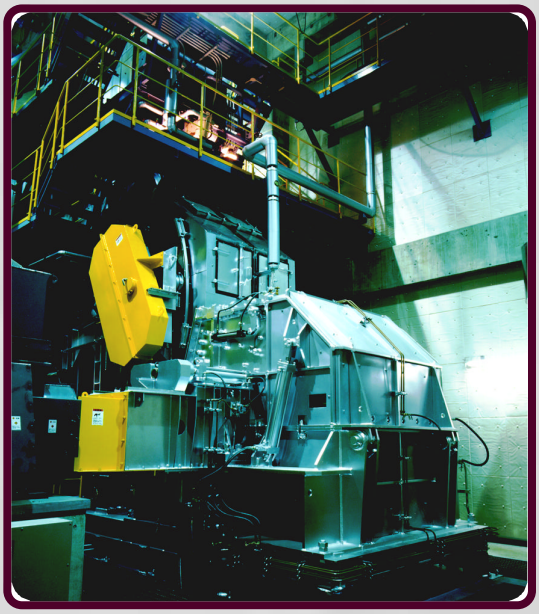
Other major products in this sector are boilers that are specially designed for power generation and industrial processes. During the year, the Company delivered KHI's specially-developed boiler for a Japanese firm. This involves a proprietary method of NOx and dust reduction called KACC (Kawasaki Advanced Clean Combustion) technology, which ensures that the plant's waste gases have exceptionally low concentrations of these types of environmental pollutants.

In the environmental field, KHI is one of Japan's top manufacturers of municipal refuse incineration plants. During the year, KHI received orders for a number of these plants, as well as orders for various plant modifications designed to reduce the amounts of dioxin released into the atmosphere from such facilities. Several of these kinds of products were recognized within sales during the year. In addition, KHI made delivery of a recycling complex known as a Recycling Plaza to the city of Fukushima.

In the plant engineering sector, demand is growing for plants that are more environment-friendly or boast leading-edge technologies. KHI is committed to developing and supplying a variety of plants and facilities with an ever-widening array of capabilities to meet this demand.

**Steelmaking Plant**
KHI designed, manufactured and managed the installation of this steelmaking plant for Sumitomo Metal Mining. It incorporates the latest environment-friendly designs and boasts world-leading productivity levels.

**Oil-Fired Boiler**
Built for Kishu Paper, this specialized heavy-oil boiler is the first of its kind to feature KHI's proprietary low-NOx combustion system, which uses a split combustion chamber to allow gases to be more completely burnt off, thereby reducing NOx emissions.



**Fukushima City Recycling Plaza**
This system enables the recycling of steel and aluminum as reusable materials by shredding and screening bulky noncombustible waste. The plaza also has facilities to recycle steel and aluminum cans, and to promote the city's recycling activities.

# Machinery & Steel Structures

**Main Products**

Aero-derived gas-turbine engines for naval vessels; Diesel engines

Bridges; LNG and LPG tanks; Penstocks; Watergates; Steel frames

Airport facilities

Shield machines and tunnel boring machines

Crushing machinery

Industrial hydraulic equipment

Wheel loaders and road rollers

Industrial robots

Medium-sized gas turbine generators

KHI is one of Japan's leading suppliers of steel structures such as bridges and storage tanks for LNG or LPG. These structures often form part of key pieces of Japan's transport and industrial infrastructure. Examples of civil engineering projects in which KHI has been a major participant include the drilling of the Eurotunnel under the Straits of Dover, the construction of Kansai International Airport near Osaka, and the building of the world's longest single-span suspension bridge across the Akashi Straits, which separate the island of Shikoku from mainland Japan. During fiscal 1999, KHI received orders for an LNG tank from a Japanese gas supplier, and for steel stacks and penstocks from electric power companies. On the sales side, the division recognized sales of bridges, as well as the H-IIA rocket launch complex for the National Space Development Agency of Japan.

KHI also manufactures a wide variety of machinery. These include prime movers, such as gas turbines, steam turbines and diesel engines for marine and industrial use. In addition, KHI makes many different kinds of air-powered machines, ranging from centrifugal compressors to compression modules. The Company also boasts a leading position in Japan in the manufacture of machines designed for crushing and pulverization. During fiscal 1999, KHI received orders for ship engines from both domestic and foreign customers, and also made delivery of a variety of such products.

As part of the April 1999 corporate reorganization, the prime mover and crushing machine businesses are now managed in the same group as steel structures. Incorporating stronger marketing functions, the new organization is designed to boost the effectiveness of new product development activities and to promote the cost-competitiveness of KHI's businesses in all three of these areas.

In terms of mass-manufactured industrial products, KHI makes a wide range of specialized machinery. As well as being one of the world's top-ranking suppliers of hydraulic machinery, KHI is Japan's leading manufacturer of small- and medium-sized gas turbine generators. Under the Kawasaki brand name, the Company also markets industrial robots for welding, assembly and handling functions, as well as construction machinery, notably wheel loaders and road rollers.

Demand in the Japanese mass-produced industrial machinery sector was particularly depressed during fiscal 1999 due to the prolonged recession and a downturn in private-sector capital investment. To overcome domestic market problems, KHI is streamlining operations. However, the key to success in this sector remains the globalization of the Company's operations, notably through a greater shift towards overseas manufacturing.

Currently, KHI's principal overseas production base is Kawasaki Precision Machinery (UK) Ltd., a manufacturer of hydraulic machinery based in Plymouth, England. In addition, the Company has local manufacturing and sales operations for industrial robots and construction machinery in the United States. Future expansion plans revolve around the greater use of overseas sales and manufacturing bases, especially those currently being used for motorcycles and related consumer products.

**Kurushima Kaikyo Bridge**
This is one of a series of bridges linking the Japanese mainland and the island of Shikoku. Spanning the Kurushima Straits, it is the world's only suspension bridge with three continuous spans. KHI was involved with the construction of the main towers and the supporting girders.


**Gyratory Crusher**
Ordered by De Beers for delivery to Orapa Mine in Botswana, this gyratory crusher is used to do primary diamond crushing. It has a world-beating processing capacity of 3,000-4,000 tons of ore per hour.

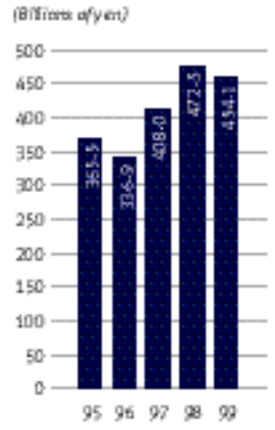
**Kawasaki F-Series Industrial Robots**
Recipient of a "Good Design Award" from the Japanese Ministry of International Trade and Industry in 1998, the Kawasaki F-series of industrial robots is the first in the world with a modular arm construction, which facilitates various configurations to suit different user applications.

**KV10DA Road Roller**
The 10-ton KV10DA road roller features an engine specially designed to reduce exhaust gases, and can operate on slopes inclined at up to 25°.

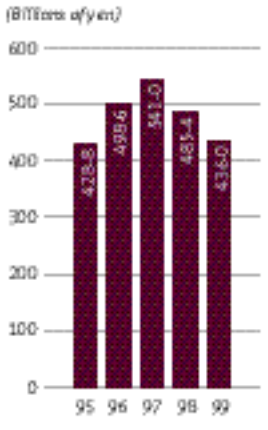
# Composites of Consolidated Sales

Analysis of Operations and Financial Position

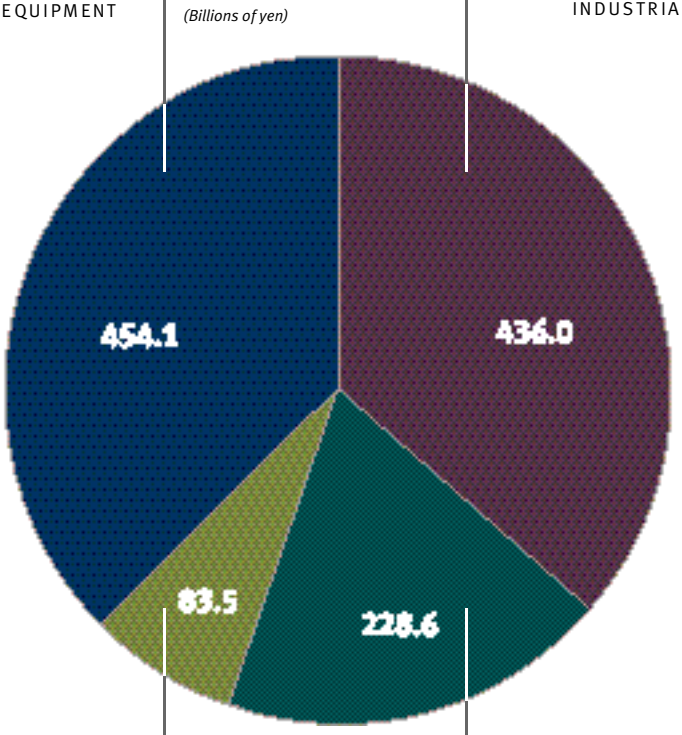




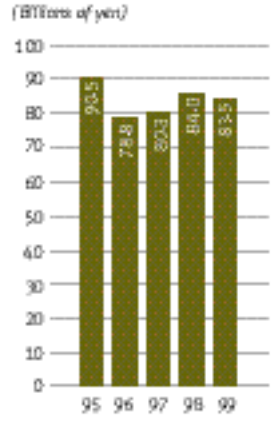

TRANSPORTATION EQUIPMENT



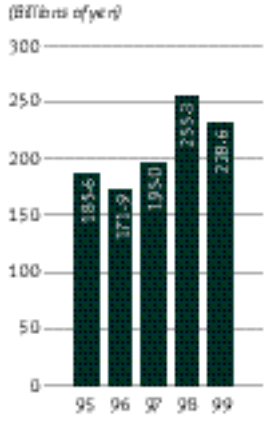

INDUSTRIAL EQUIPMENT




OTHER




AEROSPACE




PARENT COMPANY

TRANSPORTATION EQUIPMENT

Ships

Rolling Stock

Consumer Products

AEROSPACE

Aerospace

INDUSTRIAL EQUIPMENT

Plant Engineering

Machinery
& Steel Structures

OTHER

## JAPAN

Kawaju Kobe Support Co., Ltd.
Kawaju Marine Engineering Co., Ltd.
KHI JPS Co., Ltd.
Kawasaki Rolling Stock Engineering Co., Ltd.
Kawasaki Industrial Co., Ltd.
K-GES Co., Ltd.
Kawasaki Motors Corporation Japan
Union Precision Die Co., Ltd.
Ishihara Dockyard Co., Ltd.

## OVERSEAS

Kawasaki Rail Car, Inc.
Kawasaki Motors Corp., U.S.A.
Kawasaki Motors (UK) Ltd.
Kawasaki Motoren GmbH
Kawasaki Motors Pty. Ltd.
Green River Insurance Company
P.T. Kawasaki Motor Indonesia
Kawasaki Motors Netherlands N.V.
Kawasaki Motors Manufacturing Corp., U.S.A.
Canadian Kawasaki Motors Inc.
Kawasaki Motors Finance Corporation
Kawasaki Engines Europe N.V.
Kawasaki Motors (Phils.) Corporation
Kawasaki Motors Enterprise (Thailand) Co., Ltd.
KM Receivables Corporation



Kawaju Gifu Engineering Co., Ltd.
Kawasaki Helicopter System Ltd.
Kawaju Gifu Manufacturing Co., Ltd.
Kawasaki Akashi Engineering Co., Ltd.

Kawasaki Gasturbine Technologies Co., Ltd.
Kawasaki Prime Mover Engineering Co., Ltd.
Kawasaki Gas Turbine Research Center
Kawasaki Thermal Engineering Co., Ltd.
Osaka Power Engineering Co., Ltd.
Kawasaki Engineering Co., Ltd.
Kawasaki Environmental Plant Engineering Co., Ltd.
Kawaju Yachiyo Engineering Ltd.
Kawasaki Plant Assistance & Service Co., Ltd.
Kawasaki Construction Co., Ltd.
Kawasaki Inspection Service Co., Ltd.
Kawaju Harima Tech Inc.

Kawasaki Hydraulic Co., Ltd.
Nichijo Manufacturing Co., Ltd.
Kawasaki Construction Machinery, Tohoku Ltd.
Kawasaki Construction Machinery, Nishi-Nihon Ltd.
Kawasaki Construction Machinery, Kanto Ltd.
Kawasaki Construction Machinery, Chubu Ltd.
Kawasaki Construction Machinery, Kinki Ltd.
Kawasaki Construction Machinery, Kyushu Ltd.
Kawasaki Safety Service Industries, Ltd.
Kawasaki Hydromechanics Corporation
Kawasaki Metal Industries, Ltd.
Kawajyu Steel Works & Engineering Co., Ltd.

Kawasaki Precision Machinery (UK) Limited
Kawasaki Construction Machinery Corp. of America
Kawasaki Robotics (U.S.A.), Inc.

Kawaju Shoji Co., Ltd.
Kawaju Real Estate Co., Ltd.
Kawasaki Kosan Co., Ltd.
Kawasaki Foods Co., Ltd.
Kawaju Techno Service Corporation
Uji Kanko Co., Ltd.
Kawaju Tomakomai Kanko Kaihatsu Co., Ltd.

Kawasaki Heavy Industries (Europe) B.V.
Kawasaki Heavy Industries (H.K.) Ltd.
Kawasaki Heavy Industries (U.S.A.), Inc.

# Financial Review



With the economy hit by sluggish consumer spending and a downturn in capital investment, Japan's GDP contracted during the fiscal year ended March 31, 1999 (fiscal 1999). Together with difficult conditions in Asian markets, this caused KHI's total consolidated net sales to fall 7.3%, to ¥1,202.2 billion ($9,973 million). As a result of lower net sales and higher selling, general and administrative (SGA) expenses, operating income dropped 57.6% to ¥21.7 billion ($180 million), and KHI posted a net loss for the year of ¥6.1 billion ($51 million). The total cash dividend remained unchanged, at ¥6.00 ($0.05) per share.

## Net Sales

Net sales declined for the first time in six years, with all of KHI's business segments posting decreases in sales revenues.

Sales in the Transportation Equipment segment amounted to ¥454.1 billion ($3,767 million), a fall of 3.9%. This was principally due to a decline in the number of large ships recognized in sales compared with the previous year. Significant manufacturing disruption on major U.S. rolling stock contracts caused the profitability of rolling stock operations to fall, leading to a 95.0% slump in operating income to ¥0.5 billion ($4 million).

Due to lower sales to the Japan Defense Agency compared with fiscal 1998, when the Company delivered the prototypes of the OH-1 light observation helicopter, sales in the Aerospace segment totaled ¥228.6 billion ($1,896 million), a decline of 10.5% over the previous year. Operating income for the segment declined 10.5% to ¥18.4 billion ($152 million).

Sales in the Industrial Equipment segment were also down sharply on the previous year, slipping 10.2% to ¥436.0 billion ($3,617 million). In Japan, sales of custom-ordered capital goods and mass-produced industrial machinery both declined, while exports to Asian markets also suffered. Operating income for the segment plunged 96.1% to ¥0.7 billion ($6 million).

Sales in the Other segment amounted to ¥83.5 billion ($692 million), a fall of 0.6%. Operating income rose 7.8% to ¥2.2 billion ($18 million).

## Geographical Breakdown

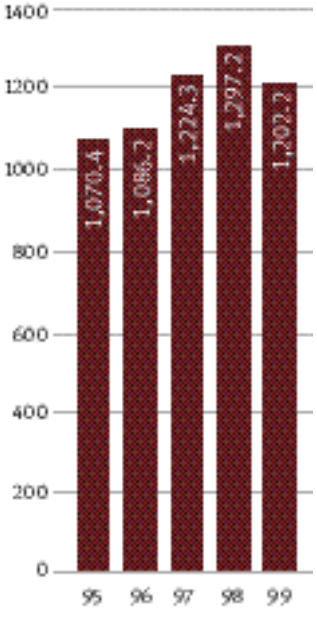
Sales in Japan declined 11.1% to ¥982.9 billion ($8,153 million), while operating income fell 42.3% to ¥27.3 billion ($226 million), both figures reflecting lower parent company revenues and profits.

In North America, sales were boosted by higher revenues from consumer products and rolling stock, and rose 22.0% to ¥155.6 billion ($1,291 million). However, due to deteriorating profitability on rolling stock, an operating loss of ¥5.3 billion ($44 million) was recorded.

A good performance by consumer products in Europe helped boost sales in that region by 25.4%, to ¥46.3 billion ($384 million). At ¥1.3 billion ($11 million), operating income was on par with the previous year.

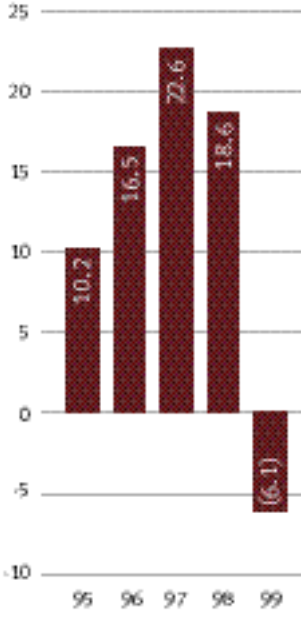
Net sales

*(Billions of yen)*



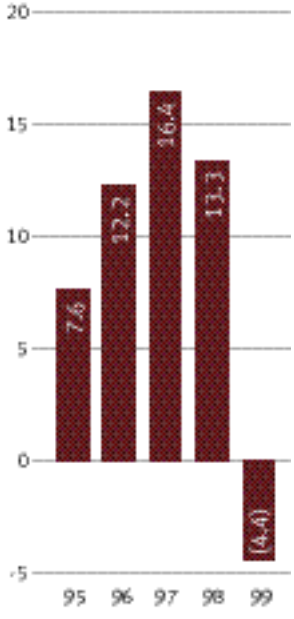

Net income

*(Billions of yen)*



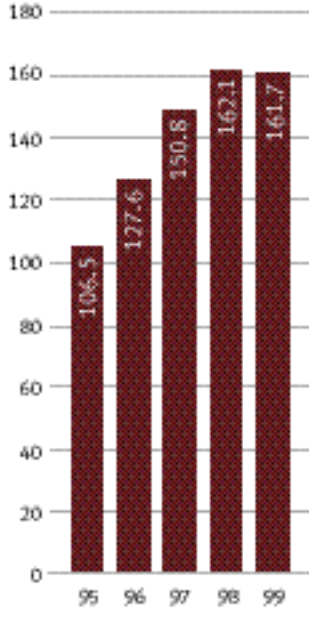

Net income per share

*(Yen)*




Working capital

*(Billions of yen)*



Sales in Asia were adversely affected by the continuing economic downturn in the region. Lower sales of motorcycles and other products caused sales to slide 44.1% to ¥12.9 billion ($107 million). Operating income also fell precipitously, and the region recorded an operating loss of ¥0.9 billion ($7 million).

At ¥4.5 billion ($38 million), sales in Other Areas were slightly ahead of the year before. Operating income was marginally lower at ¥47 million ($389 thousand).

## Overseas Sales

Owing to a rise in sales of overseas consolidated subsidiaries, total overseas sales rose ¥23.1 billion, or 5.2%, to ¥471.1 billion ($3,908 million). This accounted for 39.2% of total sales, compared with a percentage of 34.5% in fiscal 1998. The breakdown of this sales figure between the four overseas regions was: North America ¥231.2 billion ($1,918 million), up 29.0%; Europe ¥87.7 billion ($727 million), up 31.3%; Asia ¥70.8 billion ($588 million), down 28.7%; and Other Areas ¥81.5 billion ($676 million), down 20.6%.

## Sales and Income Ratios

The ratio of cost of sales to net sales rose 1.0 percentage point, from 85.9% to 86.9%. The ratio of SGA expenses to net sales rose 1.2 percentage points, from 10.1% to 11.3%. Accordingly, the ratio of operating income to net sales fell 2.1 percentage points, from 3.9% to 1.8%.

## Cash Flows

Net cash provided by operating activities decreased 53.7% to ¥20.2 billion ($168 million). Net cash used for investing activities declined 2.9% to ¥42.6 billion ($353 million). Net cash provided by financing activities amounted to ¥2.3 billion ($19 million). Cash on hand and in banks therefore decreased by ¥21.0 billion ($174 million), to ¥55.3 billion ($459 million) at the fiscal 1999 year-end.

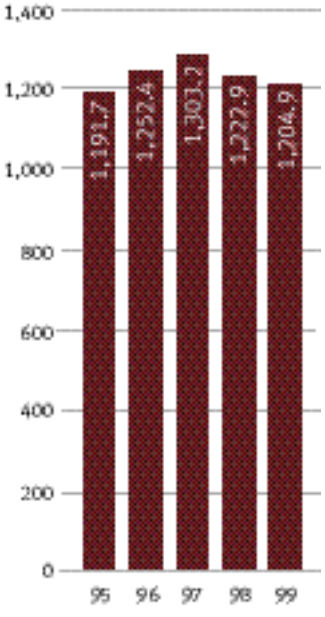
## Financial Condition

The fall in cash on hand and in banks and a slight decrease in inventories led to a 1.5% decline in total assets, to ¥1,204.9 billion ($9,995 million). Total current assets fell 2.6% to ¥884.4 billion ($7,336 million). A 3.2% fall in current liabilities to ¥722.7 billion ($5,995 million), due mainly to decreases in trade payables, advances from customers and accrued expenses, more than offset the 5.5% increase in long-term liabilities. Consequently, total liabilities declined 0.9% to ¥998.9 billion ($8,287 million). Due to the consolidated net loss of ¥6.1 billion ($51 million), which caused a 9.1% fall in retained earnings to ¥93.5 billion ($776 million) following the payment of cash dividends worth ¥8.3 billion ($69 million), shareholders' equity dropped 4.5% to ¥199.6 billion ($1,656 million). The shareholders' equity ratio fell 0.5 percentage points to 16.6%.



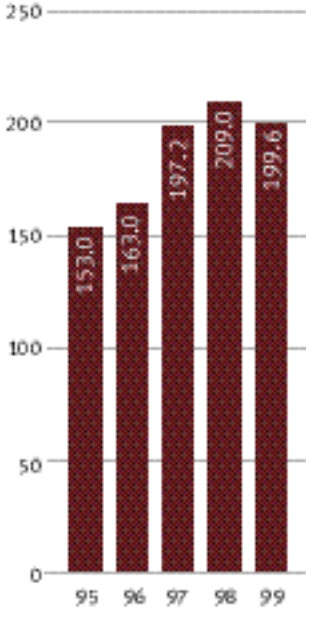
Total assets

*(Billions of yen)*



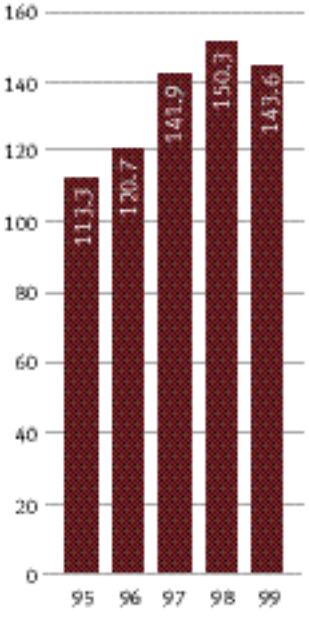

Total shareholders' equity

*(Billions of yen)*



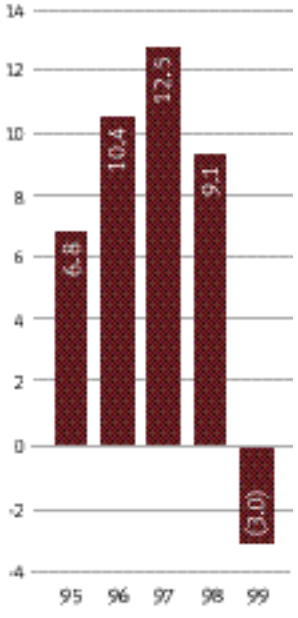

Total shareholders' equity per share

*(Yen)*




Return on equity

*(%)*



# Year 2000 Problem Compliance

## Compliance Status

POLICY

KHI recognizes that full Year 2000 compliance is essential to ensure that all operations run smoothly and that customers can rest assured that business is continuing as usual from January 2000 onwards. With this in mind, assessing compliance and taking necessary countermeasures have been accorded top management priority. KHI's Year 2000 compliance program covers the entire Company, including all affiliates and subsidiaries, and is targeted at KHI-manufactured products, internal information and computer systems, manufacturing systems and other capital equipment.



COUNTERMEASURE PROGRAM: ORGANIZATION

KHI set up working groups across the company in 1996 to tackle the possible problems inherent in its computer systems. Company business division began tackling Year 2000-related problems in KHI's products, manufacturing systems and capital equipment in 1998. To speed up countermeasures further, a comprehensive Company-wide series of progress committees was formed in January 1999. Business division heads are directly responsible for implementing countermeasure programs. The Executive Vice Presidents are responsible for assessing and encouraging progress, with final responsibility for the project resting with the President.

COUNTERMEASURE PROGRAM: PROGRESS

Machine code rewriting, software alterations, and compliance testing of individual systems were all virtually complete as of the end of March 1999. To ensure that KHI's entire operations are compliant, the Company is also conducting general tests on a series of systems covering both upstream and downstream functions. These tests are scheduled to be completed by the end of September 1999.

Each individual business division is responsible for investigating and testing the Year 2000 compliance of each of its products. Having assessed the situation, they are making a report to their customers, and implementing and then testing any necessary improvements. This work is scheduled to be completed by the end of September 1999.

With production systems and other capital equipment, KHI is making the relevant inquiries to the manufacturers concerned. Improvement and testing of all manufacturing process management systems, control systems, other production equipment, and laboratory equipment is scheduled to be completed by the end of September 1999.

COMPLIANCE EXPENDITURE

The total cost of all compliance testing and countermeasure implementation directly related to the Year 2000 problem, principally associated with the correction of software and machine code, is forecast to amount to about ¥1.2 billion ($10 million). As of the fiscal 1999 year-end, actual spending had reached approximately ¥1.0 billion ($8 million). Management judges that compliance can successfully be achieved with current personnel, and that the problem will not significantly affect business operations or performance.

CONTINGENCY PLANNING

While KHI is confident that its thorough program of countermeasure implementation and compliance testing should prevent any problems from occurring after January 1, 2000, such a program cannot provide total assurance that operations will be problem-free, owing to the uncertain nature of the Year 2000 problem. To prepare for unforeseen problems, each area of the Company is drawing up contingency and crisis management plans covering possible failures in KHI's computer systems, products, manufacturing systems and capital equipment. These are scheduled to be completed by October 1999, and are designed to ensure that if problems do arise, KHI can tackle and resolve issues swiftly in conjunction with its business partners, suppliers and customers.

# Six-Year Summary

Kawasaki Heavy Industries, Ltd. and consolidated subsidiaries
Years ended March 31



| | Millions of yen | | | | | |
|---|---|---|---|---|---|---|
| | 1999 | 1998 | 1997 | 1996 | 1995 | 1994 |
| Operating results: | | | | | | |
| Net sales | ¥1,202,189 | ¥1,297,212 | ¥1,224,259 | ¥1,086,244 | ¥1,070,444 | ¥1,070,257 |
| Cost of sales | 1,045,143 | 1,114,693 | 1,041,697 | 928,126 | 912,432 | 919,092 |
| Gross profit | 157,046 | 182,519 | 182,562 | 158,118 | 158,012 | 151,165 |
| Selling, general and administrative expenses | 135,380 | 131,440 | 120,351 | 111,362 | 110,413 | 109,800 |
| Operating income | 21,666 | 51,079 | 62,211 | 46,756 | 47,599 | 41,365 |
| Net income (loss) | (6,132) | 18,556 | 22,572 | 16,462 | 10,216 | 17,122 |
| Capital expenditure | 40,428 | 42,928 | 35,130 | 39,319 | 33,729 | 59,842 |
| Depreciation and amortization | 34,607 | 32,416 | 31,245 | 30,823 | 30,899 | 30,652 |
| R & D expenses | 18,600 | 17,800 | 17,400 | 17,300 | 17,000 | 17,300 |
| Financial position at year-end: | | | | | | |
| Working capital | ¥ 161,712 | ¥ 162,084 | ¥ 150,759 | ¥ 127,644 | ¥ 106,458 | ¥ 68,998 |
| Net property, plant and equipment | 244,866 | 242,435 | 233,196 | 231,615 | 227,173 | 227,213 |
| Total assets | 1,204,857 | 1,222,906 | 1,303,168 | 1,252,371 | 1,191,664 | 1,239,137 |
| Long-term debt, less current portion | 208,763 | 198,135 | 197,130 | 204,801 | 184,535 | 155,904 |
| Total shareholders' equity | 199,637 | 209,040 | 197,161 | 162,984 | 152,991 | 148,253 |
| Per share amounts (yen): | | | | | | |
| Net income (loss) | ¥ (4.4) | ¥ 13.3 | ¥ 16.4 | ¥ 12.2 | ¥ 7.6 | ¥ 12.8 |
| Cash dividends | 6.0 | 6.0 | 7.0 | 5.5 | 5.0 | 5.0 |
| Shareholders' equity | 143.6 | 150.3 | 141.9 | 120.7 | 113.3 | 110.2 |
| Other data: | | | | | | |
| Number of shares issued (millions) | 1,391 | 1,391 | 1,389 | 1,350 | 1,350 | 1,345 |
| Number of employees | 26,486 | 26,102 | 24,211 | 24,401 | 24,266 | 23,913 |
| Non-consolidated data: | | | | | | |
| Orders received | 950,312 | 1,007,695 | 958,477 | 1,028,903 | 939,899 | 924,264 |

# Supplementary Information on Non-Consolidated Results

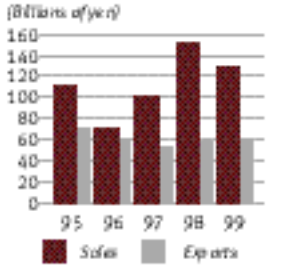
Years ended March 31



## Ships

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 115.8 | 69.5 | 100.6 | 154.5 | 124.9 |
| Exports | 72.4 | 60.0 | 49.0 | 59.4 | 60.2 |
| Orders | 83.8 | 119.3 | 56.3 | 120.9 | 86.5 |
| Order Backlog | 201.9 | 269.1 | 243.5 | 213.7 | 168.0 |





**Major Orders**

- 4 VLCCs (Very Large Crude-oil Carriers)
- 3 LPG carriers
- 2 pure car carriers

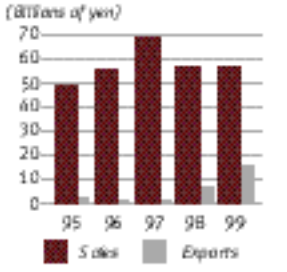
**Major Components of Sales**

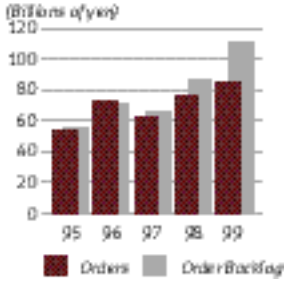
- LNG carrier
- Container ship
- Heavy cargo ship
- Bulk carrier
- Submarine
- Deep submergence rescue vehicle

## Rolling Stock

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 49.7 | 57.3 | 68.0 | 57.1 | 57.3 |
| Exports | 2.5 | 0.3 | 1.3 | 6.7 | 15.9 |
| Orders | 53.1 | 72.0 | 62.0 | 77.0 | 85.0 |
| Order Backlog | 55.0 | 71.6 | 67.2 | 87.5 | 111.5 |




**Major Orders**

- 266 cars for JR Group, including 119 Shinkansen cars
- 337 cars for other domestic railways
- 212 subway cars for New York City

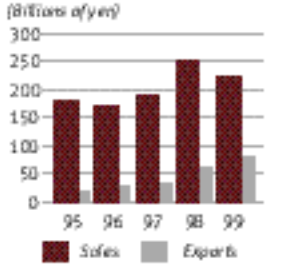
**Major Components of Sales**

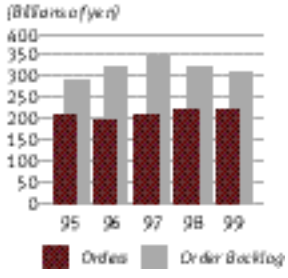
- 209 cars for JR Group, including 70 Shinkansen cars
- 112 cars for other domestic railways
- 136 bi-level passenger coaches for the United States

## Aerospace

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 185.7 | 171.8 | 194.9 | 252.3 | 22.8 |
| Exports | 22.5 | 23.4 | 43.4 | 63.2 | 81.1 |
| Orders | 206.5 | 198.5 | 212.8 | 223.9 | 217.4 |
| Order Backlog | 291.6 | 324.9 | 349.7 | 322.9 | 308.6 |




**Major Orders**

- T-4 intermediate jet trainers
- CH-47J large transport helicopters
- OH-1 light observation helicopters
- Anti-tank missiles
- Component parts for the Boeing 767 and 777
- BK117 helicopters
- Component parts for V2500, RB211/Trent and PW4000 turbo-fan engines

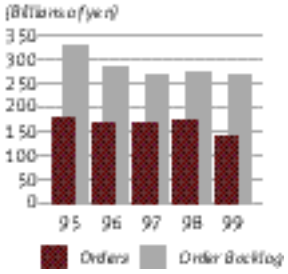
**Major Components of Sales**

- T-4 intermediate jet trainers
- CH-47J large transport helicopters
- EP-3 ELINT (electronic intelligence)
- Helicopter engines
- Gas turbine engines for naval vessels
- Component parts for the Boeing 767 and 777
- Component parts for V2500, RB211/Trent and PW4000 turbo-fan engines

## Machinery, Environment & Power Plants

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 141.0 | 200.1 | 192.4 | 163.4 | 150.6 |
| Exports | 25.4 | 13.5 | 34.3 | 14.6 | 31.7 |
| Orders | 178.3 | 165.4 | 164.1 | 171.7 | 145.3 |
| Order Backlog | 323.6 | 288.9 | 262.6 | 269.7 | 262.6 |


**Major Orders**

- Cogeneration power plant from a domestic steel manufacturer
- Municipal refuse incineration plants and plant modifications for dioxin reduction
- Marine diesel engines from domestic and overseas customers

**Major Components of Sales**

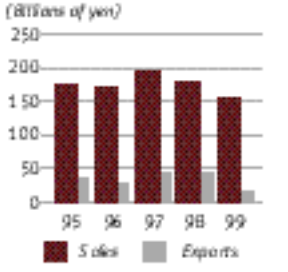
- Municipal refuse incineration plants and plant modifications for dioxin reduction
- Recycling Plaza
- Ash handling equipment for a domestic electric power company
- Power generation facilities for an oil chemical company
- Natural gas compression modules for India and Malaysia
- Marine gas / steam turbines and diesel engines for domestic and overseas customers

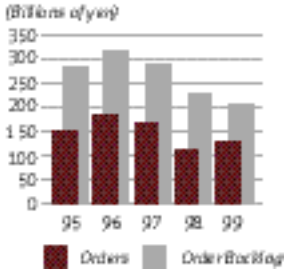


## Plant Engineering & Steel Structures

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 170.5 | 166.7 | 195.1 | 172.4 | 156.2 |
| Exports | 35.5 | 31.4 | 46.6 | 47.5 | 17.6 |
| Orders | 150.2 | 181.1 | 165.5 | 116.7 | 126.9 |
| Order Backlog | 288.0 | 315.7 | 288.5 | 234.6 | 204.9 |




**Major Orders**

- Cattle-feed additive production plant from the United States
- Food additive production plant from the United States
- Zinc galvanizing plants from Taiwan and Kenya
- LNG tank for a domestic gas supplier
- Steel stacks and penstocks from domestic electric power companies
- Large-diameter tunnel boring machines for the Tokai-Hokuriku Highway
- Bridges
- Building / steel pipe structures
- Container cranes

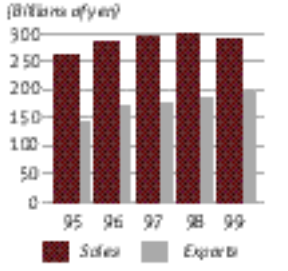
**Major Components of Sales**

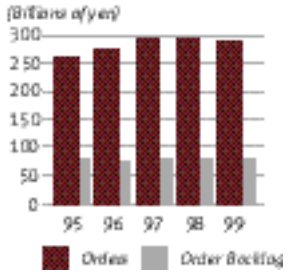
- Steelmaking plant to a domestic steel manufacturer
- Cement plant to Indonesia
- H-IIA rocket launch complex to the National Space Development Agency
- Building / steel pipe structures
- Watergates
- Shield machines

## Consumer Products & Machinery

*(Billions of yen)*

| | 95 | 96 | 97 | 98 | 99 |
|---|---|---|---|---|---|
| Sales | 263.0 | 283.6 | 292.0 | 300.5 | 291.2 |
| Exports | 146.8 | 164.4 | 171.1 | 187.2 | 197.6 |
| Orders | 268.0 | 282.6 | 297.8 | 297.5 | 289.2 |
| Order Backlog | 74.5 | 73.4 | 79.4 | 76.0 | 74.4 |




Though exports of motorcycles to Asian countries were weak, motorcycle sales in European and North American markets and exports of all-terrain vehicles (ATVs) to the United States were strong during the year. Mass-produced industrial machinery such as hydraulic machinery, construction machinery and industrial robots decreased due to a decline in private-sector capital investment in Japan caused by the prolonged recession.

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