Interconnection of Inorganic/Aluminum and Organic Chemical Technologies

Annual Report 2002
Ranking as one of Japan’s leading chemical companies, Showa Denko K.K. operates in the five major sectors of petrochemicals, chemicals, electronics, inorganic materials, and aluminum.

Showa Denko has many consolidated subsidiaries active in a wide range of related operations, including Japan Polyolefins Co., Ltd., which manufactures polyethylene plastics.

We have successfully completed the “Cheetah Project,” a medium-term consolidated business plan for the 2000-2002 period. Specifically, we have renovated operations through restructuring measures, including workforce reduction, and improved our financial strength as we reduced debt and eliminated the accumulated deficit.

Based on these achievements, we have initiated a new consolidated business plan for the 2003-2005 period named the “Sprout Project.”

Under the new project, we will focus our efforts on promoting “strategic growth businesses” through the pursuit of synergies that nurture the interconnections among inorganic/aluminum and organic chemical technologies. Targeting the three major markets of electronics, automotive parts, and personal care/environmental goods, we have identified 12 strategic market units (SMUs) with high growth potential. We will launch a series of individualized, competitive, and high-value products in these market segments, aiming to establish ourselves as an “individualized chemical company.”

Showa Denko is committed to the principle of Responsible Care and is vigorously carrying out an action plan to implement its Responsible Care program.

Forward-Looking Statements

This annual report contains statements relating to management’s projections of future profits, the possible achievement of the Company’s financial goals and objectives, and management’s expectations for the Company’s product development program. The Company cannot guarantee that these expectations and projections will be realized or correct. Actual results may differ materially from the results anticipated in the statements included herein due to a variety of factors, including such economic factors as fluctuations in foreign currency exchange rates as well as market supply and demand conditions. The timely commercialization of products under development by the Company may be disrupted or delayed by a variety of factors, including market acceptance, the introduction of new products by competitors, and changes in regulations or laws. The foregoing list of factors is not inclusive.
CONSOLIDATED FINANCIAL HIGHLIGHTS

Showa Denko K.K. and Consolidated Subsidiaries

CONSOLIDATED FINANCIAL HIGHLIGHTS

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>For the year</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Net sales</td>
<td>¥674,018</td>
<td>¥708,900</td>
<td>¥747,000</td>
<td>$5,616,815</td>
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<tr>
<td>Operating income</td>
<td>31,303</td>
<td>19,169</td>
<td>29,594</td>
<td>260,856</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>13,024</td>
<td>(34,260)</td>
<td>2,763</td>
<td>108,534</td>
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<tr>
<td>Capital expenditures</td>
<td>28,446</td>
<td>32,299</td>
<td>40,023</td>
<td>237,053</td>
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<tr>
<td>Depreciation and amortization</td>
<td>36,956</td>
<td>38,893</td>
<td>40,752</td>
<td>307,963</td>
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<tr>
<td><strong>At year-end</strong></td>
<td></td>
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<tr>
<td>Total assets</td>
<td>986,544</td>
<td>1,030,872</td>
<td>1,088,623</td>
<td>8,221,197</td>
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<tr>
<td>Total stockholders’ equity</td>
<td>150,121</td>
<td>139,458</td>
<td>144,676</td>
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<tr>
<td><strong>Per share</strong></td>
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<tr>
<td>Net income (loss)</td>
<td>¥11.44</td>
<td>(¥30.78)</td>
<td>¥2.66</td>
<td>$0.095</td>
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<tr>
<td>Stockholders’ equity</td>
<td>131.92</td>
<td>122.54</td>
<td>139.34</td>
<td>1.099</td>
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<tr>
<td>Cash dividends (applicable to the period)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td><strong>Number of employees at year-end</strong></td>
<td>10,933</td>
<td>11,970</td>
<td>13,207</td>
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Note: Yen amounts have been translated into U.S. dollars, for convenience only, at the rate of ¥120 to US$, the approximate rate of exchange at December 31, 2002.

KEY SALES BY SEGMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Petrochemicals</th>
<th>Chemicals</th>
<th>Electronics</th>
<th>Inorganic Materials</th>
<th>Aluminum</th>
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<tbody>
<tr>
<td>2002</td>
<td></td>
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</table>
MESSAGE FROM THE MANAGEMENT

In 2002, the third and last year of our medium-term consolidated business plan called the “Cheetah Project,” we achieved the goal of improving our financial strength by eliminating accumulated deficit and substantially cutting debt and total labor costs.

Despite the fact that the Japanese chemical industry continued to face a severe business environment due to the overall decline in selling prices caused by deflation, Showa Denko K.K.’s business performance showed a considerable improvement over the preceding year, thanks to the successful restructuring efforts under the Cheetah Project.

As for the Company’s consolidated performance in 2002, net sales totaled ¥674.0 billion, a decrease of 4.9% from the previous term. However, operating income was up 63.3%, to ¥31.3 billion, as all business segments, except Inorganic Materials, recorded increases in profits due to reductions in labor and other costs.

In the first half of the year, we recorded extraordinary profit, mainly gain on the sale of securities. However, due to the devaluation of investment securities at the end of the term, we ended up with net income of ¥13.0 billion. Thus, we eliminated accumulated deficit by the end of the year.

Nevertheless, we are still undergoing the process of structural reform. We again had to forgo the payment of dividends for the term, and we deeply apologize for this to our stockholders.

Regarding capital investment in 2002, we expanded our hydrofluorcarbon production capacities and newly constructed compound semiconductor manufacturing facilities. Together with expenditures for other expansions, maintenance, and environmental preservation work, our capital expenditures in 2002 totaled ¥28.4 billion.

To reduce debt and improve our financial strength, we worked hard to increase operating income, cut inventories, and sell assets, including disposal of shares in affiliates. As a result, the outstanding balance of interest-bearing debt as of the end of 2002 decreased ¥41.3 billion, to ¥581.1 billion, falling below the line of “¥600 billion or less” targeted under the Cheetah Project.

Launch of the “Sprout Project”

Based on the achievements made under the Cheetah Project, which aimed to renovate operations and improve financial strength, we have launched a new consolidated business plan for the 2003-2005 period named the “Sprout Project.” The main goal of the new business plan is to establish Showa Denko as a focused and individualized chemical company that pursues synergies by nurturing the interconnection of inorganic/aluminum and organic chemical technologies and by the use of market-oriented business strategies.

We will view things from a customer standpoint in our development efforts so as to provide individualized new products that will fully satisfy our customers. At the same time, we will allocate resources in an efficient and focused manner in accordance with a clear business portfolio as defined in the new business plan.

To cope with the progress of deflation in Japan, we will further reduce costs with a view to enhancing our competitiveness and improving profitability.

In January 2003, we established a Corporate Ethics Committee to further strengthen compliance with laws and regulations at Showa Denko K.K. and its Group companies.
Segment Performances

In terms of net sales for the year, the Petrochemicals Segment contributed 33.8%, Chemicals Segment 10.2%, Electronics Segment 11.2%, Inorganic Materials Segment 8.4%, and Aluminum Segment 36.4%. Although net sales decreased ¥34.9 billion from the preceding year, both operating income and net income substantially improved, to ¥31.3 billion and ¥13.0 billion, respectively. A breakdown of net sales and operating income by segment is as follows:

In the Petrochemicals Segment, sales fell 2.5%, to ¥227.8 billion, but operating income rose 62.4%, to ¥10.0 billion, due to cost reductions and increases in the selling prices of organic chemicals in the second half of the year. Sales from olefins operations decreased owing to a decline in shipments in the wake of a maintenance shutdown and a fall in selling prices. In the area of organic chemicals, sales of acrylonitrile increased due to a rise in selling prices and sales of acetic acid increased due to an increase in shipments. However, sales of vinyl acetate monomer and ethyl acetate decreased as the influence of low selling prices in the first half of the year overwhelmed the rise in selling prices in the second half. As a result, overall sales from organic chemicals operations fell.

Sales of polyethylene declined due to the fall in selling prices. Sales from plastic products operations also decreased following the sale of overseas injection molding subsidiaries in late 2001. Showa Highpolymer Co., Ltd., which had been consolidated in the latter half of 2001, contributed to the increase in the Petrochemicals Segment’s sales on a full-year basis. Meanwhile, Heisei Polymer Co., Ltd.’s sales decreased as a result of the transfer of its laminate business.

In the Chemicals Segment, sales decreased 6.1%, to ¥68.5 billion, but operating income increased 20.6%, to ¥5.7 billion, mainly due to cost reductions. Sales from gases & chemicals operations were down owing to the decrease in shipments of industrial gases and chemicals amid the recession. In specialty chemicals operations, shipments of raw materials for cosmetics and new chelating agents increased. However, due to decreases in shipments of raw materials for agrochemicals and specialty polymers, sales from specialty chemicals operations declined slightly. Sales from agrochemicals operations increased owing to contributions by the new herbicides we had acquired in 2001.

In the Electronics Segment, sales decreased 3.2%, to ¥75.2 billion, but operating income shot up 335.2%, to ¥6.2 billion, mainly due to increases in sales volumes of hard disks (HDs). Shipments of gallium phosphide (GaP) LEDs were almost unchanged. Sales of specialty gases for semiconductor processing were almost the same level as that of the preceding year. Sales volumes of
the LCD polishing agent increased, but sales volumes and selling prices of rare earth magnetic alloys decreased. In addition, the sale of capacitor-grade tantalum powder was terminated. As a result, sales of electronic materials as a whole decreased.

In the Inorganic Materials Segment, sales rose 4.3%, to ¥56.9 billion, but operating income was down 61.0%, to ¥1.4 billion. Sales from ceramics operations decreased owing to a continued stagnation in the customer industries, which led to decreases in both sales volumes and selling prices. Sales from carbons & metallic materials operations also fell due to the fact that increases in sales volumes of graphite electrodes were not sufficient to offset decreases in their selling prices. Showa Denko Carbon, Inc., our graphite electrode subsidiary in the United States, saw a decline in sales due to the fall in selling prices that more than offset the rise in shipments.

In the Aluminum Segment, sales were down 9.0%, to ¥245.6 billion, but operating income soared 60.5%, to ¥12.9 billion, due to cost reductions. Sales volumes of rolled products increased as a result of recovery in demand for high-purity foils. Shipments of extrusions fell, reflecting the fall in demand from the construction industry. In the heat exchangers operation, sales volumes in Japan decreased, due partly to the shift of production to overseas subsidiaries. Shipments of Shotic continuously cast aluminum rods and their forged products increased, centering on high-value-added product lines. Demand for photosensitive drums for laser printers was on a recovery trend, but failed to reach the preceding year’s level. Meanwhile, aluminum ingots saw a slight increase in sales volumes, but their selling prices decreased. Showa Aluminum Alloy K.K. increased its sales volumes of alloys for use in automobiles.

**Start of Ammonia Production through Recycling of Waste Plastic**

From April 2003, Showa Denko will use waste plastic to produce ammonia and other chemical products in Kawasaki. This project will receive a total of about ¥3.7 billion in subsidies from the Ministry of Economy, Trade and Industry as well as from the Kawasaki municipal government.

**Expansion of HD Business**

Showa Denko is the only independent vendor in the world that can provide both aluminum- and glass-substrate HDs in commercial quantities. To meet the increasing demand for HDs for use in notebook PCs and car navigation systems, Showa Denko acquired the Mitsubishi Chemical Corporation Group’s HD business in Singapore in January 2003. We now have the capacity to produce 5.3 million HDs a month (2.1 million in Singapore and 3.2 million in Japan), becoming a first-class HD manufacturer in terms of technical capabilities and production capacity. We will continue to develop and offer high-quality HDs.
Strengthening Our Presence Overseas in Heat Exchangers Business

We are currently producing automobile air-conditioner condensers in the United States, the Czech Republic, and Thailand, in addition to our sites in Japan. In 2002, we suspended heat exchanger production at Hikone, Japan, and strengthened our overseas sites in order to improve the global cost-competitiveness of the business.

At Showa Aluminum Czech S.R.O., the automobile air-conditioner condenser production capacity has been doubled to meet growing demand in Europe and to increase cost-competitiveness. At the same time, Showa Aluminum (Thailand) Co., Ltd.’s capacity has also been doubled, following the transfer of part of the Hikone Plant’s production facilities.

Rare Earth Magnet Alloy Production in China Planned

Showa Denko is one of the largest manufacturers of rare earth magnet alloys in Japan. The neodymium-iron-boron alloys we produce in Chichibu are being used for the production of the strongest magnets on the market.

We will start producing rare earth magnet alloys in Baotou, Inner Mongolia, China, in the middle of 2003 through a joint venture we have established with Chinese companies. This project will enable us to secure a stable, long-term supply of raw materials and low cost production since China accounts for more than 80% of the world’s neodymium production. Baotou Iron and Steel (Group) Co., Ltd., which is the parent company of our joint venture partner, Inner Mongolia Baotou Steel Rare Earth Hi-Tech Co., Ltd., owns many neodymium mines in China.

Promotion of Responsible Care Activities

We are committed to the principles of Responsible Care, which means that we are working to ensure the safety and health of our employees and of people everywhere as well as to protect the environment from harm caused by chemical substances throughout such substances’ entire life cycles, namely, the development, production, distribution, use, final consumption, and disposal of these substances.

As part of our efforts to contribute to the prevention of global warming and protect natural resources, we reduced our rate of energy consumption by basic energy unit in 2001 to 86% of the 1990 figure. Furthermore, approximately 20% of our total electricity requirements are met by our hydroelectric power plants, a clean source of energy.

In 2002, we achieved our goal of obtaining certification of compliance with the ISO 14001 international standards for environmental management systems at all Showa Denko K.K. sites.

Showa Denko promises to establish itself as a focused and individualized chemical company by carrying out the Sprout Project. By doing so, we will enhance our corporate value, give satisfaction to our stockholders, meet customers’ expectations, and contribute to the sound growth of society on a global scale.

Management is looking forward to your continued support.

March 28, 2003

Mitsuo Ohashi, President and CEO
Showa Denko K.K. and its Group companies concluded the three-year consolidated business plan, the “Cheetah Project,” at the end of 2002, accomplishing most of the goals of improving financial strength, despite the fact that profit targets were not reached due to the drastic changes in the economic environment. In January 2003, the Company initiated a new consolidated business plan for the 2003-2005 period, named the “Sprout Project,” under which the focus has shifted from restructuring to expansion in strategically selected market areas of high growth potential.

**MAJOR ACCOMPLISHMENTS UNDER THE CHEETAH PROJECT**

Showa Denko renovated operations to pave the way for future growth while promoting projects to reform the corporate culture and organization. As a result, the Showa Denko Group of companies has been transformed into a fully integrated group with common goals and supported by highly motivated employees.

1. Improvement in consolidated balance sheet
   - **Elimination of accumulated deficit**
     While we had a deficit of ¥51.7 billion at the end of 2001, we eliminated the deficit and recorded retained earnings of ¥1.3 billion at the end of 2002.
   - **Reduction in debt**
     We reduced interest-bearing debt to ¥581.1 billion as of the end of 2002, achieving the goal of “¥600 billion or less.” Compared with the debt of ¥711.6 billion at the end of 1998, this represented a reduction of around ¥130.0 billion.

2. Reduction in personnel and total labor costs
   - The number of employees decreased to 10,933 at the end of 2002, from 13,464 at the end of 1998 (a reduction of 2,531). However, when we exclude the 2,764 employees of newly consolidated firms, the number of employees actually decreased by 5,295.

   As a result, total labor costs decreased ¥27.0 billion from the 1998 figure. When newly consolidated subsidiaries are excluded, total labor costs actually decreased ¥27.0 billion.

3. The sale of operations and affiliated companies
   - During the Cheetah Project period, we sold a total of 25 firms and operations, which resulted in a ¥28.0 billion reduction in debt.

4. Cost reductions
   - We reduced our total costs by ¥40.0 billion, including ¥20.0 billion in manufacturing costs and ¥14.0 billion in labor costs.

5. Implementation of business strategies in line with the target portfolio

   (1) **Electronics**
   - Strengthened the hard disk (HDD) business
   - Strengthened the compound semiconductor business product mix
   - Installed a 1.5-ton rare earth alloy furnace [largest in the world]
   - Strengthened our presence in Asia for specialty gas operations

   (2) **Aluminum**
   - Merged with Showa Aluminum Corporation and Shotic Corporation; pursued technological synergies from merger and accelerated rationalization
   - Achieved global setup of producing heat exchangers and Shotic’s forged products (sites in Japan, the United States, Europe, and Asia)
   - Accelerated cost reductions in commodity businesses, including extrusions

   (3) **Chemicals**
   - Launched independent power producer (IPP) operations at the Kawasaki plant
   - Strengthened cooperation with Asahi Glass Co., Ltd., in the refrigerant business
   - Expanded pharmaceutical/agrochemical intermediate product lines

   (4) **Petrochemicals**
   - Strategically reduced our ethylene production capacity at the Utsa plant, improving cost competitiveness and ensuring a long-term high capacity utilization
   - Secured a long-term guaranteed supply of methanol-process acetic acid from BP PETRONAS Acetyl Sdn, Bhd. in Malaysia

   (5) **Inorganic materials**
   - Decided to terminate ferrochrome production in Japan
   - Withdrew from some of the commodity ceramics businesses, including commodity refractory products operations

6. Corporate culture innovation
   - We have reformed our corporate culture to ensure that employees become more alert and ready to assume full accountability for their actions. We have also introduced a performance rating system based on the levels of financial targets achieved, including ROA and cash flows, as well as carrying out organizational changes. Through these measures, we have reformed the Showa Denko Group into a more integrated organization in which highly motivated employees share common goals.
LAUNCH OF THE SPROUT PROJECT

1. Basic concept of the project

(1) Pursuit of technological synergies
We are transforming ourselves from a diversified chemical company (operating many businesses with little synergy) into a focused and individualized chemical company by pursuing synergies through nurturing the interconnection of inorganic/aluminum and organic chemical technologies.

(2) Change to market-oriented way of thinking
We are changing our way of thinking from a production-based concept (only offering the products we produce) to a market-oriented concept. This means that we determine our business domains in view of the target markets (strategic market units or SMUs) and our individualized technology base.

2. Business portfolio

(1) Background
We first examined our extensive businesses and technical capabilities and analyzed our three major target markets, namely, electronics, automotive parts, and personal care/environmental goods. Then, we identified the areas where we can expect to achieve high growth by fully utilizing our core technologies. Based on the specific market segments thus identified (SMUs), we have classified all our businesses into the following three categories:

① “Strategic growth businesses” that are directly linked to SMUs and will serve as growth engines for Showa Denko and its Group companies
② “Base businesses” that will, despite their relatively low growth potential, support the strategic growth businesses
③ Businesses that need restructuring regardless of current earnings power

(2) SMUs
We have identified 12 SMUs, as portrayed in the chart below, in view of our competitive edges and market growth potential. All strategic growth businesses under the Sprout Project will be conducted through the SMU approach.

(3) Base businesses and businesses that need restructuring
(a) Base businesses
• Basic chemicals
  Strengthening competitive position through cost reductions and other measures (example: production of ammonia by gasifying waste plastic)
(b) Businesses that need restructuring
• Petrochemicals
  In the process of establishing a first-class and cost-competitive position in Asia at our ethylene plant in Oita
  Expanding acetyl/operations
• HD and memory disk (MD)
  Acquired Mitsubishi Chemical Group’s HD business, becoming the top original equipment manufacturer (OEM) in the world in terms of quality and marketing/production capabilities
• Commodity ceramic products
  Shifting production sites to China
• Commodity aluminum materials
  Rolled products operations being shifted to strategic growth products
  Extrusion operations shifting to high-value products, with consolidation of production sites

3. Further improvement in financial strength

(Compared with the 2002 levels)
¥20.0 billion

Showa Denko is committed to fully implementing the strategies under the Sprout Project, thereby realizing its vision and enhancing corporate value.
SHOWA DENKO AT A GLANCE

Petrochemicals
Percentage of Net Sales: 33.8%
Sales: 227,753 (Millions of yen)
Olefins (ethylene and propylene), organic chemicals (acetic acid, vinyl acetate monomer, ethyl acetate, and acrylonitrile), polyethylene, and plastic products

Chemicals
Percentage of Net Sales: 10.2%
Sales: 68,530 (Millions of yen)
Chemicals (caustic soda, chlorine, and liquid ammonia), gases (fluorocarbons, oxygen, nitrogen, and hydrogen), specialty chemicals (amino acids, stabilized vitamin C, analyzers, and columns), specialty polymers, and agrochemicals

Electronics
Percentage of Net Sales: 11.2%
Sales: 75,248 (Millions of yen)
HDs, compound semiconductors, rare earth magnetic alloys, specialty gases, alternatives to chlorinated solvents and other high-purity chemicals, ceramic materials for semiconductors, and fine carbons

Inorganic Materials
Percentage of Net Sales: 8.4%
Sales: 56,878 (Millions of yen)
Ceramics (aluminum hydroxide, alumina, abrasives, and refractories), carbons (graphite electrodes), and metallic materials (ferrochromes)

Aluminum
Percentage of Net Sales: 36.4%
Sales: 245,610 (Millions of yen)
Ingots, sheets, extruded products, high-purity foils for capacitors, fabricated products (heat exchangers, photosensitive drums, and beverage cans), and building products
**REVIEW OF OPERATIONS**

Petrochemicals

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<tr>
<th>CONSOLIDATED BUSINESS RESULTS (Millions of yen)</th>
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<tr>
<td>Sales</td>
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<tr>
<td>Operating income</td>
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In 2002, sales of olefins and organic chemicals fell, while sales of plastics rose as the full year of Showa Highpolymer Co., Ltd.’s consolidation more than offset the sale in late 2001 of overseas injection molding subsidiaries. In all, the Petrochemicals Segment’s sales for the year decreased 2.5%, to ¥227,753 million. However, operating income increased 62.4%, to ¥9,955 million, as a result of cost reductions at our ethylene plant and other plants as well as the recovery of the organic chemicals market in the latter half of the year.

**Olefins**

Ethylene production in Japan totaled 7.15 million tons in 2002, representing a decline of 2.9% from the preceding year, due to shrinkage in the domestic demand for petrochemicals, caused by the prolonged recession.

Showa Denko’s ethylene production decreased from 629,000 tons in 2001 to 568,000 tons in 2002 as a result of a maintenance shutdown in March and April. Sales of olefins decreased due to the maintenance shutdown and lower selling prices that accompanied a fall in naphtha prices. Operating income improved, however, as a result of continued cost reductions in ethylene plant operation and because we benefited from propylene’s high selling prices.

**Organic Chemicals**

Sales of acetic acid and acrylonitrile were up due to greater sales volume and higher selling prices, respectively. Sales of vinyl acetate and ethyl acetate were down, since the rise in their selling prices in the second half of the year was not enough to offset the low selling prices and decreased sales volumes in the first half. As a whole, sales of organic chemicals declined slightly.

Operating income increased due to overall cost reductions, the full-year contribution of the long-term guaranteed supply of acetic acid from BP PETRONAS Acetyl, and an increase in the selling prices of acetic acid in the second half.

Showa Aluminum Powder K.K., a consolidated subsidiary, increased its sales of aluminum paste products for use in automotive applications in South Korea, Southeast Asia, and North America.

**Plastics**

The sales and operating income of Japan Polylefins Co., Ltd. (JPO), declined. This was because the company suffered from low selling prices in the first half of the year and was unable to implement sufficient price increases to compensate for the rise in naphtha prices in the second half.

Showa Highpolymer, which had become a consolidated subsidiary in the latter half of 2001, contributed to a substantial growth in plastics sales in 2002. Heisei Polymer Co., Ltd., had lower sales as a result of the transfer of its laminate business to a subsidiary in Showa Denko’s Aluminum Segment.

Chemicals

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<th>CONSOLIDATED BUSINESS RESULTS (Millions of yen)</th>
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<tr>
<td>Sales</td>
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<tr>
<td>Operating income</td>
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</tbody>
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Sales of specialty chemicals decreased slightly, due to the sale of a paper-processing agent business and other factors, despite the increased sale of agrochemicals by SDS Biotech K.K. Sales of gases & chemicals decreased substantially, due mainly to falling shipment volumes and lower selling prices for industrial gases that reflected stagnant domestic demand. As a result, the...
Chemicals Segment’s sales in 2002 declined 6.1%, to ¥68,530 million. The operating income of the Chemicals Segment improved due to the contribution of cost reduction efforts in agrochemicals and other specialty chemicals.

Gases & Chemicals Sales of industrial gases (oxygen, nitrogen, etc.) fell due to decreased sales volumes and lower selling prices, while sales of hydrofluorocarbons rose as a result of the increased toll production of HFC 134a and the start of the toll production of HFC 125. Sales of caustic soda and ammonia were down due to decreases in sales volumes. As a result, gases and chemicals had lower sales, but operating income improved due to cost reductions.

Specialty Chemicals Stabilized vitamin C for cosmetic applications and EDTA chelating agents grew in sales. Sales of specialty polymers increased following the start of our Shoprene polychloroprene business. However, sales of amino acids and sodium polyacrylate thickener were lower due to decreases in selling prices. Due partly to the sale of the paper-processing agent business, sales of specialty chemicals as a whole declined. Operating income improved, however, mainly as a result of cost reductions.

SDS Biotech K.K. increased its sales as a result of the increased shipments of its new herbicide, Grachitor.

New Developments In November 2002, we established a fully owned subsidiary, Showa Denko Elastomers K.K., by reorganizing Showa DDE Manufacturing K.K.

Electronics

The Electronics Segment’s sales in 2002 fell 3.2%, to ¥75,248 million, but operating income rose 335.2%, to ¥6,189 million, due mainly to a substantial increase in shipment volumes of HDs. Sales of specialty gases and polishing agents for LCD panels and glass increased. However, total sales of electronic materials decreased as sales of rare earth magnetic alloys fell due to lower selling prices and shipment volumes and because we stopped selling capacitor-grade tantalum powder.

HDs and MDs PC production in 2002 grew only modestly. However, since our customers in the hard disk drive (HDD) industry increased their market shares substantially, shipment volumes of our aluminum- and glass-substrate HDs grew accordingly. As a result, our HD business had increased sales. In our MD business, sales of aluminum substrates rose as increases in shipments more than offset decreases in selling prices.

New Developments We acquired the Mitsubishi Chemical Corporation Group’s HD business in Singapore. With an aluminum-substrate HD production site now in Singapore as well as in Japan, we have substantially increased production capacity and solidified the foundations of the business.
Compound Semiconductors Although demand remained low for indium phosphide (InP) epitaxial wafers for photodiodes, our compound semiconductors business recorded modest increases in sales and operating income. This was due to the recovery of demand for LEDs in the first half of the year and a sharp rise in demand for laser epitaxial wafers for optical pickups.

In the optical electronic materials product line, sales of gallium phosphide (GaP) LEDs showed temporary recovery between March and July. Sales of four-element, high-brightness LEDs were also favorable. The market for laser-diode epitaxial wafers for DVD optical pickups expanded rapidly. Sales of InP epitaxial wafers dropped to less than a third of the preceding year, reflecting the prolonged, severe stagnation of the optical fiber communications market.

New Developments Showa Denko became the first company in the world to supply 6-inch InP monocrystal mirror wafers. We also started sales of laser-diode epitaxial wafers for CD-R optical pickups.

Rare Earths Sales of our rare earth magnetic alloys fell because stagnation in the magnet manufacturing industry continued and selling prices were down.

New Developments In October 2002, we established Baotou Showa Rare Earth Hi-Tech New Material Co., Ltd., in Baotou, Inner Mongolia, China. The new company will start production of neodymium-based rare earth magnet alloys.

Specialty Gases for Semiconductor Processing Sales of specialty gases for semiconductor processing were almost unchanged as brisk export offset the decline in domestic shipments. Shipment volumes of Solfine high-purity chemicals increased.

New Developments We put on the market SiF4, which is a cleaning gas used in metalorganic chemical vapor deposition (MOCVD) processes for the production of optical fiber communication devices.

Ceramics Demand for ceramic products for electronic applications remained low, but shipment volumes of SHOROX polishing agent for LCD panels and glass increased. Sales in this business climbed as we obtained new customers.

New Developments We have decided to expand our production capacity for SHOROX.

Carbons & Metallic Materials Sales fell as we stopped selling capacitor-grade tantalum powder.

New Developments We continued to develop markets for our vapor-grown carbon nanofiber products, consisting of VGCF (diameter: 150 nm) and VGNF (diameter: 80 nm). Efforts are also being made to develop carbon material for cathodes for lithium-ion batteries and carbon separators for fuel cells.

Inorganic Materials

<table>
<thead>
<tr>
<th>CONSOLIDATED BUSINESS RESULTS</th>
<th>Yen (Millions)</th>
<th>2002</th>
<th>2001</th>
<th>Difference</th>
<th>Rate of change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>56,878</td>
<td>54,555</td>
<td>2,323</td>
<td>+4.3%</td>
<td></td>
</tr>
<tr>
<td>Operating income</td>
<td>1,369</td>
<td>3,511</td>
<td>-2,142</td>
<td>-61.0%</td>
<td></td>
</tr>
</tbody>
</table>

In 2002, the Inorganic Materials Segment’s sales increased 4.3%, to ¥56,878 million, but operating income decreased 61.0%, to ¥1,369 million.

Ceramics Sales of ceramics decreased as sales volumes and selling prices fell inside and outside Japan in the first half of the year. Operating income also decreased, despite cost reductions.

Carbons & Metallic Materials Sales of graphite electrodes fell due to lower selling prices and the appreciation of the yen in the second half of the year, notwithstanding some increases in export shipments. Showa Denko Carbon, Inc.’s sales declined slightly as an increase in shipments resulting from the recovery of the U.S. economy was offset by the fall in selling prices. The operating income of the company fell due to the fall in selling prices.

In all, the performance of the carbons & metallic materials businesses declined.

New Developments In the area of high-carbon ferrochrome production, we decided to stop operation of our consolidated subsidiary Shunan Denko K.K. in February 2003.
Aluminum

The Aluminum Segment’s sales were down 9.0%, to ¥245,610 million, due to lower shipment volumes and selling prices of commodity products (rolled products and extrusions) and of heat exchangers in Japan. Sales of Shotic forged aluminum products, photosensitive drums, and other high-value products were steady. Operating income increased 60.5%, to ¥12,894 million, due to successful rationalization efforts.

Metal Center 
Aluminum ingot sales rose due to an increase in shipment volumes, despite low selling prices that reflected the slackening supply-demand situation worldwide.

Rolled Products
Sales of high-purity foils for capacitors increased due to a substantial increase in shipment volumes in the first half of the year. Inventory adjustments by customers started again in the second half. Meanwhile, there was an increase in sales of a newly developed aluminum alloy ST60 for use in the heat sinks of plasma display panels (PDPs).

Extrusions
Although the performance of this business improved as a result of cost reductions through elimination of overcapacity, consolidation of production, and an increase in efficiency, sales of commodity extrusions were down due mainly to a decrease in shipments to the construction industry.

Shotic
Sales of Shotic forged aluminum products were up, due to a brisk demand inside and outside Japan for use in automobile air-conditioner parts.

Aluminum Specialty Products
Sales of photosensitive drums for laser beam printers increased only slightly, due to inventory adjustments by customers in the first half of the year.

Heat Exchangers
Domestic sales of automotive heat exchangers decreased as a result of the fall in selling prices and the shift of production to overseas subsidiaries. Our U.S. subsidiary also recorded a fall in sales due to the appreciation of the yen. However, our subsidiaries in Thailand and the Czech Republic increased their sales as we are gradually transferring automotive heat exchanger production from Japan to those countries.

Aluminum Cans
Sales of aluminum cans decreased slightly due to a fall in selling prices, reflecting the lackluster beer industry in Japan.

New Developments
We decided to consolidate Showa Aluminum Viewtech Co., Ltd., and Showa Aluminum Exterior Corporation in May 2003 as a means of enhancing the efficiency of marketing aluminum building exteriors.

Showa Denko Packaging Co., Ltd., a new subsidiary created by the merger of Showa Laminating Industry Corporation and the laminating business of Heisei Polymer Co., Ltd., showed a good performance due to steady sales of cap seals and reductions in fixed costs.
RESPONSIBLE CARE ACTIVITIES

Showa Denko has been performing its Responsible Care activities since 1995, when it established guidelines for action to implement the program. Responsible Care activities are going on at our five business segments (14 business divisions and 11 regional offices), three branches, an R&D Center, and 18 subsidiaries/affiliates, based on voluntary, specific action plans prepared in line with the Responsible Care Committee’s basic plan. The following are some examples of our activities:

CONSERVATION OF ENERGY
We are making our best efforts to conserve energy in order to contribute to the prevention of global warming and protect natural resources. Our rate of energy consumption by basic energy unit in 2001 was reduced to 86% of the 1990 figure. Approximately 20% of our total electricity requirements are now met by our hydroelectric power plants, a clean source of energy.

REDUCTION OF INDUSTRIAL WASTE
We are committed to effectively using and reducing the volume of industrial waste discharge. Owing to the use of waste oil as fuel (heat recovery) and use of inorganic sludge (in cement, for example), the final volume of landfill disposal in 2001 was reduced to 44% of the 1990 base level.

PROMOTION OF RESOURCE CONSERVATION AND RECYCLING
We are promoting resource conservation and recycling at all of our operation sites. As one example, a special committee has been promoting the recycling of aluminum cans and, in 2001, 1.560 million such cans were recycled—approximately 170 times as many as in 1990. The amount of recycled aluminum used in our aluminum alloy production in 2001 was about double that of 1990.

DEVELOPMENT OF ENVIRONMENT-FRIENDLY PRODUCTS AND TECHNOLOGIES
We are working hard to develop products and technologies that contribute to the protection of the environment, safety, and health. Examples include separators for fuel cells and Clean-S perfluorocarbon-gas-treating scrubbers.

ACQUISITION OF ISO 14001 CERTIFICATION
In 2002, two of our operation sites were certified under the ISO 14001 international standards for environmental management systems. We are happy to report that we have now finished acquiring certification at all of our operation sites. As of December 2002, environmental management activities were being implemented at 13 of our subsidiaries and affiliates, as well as at our operation sites, in accordance with the standards.

ENVIRONMENT-RELATED INVESTMENT
(Cumulative value since 1990)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cumulative investment value (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'90</td>
<td>1</td>
</tr>
<tr>
<td>'91</td>
<td>2</td>
</tr>
<tr>
<td>'92</td>
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<td>11</td>
</tr>
<tr>
<td>'01</td>
<td>12</td>
</tr>
</tbody>
</table>

TRANSITION OF THE RATE OF ENERGY CONSUMPTION
Rate of energy consumption (Relative value: base year 1990)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate of energy consumption (Relative value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'90</td>
<td>100</td>
</tr>
<tr>
<td>'91</td>
<td>90</td>
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<tr>
<td>'92</td>
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<td>9</td>
</tr>
<tr>
<td>'01</td>
<td>8</td>
</tr>
</tbody>
</table>

TRENDS IN THE NUMBER OF ALUMINUM CANS RECOVERED
Number of aluminum cans recovered (Million units)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of aluminum cans recovered (Million units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'90</td>
<td>200</td>
</tr>
<tr>
<td>'91</td>
<td>400</td>
</tr>
<tr>
<td>'92</td>
<td>600</td>
</tr>
<tr>
<td>'93</td>
<td>800</td>
</tr>
<tr>
<td>'94</td>
<td>1,000</td>
</tr>
<tr>
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<td>'97</td>
<td>1,600</td>
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<tr>
<td>'00</td>
<td>2,200</td>
</tr>
<tr>
<td>'01</td>
<td>2,400</td>
</tr>
</tbody>
</table>

TRENDS IN USAGE OF ALUMINUM RECOVERED
Ratio of aluminum recovered to total usage (%) (Base year 1990)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio of aluminum recovered to total usage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'90</td>
<td>50</td>
</tr>
<tr>
<td>'91</td>
<td>100</td>
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<tr>
<td>'92</td>
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<td>'93</td>
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<td>400</td>
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<td>450</td>
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<td>'99</td>
<td>500</td>
</tr>
<tr>
<td>'00</td>
<td>550</td>
</tr>
<tr>
<td>'01</td>
<td>600</td>
</tr>
</tbody>
</table>

Target value

Shinwa Denko K.K.
Showa Denko and its Group companies are promoting R&D in line with their medium-term consolidated business plan to create high-value, individualized products in the fields of petrochemicals, fine chemicals, electronics, and new materials.

In particular, we are focusing on developing electronic materials, high-value fabricated aluminum products, and specialty chemicals for our strategic growth markets of electronics, automotive parts, and personal care/environmental goods. To ensure the success of such development, we are pursuing technological synergies by nurturing the interconnection of inorganic/aluminum and organic chemical technologies. Furthermore, on March 16, 2002, we reformed our organization to enhance the efficiency of our R&D operations. Showa Denko and its Group companies invested ¥15,443 million in R&D in 2002. A breakdown by segment of R&D efforts and investments during the year is as follows:

**PETROCHEMICALS**
In this segment, we are fully utilizing our catalyst technology to strengthen the competitiveness of our basic petrochemical products, while developing new derivatives. As for the propylene-based product line, we are developing applications for our proprietary allyl ester resin. At the same time, we are developing other allyl derivatives for environment/IT-related applications. The Petrochemicals Segment invested ¥3,558 million in R&D in 2002.

**CHEMICALS**
Development is under way for such specialty chemicals as organic intermediates for pharmaceuticals and agrochemicals, base materials for cosmetics, and optical functional materials. As for organic intermediates for pharmaceuticals and agrochemicals, we are developing new compounds for pesticides in the areas in which our raw materials position can be fully utilized. We are also developing new materials for metal-organic chemical vapor deposition (MOCVD) processes, new raw materials for photographic chemicals, and biodegradable chelating agents.

In the area of base materials for cosmetics, we are developing new applications for stabilized vitamin C. Following the successful development of nano-particles for ultraviolet shielding and an innovative biosurfactant, we are developing more new base materials with a view to adding to our individualized product lines.

Regarding optical functional materials, we are developing waterborne etching resist inks, photomagable coverlays, and photo initiators through our subsidiary Nippon Polytech Corp. The Chemicals Segment’s R&D investment amounted to ¥1,994 million in 2002.

**ELECTRONICS**
In the area of displays and their materials, we are continuing to develop LEDs with raised brightness and diverse colors as well as nitride-based LEDs that emit blue and ultraviolet rays for use in white lighting. We are also continuing to develop epitaxial wafers that emit laser beams for pick-ups, epitaxial wafers that emit long-wave laser beams for optical communications, and epitaxial wafers for electronic devices.

In the development of indium phosphide (InP) substrates, we are further strengthening our technical advantages by facilitating the production of InP substrates with larger diameters and lower dislocations. We are concentrating our resources on the development of battery applications for such new materials as vapor-grown carbon fibers and carbon nanotubes.

As the memory density of HD media is now increasing at an annual rate of over 100%, we are continuing to develop technologies for better processing the HD base layer and improving the magnetic and protective layers in order to achieve higher memory density and differentiate
our products from competitors’. Technical development is progressing for use of HD media in personal data assistants (PDAs).

Based on our metal refining/production expertise, we are continuing to develop new casting and alloying technologies for controlling the microstructures of rare earth magnetic alloys, including neodymium-iron-boron alloys.

In the area of semiconductor processing, we are developing chemical mechanical polishing (CMP) slurries for metal polishing in addition to the successfully commercialized ceria-based CMP slurry products. The development is being accelerated through synergies with businesses involved in high-purity gases for etching and cleaning as well as solvents and solutions. The Electronics Segment invested ¥2,780 million in R&D in 2002.

INORGANIC MATERIALS

Our development efforts in this segment focus on nano-scale materials, such as ultrafine particles of titania and zinc oxide. Nano-particles of titania and zinc oxide are being adopted as base materials for cosmetics. Also, the development of ultrafine particles of titania is progressing for use in multilayered ceramic capacitors and as a photocatalyst. Various functional ceramic fillers and advanced ceramics, including super abrasives, are being developed. The Inorganic Materials Segment spent ¥175 million on R&D in 2002.

ALUMINUM

We are developing lightweight, high-performance heat exchangers for car air-conditioners and thin-wall tubes, forged parts for compressors, and suspension arms/forged parts and their materials. We are also developing new heat exchangers and subframes for next-generation, low-emission vehicles.

Development is progressing for high-capacitance aluminum foils for use in electrolytic capacitors, high-precision photosensitive drums (substrates and extruded tubes) for laser beam printers, and aluminum alloys for use in the heat sinks of plasma display panels. Heat exchangers and various types of heat sinks for energy devices are also being developed. The Aluminum Segment’s R&D investment amounted to ¥2,439 million in 2002.

COMMON R&D PROJECTS

Showa Denko’s Corporate Research Center conducts basic research into new areas with a view to developing technologies common to different segments, while the Analysis & Physical Properties Center supports each segment’s R&D efforts by conducting analyses and investigations.

In the area of energy devices, we are conducting collaborative research for developing carbon separators for solid polymer-type fuel cells as part of a national project. We have developed the world’s first phosphorescent polymer for use in organic electroluminescent devices, and we are progressing with research for commercializing the polymer.

Common R&D expenditures in 2002 totaled ¥4,517 million.
## CONSOLIDATED SIX-YEAR SUMMARY

**Showa Denko K.K. and Consolidated Subsidiaries**  
December 31

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For the year</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net sales</td>
<td>¥674,018</td>
<td>¥708,900</td>
<td>¥747,000</td>
<td>¥662,747</td>
<td>¥730,906</td>
<td>¥797,790</td>
<td>¥5,616,815</td>
</tr>
<tr>
<td>Petrochemicals</td>
<td>227,753</td>
<td>233,647</td>
<td>232,294</td>
<td>192,996</td>
<td>218,240</td>
<td>251,174</td>
<td>1,897,938</td>
</tr>
<tr>
<td>Chemicals</td>
<td>66,530</td>
<td>73,020</td>
<td>76,782</td>
<td>63,902</td>
<td>71,720</td>
<td>68,065</td>
<td>571,086</td>
</tr>
<tr>
<td>Electronics</td>
<td>75,248</td>
<td>77,742</td>
<td>94,393</td>
<td>81,976</td>
<td>85,412</td>
<td>89,117</td>
<td>627,063</td>
</tr>
<tr>
<td>Inorganic Materials</td>
<td>56,878</td>
<td>54,555</td>
<td>57,778</td>
<td>61,192</td>
<td>75,396</td>
<td>75,985</td>
<td>473,981</td>
</tr>
<tr>
<td>Aluminum</td>
<td>245,610</td>
<td>269,936</td>
<td>283,752</td>
<td>262,682</td>
<td>280,137</td>
<td>310,450</td>
<td>2,046,747</td>
</tr>
<tr>
<td>Operating income</td>
<td>31,303</td>
<td>19,169</td>
<td>29,594</td>
<td>25,073</td>
<td>28,696</td>
<td>45,585</td>
<td>260,856</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>13,024</td>
<td>(34,260)</td>
<td>2,763</td>
<td>(633)</td>
<td>(15,184)</td>
<td>9,501</td>
<td>108,534</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>28,446</td>
<td>32,299</td>
<td>40,023</td>
<td>37,180</td>
<td>49,004</td>
<td>64,006</td>
<td>237,053</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>36,956</td>
<td>36,893</td>
<td>40,752</td>
<td>42,592</td>
<td>42,828</td>
<td>40,478</td>
<td>307,963</td>
</tr>
<tr>
<td><strong>At year-end</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total assets</td>
<td>986,544</td>
<td>1,030,872</td>
<td>1,088,623</td>
<td>961,692</td>
<td>1,016,482</td>
<td>1,031,568</td>
<td>8,221,197</td>
</tr>
<tr>
<td>Total stockholders' equity</td>
<td>150,121</td>
<td>139,458</td>
<td>144,676</td>
<td>85,883</td>
<td>105,156</td>
<td>105,156</td>
<td>1,251,010</td>
</tr>
</tbody>
</table>

**Per share**

<table>
<thead>
<tr>
<th></th>
<th>Yen</th>
<th>U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income (loss)</td>
<td>¥11.44</td>
<td>$0.095</td>
</tr>
<tr>
<td>Stockholders' equity</td>
<td>131.92</td>
<td>1.099</td>
</tr>
<tr>
<td>Cash dividends (applicable to the period)</td>
<td>—</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Number of employees at year-end**  
10,933

**Note:** Yen amounts have been translated into U.S. dollars, for convenience only, at the rate of ¥120 to US$1, the approximate rate of exchange at December 31, 2002.
Consolidated net sales in 2002 totaled ¥674,018 million (US$5,617 million), a decrease of ¥34,882 million, or 4.9%, from the previous term. Sales in the Aluminum Segment fell ¥24,326 million, due to the divestiture of affiliates and weak demand for commodity aluminum products. Sales in the Petrochemicals Segment were down ¥5,894 million, mainly due to a decrease in shipments as a result of the maintenance shutdown of our ethylene plant. Sales in the Chemicals Segment decreased ¥4,490 million, as a result of low demand and low selling prices. Sales in the Electronics Segment fell ¥2,494 million, due mainly to the termination of capacitor-grade tantalum powder sales. However, sales in the Inorganic Materials Segment increased ¥2,323 million, as a result of a decrease in eliminations between the parent company and consolidated subsidiaries.

Cost of sales decreased ¥38,055 million, or 6.5%, to ¥551,263 million (US$4,594 million), due mainly to cost reductions and the lower average cost of naphtha and other raw materials. Owing to rationalization efforts, selling, general and administrative expenses fell ¥8,961 million, or 8.9%, to ¥91,452 million (US$762 million).

Operating income was up ¥12,134 million, or 63.3%, to ¥31,303 million (US$261 million). The main contributing factors were the operating income increases of the Aluminum Segment due to rationalization efforts, of the Electronics Segment due to a rise in sales volumes of hard disk media, and of the Petrochemicals Segment due to an increase in organic chemicals’ selling prices in the year.

R&D expenditures were almost flat at ¥15,443 million (US$129 million), a decrease of ¥4 million.

Broken down by business segment, net sales and operating income were as follows:

**Petrochemicals Segment**
Sales of olefins were down as sales volumes decreased as a result of the maintenance shutdown of our ethylene plant in the first half of the year. Sales of organic chemicals decreased as the selling prices of acetic acid, vinyl acetate monomer, and ethyl acetate fell in the first half of the year, although they started to rise in the second half. The selling price of acrylonitrile rose during the year. Japan Polyolefins Co., Ltd. (JPO), engaged in the polyethylene business, recorded lower sales due to stagnation in selling prices. Showa Highpolymer Co., Ltd., which had been consolidated in the second half of 2001, contributed to plastics sales in 2002 on a full-year basis. Heisei Polymer Co., Ltd.’s sales decreased as it transferred its laminate business to a subsidiary belonging to the Aluminum Segment. As a result, the Petrochemicals Segment’s sales decreased ¥5,894 million, or 2.5%, to ¥227,753 million (US$1,898 million). However, operating income was up ¥3,825 million, or 62.4%, to ¥9,955 million (US$83 million), due to a rationalization of the olefins operations, improvements in the profitability of organic chemicals operations, and the full-year consolidation of Showa Highpolymer.

**Chemicals Segment**
Sales of gases and chemicals fell due to decreases in the selling prices of industrial gases, caustic soda, and ammonia amid the recession. Sales of specialty chemicals declined slightly as a result of the divestiture of some businesses, including a paper-processing agent business. The Chemicals Segment’s sales fell ¥4,490 million, or 6.1%, to ¥68,530 million (US$571 million). However, operating income rose ¥971 million, or 20.6%, to ¥5,679 million (US$47 million), owing to cost reductions and an increase in sales volumes of agrochemicals.
Electronics Segment

Sales of HDs were up due to a substantial increase in the sales volume. Sales of compound semiconductors increased slightly. Sales of semiconductor-processing specialty gases were almost unchanged as an increase in export volumes offset a decrease in domestic shipments. Sales of rare earth magnetic alloys decreased, owing to lower sales volumes and lower selling prices. Sales of tantalum materials were terminated following the divestiture of a tantalum material manufacturing subsidiary. As a result, the Electronics Segment’s sales decreased ¥2,494 million, or 3.2%, to ¥75,248 million (US$627 million), but operating income soared ¥4,767 million, or 335.2%, to ¥6,189 million (US$52 million), due to a substantial increase in the sales volume of HDs.

Inorganic Materials Segment

The ceramics operations had lower sales due to decreases in the sales volumes and selling prices of alumina and other materials. The carbons and metallic materials operations also had lower sales. This was because the selling prices of graphite electrodes declined despite an increase in the sales volume of the product, both in Japan and at Showa Denko Carbon, Inc., in the United States. Due to a decrease in the eliminations between the parent company and consolidated subsidiaries, however, the Inorganic Materials Segment’s sales were up ¥2,323 million, or 4.3%, to ¥56,878 million (US$474 million). Operating income was down ¥2,142 million, or 61.0%, to ¥1,369 million (US$11 million), due to the lower shipments and selling prices of ceramics as well as the lower selling prices of graphite electrodes.

Aluminum Segment

Sales of Shotic aluminum forgings rose due to increases in shipments for use in automotive parts. However, sales of commodity extrusions and rolled products fell as a result of stagnant domestic demand and a fall in selling prices. Sales of automotive heat exchangers in Japan declined as a result of transfer of part of production to overseas. Heat exchanger production capacities in Thailand and the Czech Republic are being doubled, for completion in 2003. We divested Showa Distribution K.K. and changed an aluminum panel subsidiary into a non-consolidated subsidiary to which the equity method is applied. As a result, the Aluminum Segment’s sales fell ¥24,326 million, or 9.0%, to ¥245,610 million (US$2,047 million). However, operating income rose ¥4,859 million, or 60.5%, to ¥12,894 million (US$107 million), due to cost reductions, centering on headcount reduction, and the increase in Shotic shipments.

Operations in Japan

The Petrochemicals Segment’s sales declined slightly, due to a decrease in shipments in the wake of the maintenance shutdown of our ethylene plant and a fall in the selling prices of organic chemicals, which more than offset the full-year contribution to sales by Showa Highpolymer. The Chemicals Segment’s sales fell, notwithstanding increases in agrochemicals sales, as sales volumes of gases and chemicals decreased. The Electronics Segment’s sales rose as a result of an increase in the shipments of HDs. The Aluminum Segment’s sales fell due to decreases in the shipments of extrusions and heat exchangers. As a result, consolidated sales from operations in Japan fell 4.3%, to ¥608,433 million (US$5,070 million).

The Petrochemicals Segment’s operating income increased due to cost reductions and the rise in the selling prices of organic chemicals in the second half of the year. The Chemicals Segment’s operating income rose due to increases in agrochemicals shipments and cost reductions. Operating income of the Electronics Segment and the Aluminum Segment also rose due to an increase in shipments and cost reductions, respectively. However, the Inorganic Materials Segment’s operating income fell due to lower shipments and stagnant market prices. As a result, consolidated operating income from operations in Japan increased 65.5%, to ¥34,346 million (US$286 million).

Operations Overseas

The Petrochemicals Segment’s sales fell as a result of the divestiture of injection moldings operations in Southeast Asia. The Electronics Segment’s sales also fell as we withdrew from sales of tantalum materials in Europe. As a result, sales from operations overseas decreased 10.2%, to ¥65,584 million (US$547 million).
Operating income declined 45.0%, to ¥1,816 million (US$15 million), following the divestiture of injection moldings operations in Southeast Asia and a fall in the operating income of Showa Denko Carbon, due to the slowdown of the U.S. economy.

The gap between interest expense and interest and dividend income declined ¥1,011 million, to ¥10,296 million (US$86 million), due to our strenuous efforts to reduce debt. Gain on the sale of shares in Showa Cobalt Supermetals K.K. increased ¥12,307 million, to ¥15,636 million (US$130 million), due mainly to the sale of shares in Showa Cabot Supermetals K.K. Loss on the sale of property, plant and equipment decreased ¥6,569 million, to ¥3,081 million (US$26 million).

Loss on the write-down of marketable and investment securities amounted to ¥5,373 million (US$45 million) in the wake of the fall in stock prices, centering on the prices of bank stocks, at the end of 2002. To improve cost-competitiveness, Showa Denko K.K. and its Group companies reduced headcount and recorded ¥2,774 million (US$23 million) in special severance pay. A ¥2,290 million (US$19 million) reserve was provided to prepare for the restructuring of certain businesses to be implemented in 2003.

As a result, the Company posted before-tax income of ¥18,992 million (US$158 million). After income taxes, net, of ¥4,948 million (US$41 million) and a loss in minority interests of ¥1,019 million (US$8 million), the Company recorded net income of ¥13,024 million (US$109 million), an improvement of ¥47,284 million over the previous term.

Total Assets
Total assets decreased ¥44,328 million, to ¥986,544 million (US$8,221 million). Cash and cash equivalents decreased ¥6,829 million, to ¥23,260 million (US$194 million), as a result of strenuous efforts to reduce inventories.

Liabilities
Interest-bearing debt fell ¥41,281 million, to ¥581,129 million (US$4,843 million), mainly as a result of increases in free cash flows. Reserve for restructuring expenses decreased ¥12,629 million, to ¥9,017 million (US$75 million), due mainly to the payment of special severance pay to early retirees.

Stockholders’ Equity
The accumulated deficits were eliminated by the use of net income for the period of ¥13,024 million (US$109 million) and withdrawal of part of the capital surplus of ¥38,642 million, which had been approved at the general meeting of stockholders in March 2002. The Company now has retained earnings of ¥1,302 million (US$11 million), compared with a ¥51,679 million deficit at the end of the previous year. Capital surplus decreased ¥38,532 million, mainly due to the above-mentioned withdrawal, to ¥8,174 million (US$68 million). As a result, stockholders’ equity increased ¥15,865 million, to ¥150,121 million (US$1,251 million).

Capital Expenditures
Capital expenditures were down ¥3,853 million, to ¥28,446 million (US$237 million). Chief items in the capital expenditures were the expansions of hydrofluorocarbon production facilities (Chemicals Segment), HD production facilities (Electronics Segment), and heat exchangers production facilities in the Czech Republic (Aluminum Segment).

Cash Flows
Net cash provided by operating activities increased ¥1,763 million, to ¥37,495 million (US$312 million), as the substantial increase in net income for the period (before tax adjustment) and a decrease in inventories more than offset the payment of special severance pay. Net cash used in investing activities decreased ¥22,191 million, to ¥846 million (US$7 million). This was because a ¥25,676 million (US$214 million) gain on the sale of shares, centering on those in Showa Cobalt Supermetals, more than offset expenditures for capital investments and acquisition of investment securities. Net cash used in financing activities increased ¥20,452 million, to ¥43,104 million (US$359 million), mainly as a result of a reduction in interest-bearing debt. As a result, cash and cash equivalents at the end of 2002 decreased ¥6,829 million, to ¥23,260 million (US$194 million).
### CONSOLIDATED BALANCE SHEETS

**Showa Denko K.K. and Consolidated Subsidiaries**

At December 31, 2002 and 2001

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>2002</th>
<th>2001</th>
<th>2002 (in U.S. dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current assets</strong></td>
<td>¥</td>
<td>¥</td>
<td>$</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
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<td>$193,837</td>
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<tr>
<td>Marketable securities</td>
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<td>¥29</td>
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<tr>
<td>Notes and accounts receivable</td>
<td>¥163,595</td>
<td>¥165,506</td>
<td>¥1,363,293</td>
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<tr>
<td>Allowance for doubtful receivables</td>
<td>(¥1,309)</td>
<td>(¥1,143)</td>
<td>(¥10,908)</td>
</tr>
<tr>
<td>Inventories</td>
<td>¥80,447</td>
<td>¥88,492</td>
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<tr>
<td>Deferred tax assets—current</td>
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<td>¥13,789</td>
<td>¥65,282</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
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<td>¥11,400</td>
<td>¥104,685</td>
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<td><strong>Total current assets</strong></td>
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<tr>
<td><strong>Property, plant and equipment</strong></td>
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<td></td>
</tr>
<tr>
<td>Land</td>
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<td>¥293,297</td>
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<td>Buildings and structures</td>
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<td>¥215,738</td>
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<td>Machinery and equipment</td>
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<td>¥654,381</td>
<td>¥5,633,667</td>
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<td>Construction in progress</td>
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<td>¥8,645</td>
<td>¥74,669</td>
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<tr>
<td><strong>Less: Accumulated depreciation</strong></td>
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<td>(¥597,671)</td>
<td>(¥5,284,467)</td>
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<td><strong>Net property, plant and equipment</strong></td>
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<td>¥574,391</td>
<td>¥4,713,361</td>
</tr>
<tr>
<td><strong>Investments and other assets</strong></td>
<td>¥</td>
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<td>Investment securities</td>
<td>¥66,520</td>
<td>¥75,727</td>
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<td>Long-term loans</td>
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<td>Deferred tax assets—non-current</td>
<td>¥24,410</td>
<td>¥18,034</td>
<td>¥203,417</td>
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<td>Other</td>
<td>¥26,570</td>
<td>¥32,761</td>
<td>¥221,414</td>
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<tr>
<td>Allowance for doubtful accounts</td>
<td>(¥2,596)</td>
<td>(¥3,885)</td>
<td>(¥21,637)</td>
</tr>
<tr>
<td><strong>Investments and other assets</strong></td>
<td>¥122,784</td>
<td>¥130,481</td>
<td>¥1,023,202</td>
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<tr>
<td><strong>Excess of cost over equity in net assets acquired</strong></td>
<td>¥11,762</td>
<td>¥17,449</td>
<td>¥98,020</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>¥986,544</td>
<td>¥1,030,872</td>
<td>¥8,221,197</td>
</tr>
</tbody>
</table>

See notes to financial statements.
**LIABILITIES AND STOCKHOLDERS’ EQUITY**

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term debt (Note 5)</td>
<td>¥ 150,506</td>
<td>¥ 210,862</td>
<td>$1,254,218</td>
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<tr>
<td>Current portion of long-term debt (Note 5)</td>
<td>160,971</td>
<td>96,709</td>
<td>1,341,428</td>
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<tr>
<td>Notes and accounts payable (Note 8)</td>
<td>124,855</td>
<td>124,176</td>
<td>1,040,459</td>
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<tr>
<td>Accrued liabilities</td>
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<td></td>
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</tr>
<tr>
<td>Income taxes</td>
<td>2,076</td>
<td>3,521</td>
<td>17,301</td>
</tr>
<tr>
<td>Other</td>
<td>3,085</td>
<td>3,714</td>
<td>25,706</td>
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<tr>
<td>Reserve for restructuring expenses (Note 2)</td>
<td>9,017</td>
<td>21,646</td>
<td>75,144</td>
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<tr>
<td>Other current liabilities</td>
<td>22,322</td>
<td>28,103</td>
<td>186,017</td>
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<tr>
<td>Total current liabilities</td>
<td>472,833</td>
<td>488,731</td>
<td>3,940,272</td>
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<tr>
<td><strong>Long-term liabilities</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Long-term debt less current portion (Note 5)</td>
<td>269,652</td>
<td>314,839</td>
<td>2,247,096</td>
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<tr>
<td>Deferred tax liabilities—non-current (Note 11)</td>
<td>5,995</td>
<td>4,780</td>
<td>49,956</td>
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<tr>
<td>Employees’ severance indemnities (Notes 2 and 6)</td>
<td>9,099</td>
<td>8,731</td>
<td>75,827</td>
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<tr>
<td>Deferred tax liabilities due to land revaluation</td>
<td>24,702</td>
<td>24,372</td>
<td>205,849</td>
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<td>Other long-term liabilities</td>
<td>13,076</td>
<td>14,319</td>
<td>108,969</td>
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<td>Total long-term liabilities</td>
<td>322,524</td>
<td>367,041</td>
<td>2,687,697</td>
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<tr>
<td><strong>Minority interests</strong></td>
<td>41,066</td>
<td>35,643</td>
<td>342,218</td>
</tr>
<tr>
<td><strong>Contingent liabilities (Note 7)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stockholders’ equity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authorized, 3,300,000,000 shares</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issued and outstanding, 2002—1,138,100,738 shares</td>
<td>110,451</td>
<td>—</td>
<td>920,428</td>
</tr>
<tr>
<td>Issued and outstanding, 2001—1,138,100,738 shares</td>
<td>8,174</td>
<td>110,451</td>
<td>—</td>
</tr>
<tr>
<td>Capital surplus</td>
<td>1,302</td>
<td>46,707</td>
<td>68,121</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>34,080</td>
<td>33,657</td>
<td>283,999</td>
</tr>
<tr>
<td>Revaluation reserve (Note 13)</td>
<td>(2,442)</td>
<td>250</td>
<td>(20,351)</td>
</tr>
<tr>
<td>Securities valuation surplus</td>
<td>(1,402)</td>
<td>73</td>
<td>(11,680)</td>
</tr>
<tr>
<td>Foreign currency translation adjustments (Note 2)</td>
<td>(43)</td>
<td>—</td>
<td>(358)</td>
</tr>
<tr>
<td>Less: Treasury stock at cost, 2002—159,373 shares</td>
<td>(2)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Total stockholders’ equity</td>
<td>150,121</td>
<td>139,458</td>
<td>1,251,010</td>
</tr>
<tr>
<td>Total liabilities and stockholders’ equity</td>
<td>¥ 986,544</td>
<td>¥1,030,872</td>
<td>$8,221,197</td>
</tr>
</tbody>
</table>

**Note:** The Company has changed the presentation of certain items in stockholders’ equity, beginning with the year under review, and the corresponding financial data for the previous year have also been restated in the new format.
# CONSOLIDATED STATEMENTS OF INCOME

Showa Denko K.K. and Consolidated Subsidiaries  
For the years ended December 31, 2002 and 2001

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars (Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2001</td>
<td>2002</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>2002</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>¥674,018</td>
<td>¥708,900</td>
<td>$5,616,815</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>551,263</td>
<td>589,318</td>
<td>4,593,856</td>
</tr>
<tr>
<td>Gross profit</td>
<td>122,755</td>
<td>119,582</td>
<td>1,022,959</td>
</tr>
<tr>
<td>Selling, general and administrative expenses</td>
<td>91,452</td>
<td>100,413</td>
<td>762,102</td>
</tr>
<tr>
<td>Operating income</td>
<td>31,303</td>
<td>19,169</td>
<td>260,856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other income (expenses)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest and dividend income</td>
<td>1,089</td>
<td>1,402</td>
<td>9,075</td>
</tr>
<tr>
<td>Gain on the sale of marketable and investment securities, net</td>
<td>15,636</td>
<td>3,329</td>
<td>130,300</td>
</tr>
<tr>
<td>Interest expense</td>
<td>(11,385)</td>
<td>(12,709)</td>
<td>(94,677)</td>
</tr>
<tr>
<td>(Loss) gain on the sale of property, plant and equipment, net</td>
<td>(718)</td>
<td>893</td>
<td>(5,979)</td>
</tr>
<tr>
<td>Loss on the disposal of property, plant and equipment, net</td>
<td>(2,363)</td>
<td>(10,543)</td>
<td>(19,695)</td>
</tr>
<tr>
<td>Write-down of marketable and investment securities</td>
<td>(5,373)</td>
<td>(15,780)</td>
<td>(44,777)</td>
</tr>
<tr>
<td>Special severance pay</td>
<td>(2,774)</td>
<td>(3,975)</td>
<td>(23,118)</td>
</tr>
<tr>
<td>Provision for restructuring expenses (Note 2)</td>
<td>(2,408)</td>
<td>(21,646)</td>
<td>(20,067)</td>
</tr>
<tr>
<td>Other, net</td>
<td>(4,014)</td>
<td>(9,933)</td>
<td>(33,453)</td>
</tr>
<tr>
<td>Total</td>
<td>(12,311)</td>
<td>(68,965)</td>
<td>(102,591)</td>
</tr>
</tbody>
</table>

| Income (loss) before income taxes                                          | 18,992     | (49,796)   | 158,265    |

| Income taxes (Note 2)                                                      |            |            |            |
| Current                                                                    | 2,853      | 4,752      | 23,777     |
| Deferred                                                                   | 2,095      | (19,039)   | 17,459     |
| Minority interests                                                        | (1,019)    | 1,249      | (8,495)    |
| Net income (loss)                                                         | ¥13,024    | ¥(34,260)  | $108,534   |

| Per share amounts                                                         | ¥11.44     | ¥(30.78)   | $0.095     |

| Cash dividends (applicable to the period)                                  | —          | —          | —          |

See notes to financial statements.
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS’ EQUITY**

Showa Denko K.K. and Consolidated Subsidiaries
For the years ended December 31, 2002 and 2001

<table>
<thead>
<tr>
<th>Number of shares of common stock</th>
<th>Common stock</th>
<th>Capital surplus</th>
<th>Retained earnings</th>
<th>Revaluation reserve</th>
<th>Securities valuation surplus</th>
<th>Foreign currency translation adjustments</th>
<th>Treasury stock</th>
</tr>
</thead>
</table>

Balance at December 31, 2000

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,038,260</td>
<td>¥105,459</td>
</tr>
<tr>
<td>46,696</td>
<td>¥(68,214)</td>
</tr>
<tr>
<td>18</td>
<td>¥(60,718)</td>
</tr>
<tr>
<td>1,138,101</td>
<td>¥920,428</td>
</tr>
<tr>
<td>389,225</td>
<td>¥(430,659)</td>
</tr>
<tr>
<td>220,478</td>
<td>¥280,478</td>
</tr>
<tr>
<td>2,081</td>
<td>¥607</td>
</tr>
<tr>
<td>607</td>
<td>$(13)</td>
</tr>
</tbody>
</table>

Balance at December 31, 2001

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,138,101</td>
<td>¥110,451</td>
</tr>
<tr>
<td>46,696</td>
<td>¥(68,214)</td>
</tr>
<tr>
<td>18</td>
<td>¥(60,718)</td>
</tr>
<tr>
<td>1,138,101</td>
<td>¥920,428</td>
</tr>
<tr>
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<td>¥(430,659)</td>
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<tr>
<td>220,478</td>
<td>¥280,478</td>
</tr>
<tr>
<td>2,081</td>
<td>¥607</td>
</tr>
<tr>
<td>607</td>
<td>$(13)</td>
</tr>
</tbody>
</table>

Balance at December 31, 2002

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,138,101</td>
<td>$920,428</td>
</tr>
<tr>
<td>68,121</td>
<td>$10,850</td>
</tr>
<tr>
<td>1,138,101</td>
<td>$283,999</td>
</tr>
<tr>
<td>220,478</td>
<td>$(20,351)</td>
</tr>
<tr>
<td>607</td>
<td>$(11,680)</td>
</tr>
<tr>
<td>358</td>
<td>$(358)</td>
</tr>
</tbody>
</table>

See notes to financial statements.

Note: The presentation of certain items has been changed, beginning with this year under review, and the corresponding financial data for the previous year have also been restated in the new format.

Showa Denko K.K. 23

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CONSOLIDATED STATEMENTS OF STOCKHOLDERS’ EQUITY

Showa Denko K.K. and Consolidated Subsidiaries
For the years ended December 31, 2002 and 2001

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,038,260</td>
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<tr>
<td>46,696</td>
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<td>220,478</td>
<td>¥280,478</td>
</tr>
<tr>
<td>2,081</td>
<td>¥607</td>
</tr>
<tr>
<td>607</td>
<td>$(13)</td>
</tr>
</tbody>
</table>

Balance at December 31, 2001

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,138,101</td>
<td>¥110,451</td>
</tr>
<tr>
<td>46,696</td>
<td>¥(68,214)</td>
</tr>
<tr>
<td>18</td>
<td>¥(60,718)</td>
</tr>
<tr>
<td>1,138,101</td>
<td>¥920,428</td>
</tr>
<tr>
<td>389,225</td>
<td>¥(430,659)</td>
</tr>
<tr>
<td>220,478</td>
<td>¥280,478</td>
</tr>
<tr>
<td>2,081</td>
<td>¥607</td>
</tr>
<tr>
<td>607</td>
<td>$(13)</td>
</tr>
</tbody>
</table>

Balance at December 31, 2002

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,138,101</td>
<td>$920,428</td>
</tr>
<tr>
<td>68,121</td>
<td>$10,850</td>
</tr>
<tr>
<td>1,138,101</td>
<td>$283,999</td>
</tr>
<tr>
<td>220,478</td>
<td>$(20,351)</td>
</tr>
<tr>
<td>607</td>
<td>$(11,680)</td>
</tr>
<tr>
<td>358</td>
<td>$(358)</td>
</tr>
</tbody>
</table>

See notes to financial statements.

Note: The presentation of certain items has been changed, beginning with this year under review, and the corresponding financial data for the previous year have also been restated in the new format.

Showa Denko K.K. 23
CONSOLIDATED STATEMENTS OF CASH FLOWS

Showa Denko K.K. and Consolidated Subsidiaries
For the years ended December 31, 2002 and 2001

<table>
<thead>
<tr>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars (Note 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Income (loss) before income taxes</td>
<td>¥18,992</td>
</tr>
<tr>
<td>Adjustments for:</td>
<td></td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>36,956</td>
</tr>
<tr>
<td>Amortization of excess of cost over equity in net assets acquired</td>
<td>1,967</td>
</tr>
<tr>
<td>Interest and dividend income</td>
<td>(1,089)</td>
</tr>
<tr>
<td>Interest expense</td>
<td>11,358</td>
</tr>
<tr>
<td>Equity in earnings of the non-consolidated subsidiaries and affiliates</td>
<td>(561)</td>
</tr>
<tr>
<td>Gain on sale and write-down of marketable securities, net</td>
<td>—</td>
</tr>
<tr>
<td>Loss on sale and write-down of investment securities, net</td>
<td>(10,651)</td>
</tr>
<tr>
<td>Loss on the disposal of property, plant and equipment, net</td>
<td>2,363</td>
</tr>
<tr>
<td>Loss (gain) on sale of property, plant and equipment, net</td>
<td>716</td>
</tr>
<tr>
<td>(Increase) decrease in trade receivables</td>
<td>(5,682)</td>
</tr>
<tr>
<td>Decrease in inventories</td>
<td>8,817</td>
</tr>
<tr>
<td>Increase (decrease) in trade payables</td>
<td>2,231</td>
</tr>
<tr>
<td>Other</td>
<td>(13,861)</td>
</tr>
<tr>
<td>Subtotal</td>
<td>51,584</td>
</tr>
<tr>
<td>Interest and dividends received</td>
<td>1,391</td>
</tr>
<tr>
<td>Interest paid</td>
<td>(11,309)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(4,171)</td>
</tr>
<tr>
<td>Net cash provided by operating activities</td>
<td>37,495</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td></td>
</tr>
<tr>
<td>Proceeds from sales of marketable securities</td>
<td>446</td>
</tr>
<tr>
<td>Payments for purchases of property, plant and equipment</td>
<td>(28,669)</td>
</tr>
<tr>
<td>Proceeds from sales of property, plant and equipment</td>
<td>3,836</td>
</tr>
<tr>
<td>Payments for purchases of investment securities</td>
<td>(8,246)</td>
</tr>
<tr>
<td>Proceeds from sales of investment securities</td>
<td>25,230</td>
</tr>
<tr>
<td>Increase (decrease) in short-term loans, net</td>
<td>5,361</td>
</tr>
<tr>
<td>Payments for long-term loans</td>
<td>(1,488)</td>
</tr>
<tr>
<td>Proceeds from collection of long-term loans</td>
<td>2,688</td>
</tr>
<tr>
<td>Other</td>
<td>(24)</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td>(846)</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td></td>
</tr>
<tr>
<td>Decrease in short-term debt, net</td>
<td>(60,441)</td>
</tr>
<tr>
<td>Proceeds from long-term debt</td>
<td>116,457</td>
</tr>
<tr>
<td>Repayments of long-term debt</td>
<td>(86,330)</td>
</tr>
<tr>
<td>Proceeds from issuance of bonds</td>
<td>2,000</td>
</tr>
<tr>
<td>Redemption of bonds</td>
<td>(15,000)</td>
</tr>
<tr>
<td>Proceeds from issuance of common stock</td>
<td>—</td>
</tr>
<tr>
<td>Payments of dividends to minority stockholders</td>
<td>(676)</td>
</tr>
<tr>
<td>Other</td>
<td>886</td>
</tr>
<tr>
<td>Net cash used in financing activities</td>
<td>(43,104)</td>
</tr>
<tr>
<td>Effect of exchange rate changes on cash and cash equivalents</td>
<td>(173)</td>
</tr>
<tr>
<td>Decrease in cash and cash equivalents</td>
<td>(6,627)</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of the year</td>
<td>30,089</td>
</tr>
<tr>
<td>Effect of adjustment of newly consolidated subsidiaries on cash and cash equivalents at beginning of the year</td>
<td>(202)</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of the year</td>
<td>¥23,260</td>
</tr>
</tbody>
</table>

See notes to financial statements.
NOTES TO FINANCIAL STATEMENTS

Showa Denko K.K. and Consolidated Subsidiaries

1. BASIS OF REPORTING FINANCIAL STATEMENTS
The accompanying consolidated financial statements have been prepared in accordance with accounting principles and practices generally accepted in Japan and from the consolidated financial statements filed with the Director of the Kanto Local Finance Bureau as required by the Securities and Exchange Law of Japan.

Certain items have been reclassified for the convenience of readers who are not familiar with Japanese financial reporting practices.

Where appropriate, certain prior-year balances have been reclassified to conform to the year 2002 presentation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES
(a) Principles of Consolidation
The consolidated financial statements include the accounts of the Company and its 43 significant subsidiaries (collectively, “the Companies”) for the year ended December 31, 2002 and 49 significant subsidiaries for the year ended December 31, 2001.

For the purposes of the consolidated financial statements, all significant intercompany transactions, account balances and unrealized profits among the Companies are entirely eliminated and the portions attributable to minority interests are credited or charged to income.

Accounts of subsidiaries whose business year-ends differ by more than three months from December 31 have been included using appropriate interim financial information.

The excess of cost over equity in net assets is amortized on a straight-line basis within a period of 20 years.

(b) Investments in Non-Consolidated Subsidiaries and Affiliates

All underlying intercompany profits obtained from transactions among the Companies and non-consolidated subsidiaries and affiliates to which the equity method is applied are eliminated in the consolidated financial statements.

The amortization charged to income for the year ended December 31, 2002 totaled ¥27 million (US$225 thousand).

(c) Translation of Foreign Currency Accounts
Under the new Japanese Accounting Standards for Foreign Currency Translation, which have been effective for fiscal years beginning on or after April 1, 2000, all receivables and payables denominated in foreign currencies at the balance sheet date are translated into Japanese yen at the current exchange rates. The resulting exchange gains or losses are charged to income.

The monetary amounts stated in the financial statements of a certain consolidated subsidiary of foreign nationality are translated into Japanese yen at the year-end rate for assets and liabilities, at historical rates for other balance sheet accounts exclusive of net income and at the average annual rate for revenue and expense accounts and net income.

Under the new Japanese Accounting Standards for Foreign Currency Translation, which have been effective for fiscal years beginning on or after April 1, 2000, translation adjustments resulting from the process of translating the financial statements of foreign subsidiaries into Japanese yen are accumulated and reported as a component of stockholders’ equity in the consolidated balance sheet.

(d) Income Taxes
Periodic allocation of corporate tax is being made, in principle, regarding taxes pertaining to all temporary differences (differences between the assets/liabilities on the consolidated financial statements and the assets/liabilities in the calculation of taxable income).

(e) Allowance for Doubtful Receivables
To provide for losses from bad debts, the allowance is provided according to the actual rate of non-recovery for ordinary claims, and in view of the probability of recovery for specific doubtful receivables.

(f) Reserve for Restructuring Expenses
The Company and certain consolidated subsidiaries record a reserve for restructuring expenses on an accrual basis to provide for expenses and losses resulting from their restructuring programs.

(g) Securities
Securities to be owned until the due date are stated at cost as determined by the amortization-cost method.

Other securities with market values are stated at fair value based on the market prices prevailing as of the balance sheet date. Other securities without market values are stated at cost by the moving-average method.

Under the Japanese Accounting Standards for Financial Instruments, which have become effective for fiscal years beginning on or after April 1, 2000, securities are classified into one of the above-mentioned categories based on the purpose of holding, resulting in the different measurement and accounting for the changes in fair value.

Beginning with the consolidated financial statements for the fiscal year under review, the Company has applied the accounting standards for financial instruments contained in the Opinion Regarding the Establishment of Accounting Standards for Financial Instruments (issued by the Corporate Accounting Deliberation Council on January 22, 1999) and has restated the value of “other securities” with quoted market values at their market prices prevailing at the balance sheet date. As a consequence, the “securities valuation surplus” declined ¥2,422 million (US$20,183 thousand), in comparison with the previous method of accounting. Other securities without quoted market prices were valued at cost by the moving-average method.

(h) Inventories
Inventories are stated mainly at cost as determined by the gross-average method. Part of the inventories owned by certain subsidiaries is stated at cost as determined by the specific-cost method or by the final purchasing-price method.

(i) Property, Plant and Equipment
Property, plant and equipment is stated at cost. Depreciation of property, plant and equipment is computed principally by the straight-line method with the exception that the declining-balance method is applied to certain factories of the Company and certain consolidated subsidiaries.

(j) Leases
Finance leases other than those that are deemed to transfer the ownership of the leased assets to the lessees are principally accounted for by the method that is applicable to ordinary operating leases.

(k) Employees’ Severance Indemnities
Employees’ severance indemnities are provided based on the estimated retirement benefit obligation and the pension assets.
3. TRANSLATION INTO U.S. DOLLARS
The Companies’ accounting records are maintained in yen. The U.S. dollar amounts appearing in the accompanying financial statements and notes thereto represent the arithmetical results of translating yen to U.S. dollars at the rate of ¥120 to US$1, the approximate rate of exchange at December 31, 2002. The inclusion of such U.S. dollar amounts is solely for the convenience of readers; it does not carry with it any implication that yen amounts have been or could be converted into U.S. dollars at that rate.

4. SECURITIES
The following tables summarize acquisition costs, book values and fair values of securities with available fair values as of December 31, 2002 and 2001:

<table>
<thead>
<tr>
<th>Held-to-maturity debt securities:</th>
<th>Millions of yen</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Book value</td>
<td>Fair value</td>
</tr>
<tr>
<td>Government bonds</td>
<td>¥114</td>
<td>¥114</td>
</tr>
<tr>
<td>Total</td>
<td>¥114</td>
<td>¥114</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Held-to-maturity debt securities:</th>
<th>Millions of yen</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Book value</td>
<td>Fair value</td>
</tr>
<tr>
<td>Government bonds</td>
<td>¥10</td>
<td>¥10</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Total</td>
<td>¥114</td>
<td>¥114</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Held-to-maturity debt securities:</th>
<th>Thousands of U.S. dollars</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Book value</td>
<td>Fair value</td>
</tr>
<tr>
<td>Government bonds</td>
<td>$8</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td>$8</td>
<td>$0</td>
</tr>
</tbody>
</table>
The following tables summarize available-for-sale securities sold in the years ended December 31, 2002 and 2001:

### Year ended December 31, 2002

<table>
<thead>
<tr>
<th></th>
<th>Sale (Millions of yen)</th>
<th>Gross gain</th>
<th>Gross loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity securities</td>
<td>¥11,717</td>
<td>¥5,176</td>
<td>¥(18)</td>
</tr>
<tr>
<td>Total</td>
<td>¥11,717</td>
<td>¥5,176</td>
<td>¥(18)</td>
</tr>
</tbody>
</table>

### Year ended December 31, 2001

<table>
<thead>
<tr>
<th></th>
<th>Sale (Millions of yen)</th>
<th>Gross gain</th>
<th>Gross loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity securities</td>
<td>¥7,328</td>
<td>¥4,490</td>
<td>¥(985)</td>
</tr>
<tr>
<td>Others</td>
<td>339</td>
<td>—</td>
<td>(68)</td>
</tr>
<tr>
<td>Total</td>
<td>¥7,667</td>
<td>¥4,490</td>
<td>¥(1,053)</td>
</tr>
</tbody>
</table>

### Year ended December 31, 2002

<table>
<thead>
<tr>
<th></th>
<th>Sale (Thousands of U.S. dollars)</th>
<th>Gross gain</th>
<th>Gross loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity securities</td>
<td>$97,642</td>
<td>$43,133</td>
<td>$(150)</td>
</tr>
<tr>
<td>Total</td>
<td>$97,642</td>
<td>$43,133</td>
<td>$(150)</td>
</tr>
</tbody>
</table>

The following table summarizes book values of securities with no available fair values as of December 31, 2002 and 2001:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Held-to-maturity debt securities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local bonds</td>
<td>¥26</td>
<td>$217</td>
</tr>
<tr>
<td>Private placement corporate bonds</td>
<td>1,001</td>
<td>8,342</td>
</tr>
<tr>
<td>Available-for-sale securities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-listed equity securities</td>
<td>9,749</td>
<td>81,242</td>
</tr>
<tr>
<td>Preferred securities</td>
<td>1,000</td>
<td>8,333</td>
</tr>
<tr>
<td>Private placement local bonds</td>
<td>115</td>
<td>958</td>
</tr>
<tr>
<td>Total</td>
<td>¥11,891</td>
<td>$99,092</td>
</tr>
</tbody>
</table>

Available-for-sale securities with maturities and held-to-maturity debt securities at December 31, 2002 and 2001 mature as follows (all securities have a maturity of 10 years or less):

(a) Held-to-maturity debt securities:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year ended December 31, 2002</td>
<td>Within one year</td>
</tr>
<tr>
<td>Government bonds</td>
<td>¥3</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>¥3</td>
</tr>
</tbody>
</table>

(b) Other securities

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year ended December 31, 2002</td>
<td>Within one year</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>¥—</td>
</tr>
<tr>
<td>Total</td>
<td>¥—</td>
</tr>
</tbody>
</table>

Showa Denko K.K. 27
a) Held-to-maturity debt securities:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Within one year</td>
<td>Over one year but within five years</td>
<td>Over five years but within ten years</td>
</tr>
<tr>
<td>Government bonds</td>
<td>¥ 11</td>
<td>¥ 11</td>
<td>¥ 15</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>—</td>
<td>5</td>
<td>1,000</td>
</tr>
<tr>
<td>Subordinated bonds and other</td>
<td>104</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>¥115</td>
<td>¥16</td>
<td>¥1,015</td>
</tr>
</tbody>
</table>

(b) Other securities

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Within one year</td>
<td>Over one year but within five years</td>
<td>Over five years but within ten years</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>¥ 25</td>
<td>¥98</td>
<td>¥2</td>
</tr>
<tr>
<td>Others</td>
<td>380</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>¥305</td>
<td>¥98</td>
<td>¥2</td>
</tr>
</tbody>
</table>

(a) Held-to-maturity debt securities:

<table>
<thead>
<tr>
<th></th>
<th>Thousands of U.S. dollars</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Within one year</td>
<td>Over one year but within five years</td>
<td>Over five years but within ten years</td>
</tr>
<tr>
<td>Government bonds</td>
<td>$25</td>
<td>$83</td>
<td>$108</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>—</td>
<td>—</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>$25</td>
<td>$83</td>
<td>$117</td>
</tr>
</tbody>
</table>

(b) Other securities

<table>
<thead>
<tr>
<th></th>
<th>Thousands of U.S. dollars</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Within one year</td>
<td>Over one year but within five years</td>
<td>Over five years but within ten years</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>—</td>
<td>$617</td>
<td>$—</td>
</tr>
<tr>
<td>Total</td>
<td>$—</td>
<td>$617</td>
<td>$—</td>
</tr>
</tbody>
</table>

5. SHORT-TERM DEBT AND LONG-TERM DEBT

At December 31, 2002 and 2001, the short-term debt of the Companies consisted of the following:

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank loans, interest 0.529%–5.0%</td>
<td>¥150,506</td>
<td>¥208,862</td>
<td>$1,254,215</td>
</tr>
<tr>
<td>Commercial paper</td>
<td>—</td>
<td>2,000</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>¥150,506</td>
<td>¥210,862</td>
<td>$1,254,215</td>
</tr>
</tbody>
</table>
At December 31, 2002 and 2001, the long-term debt of the Companies consisted of the following:

<table>
<thead>
<tr>
<th>Description</th>
<th>2002</th>
<th>2001</th>
<th>U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.27% bonds due 2002</td>
<td>¥269,652</td>
<td>¥267,778</td>
<td>$2,247,096</td>
</tr>
<tr>
<td>2.3% bonds due 2005</td>
<td>430,623</td>
<td>430,623</td>
<td>3,588,524</td>
</tr>
<tr>
<td>TIBOR+0.55% bonds due 2005</td>
<td>314,018</td>
<td>314,018</td>
<td>2,231,483</td>
</tr>
<tr>
<td>TIBOR+0.55% bonds due 2006</td>
<td>10,000</td>
<td>10,000</td>
<td>63,333</td>
</tr>
<tr>
<td>0.7% convertible bonds due 2008, convertible at ¥720</td>
<td>361,254</td>
<td>361,254</td>
<td>3,010,449</td>
</tr>
</tbody>
</table>

At December 31, 2002, the following assets were pledged as collateral for short-term debt and long-term debt:

<table>
<thead>
<tr>
<th>Description</th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment securities</td>
<td>2,073</td>
<td>17,275</td>
</tr>
<tr>
<td>Property, plant and equipment, less accumulated depreciation</td>
<td>285,705</td>
<td>2,214,206</td>
</tr>
<tr>
<td></td>
<td>¥287,778</td>
<td>$2,231,483</td>
</tr>
</tbody>
</table>

The aggregate annual maturities of the non-current portion of long-term debt are as follows:

<table>
<thead>
<tr>
<th>Year ending December 31</th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>¥68,050</td>
<td>$567,082</td>
</tr>
<tr>
<td>2005</td>
<td>¥61,183</td>
<td>$509,862</td>
</tr>
<tr>
<td>2006</td>
<td>¥47,830</td>
<td>$399,417</td>
</tr>
<tr>
<td>2007</td>
<td>¥17,246</td>
<td>$143,719</td>
</tr>
<tr>
<td>2008 and thereafter</td>
<td>¥5,873</td>
<td>$48,942</td>
</tr>
<tr>
<td></td>
<td>¥200,283</td>
<td>$1,669,021</td>
</tr>
</tbody>
</table>

6. PENSION AND SEVERANCE PLANS

The Company and its consolidated subsidiaries have a funded qualified retirement pension plan, a funded welfare pension plan and unfunded benefit plans on a lump-sum payment basis, all of which are for all employees as their defined benefit system.

The plans’ funded status and amount recognized in the accompanying consolidated balance sheets as of December 31, 2002 and 2001 were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2002</th>
<th>2001</th>
<th>U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit obligation at the end of year</td>
<td>¥(119,588)</td>
<td>¥(158,616)</td>
<td>$(996,570)</td>
</tr>
<tr>
<td>Fair value of plan assets at the end of year</td>
<td>45,450</td>
<td>80,033</td>
<td>378,751</td>
</tr>
<tr>
<td>Funded status</td>
<td>(74,138)</td>
<td>(78,583)</td>
<td>(617,819)</td>
</tr>
<tr>
<td>Unrecognized transition amount under post-employment benefits accounting</td>
<td>43,396</td>
<td>41,441</td>
<td>361,254</td>
</tr>
<tr>
<td>Unrecognized actuarial loss</td>
<td>23,301</td>
<td>16,667</td>
<td>194,174</td>
</tr>
<tr>
<td>Net amount recognized</td>
<td>(7,442)</td>
<td>(7,434)</td>
<td>(62,016)</td>
</tr>
<tr>
<td>Prepaid pension expense</td>
<td>1,657</td>
<td>1,297</td>
<td>13,806</td>
</tr>
<tr>
<td>Employees’ severance indemnities</td>
<td>¥(9,099)</td>
<td>¥(8,731)</td>
<td>$(75,827)</td>
</tr>
</tbody>
</table>
The components of net pension and severance costs for the years ended December 31, 2002 and 2001 were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service cost</td>
<td>¥3,608</td>
<td>¥4,078</td>
<td>$30,065</td>
</tr>
<tr>
<td>Interest cost</td>
<td>4,473</td>
<td>5,182</td>
<td>37,275</td>
</tr>
<tr>
<td>Expected return on planned assets</td>
<td>(2,034)</td>
<td>(2,862)</td>
<td>(16,951)</td>
</tr>
<tr>
<td>Amortization of transition amount under post-employment benefits accounting</td>
<td>3,599</td>
<td>4,076</td>
<td>29,990</td>
</tr>
<tr>
<td>Recognized actuarial loss</td>
<td>1,142</td>
<td>489</td>
<td>9,514</td>
</tr>
<tr>
<td>Net periodic cost</td>
<td>¥10,787</td>
<td>¥10,963</td>
<td>$89,891</td>
</tr>
</tbody>
</table>

The assumptions and basis as of December 31, 2002 were as follows:

Discount rate: Mainly 3.0%
Expected return rate on planned assets: Mainly 3.5%
Amortization period for actuarial loss: Mainly 12 years

7. CONTINGENT LIABILITIES
At December 31, 2002, the Companies were contingently liable for outstanding trade notes discounted by banks in the ordinary course of business in an aggregate amount of ¥700 million (US$5,833 thousand) and for the endorsement of trade notes receivable in the ordinary course of business in an aggregate amount of ¥2 million (US$17 thousand). They were also guarantors for the borrowing below, principally incurred by non-consolidated subsidiaries, affiliates and others.

<table>
<thead>
<tr>
<th>Guarantee</th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guarantee</td>
<td>¥20,323</td>
<td>$169,358</td>
</tr>
</tbody>
</table>

The figure ¥20,323 million includes ¥13,045 million (US$108,708 thousand) of guarantees provided by consolidated subsidiaries.

8. EFFECT OF YEAR-END DATE ON FINANCIAL STATEMENTS
The year-end date of 2002, namely, December 31, 2002, was a bank holiday. Although notes receivable and payable on this date were accordingly settled on January 6, 2003, the Companies accounted for those notes in their financial statements as if they had been settled on that date.

Notes outstanding at December 31, 2002 and 2001, dealt with in the above-mentioned manner were as follows:

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes receivable</td>
<td>¥1,915</td>
<td>¥2,767</td>
<td>$15,958</td>
</tr>
<tr>
<td>Notes payable</td>
<td>3,610</td>
<td>3,273</td>
<td>30,083</td>
</tr>
<tr>
<td>Trade notes discounted by banks</td>
<td>166</td>
<td>87</td>
<td>1,383</td>
</tr>
</tbody>
</table>
9. INFORMATION FOR CERTAIN LEASES

At December 31, 2002, assets leased under non-capitalized financial leases were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>¥14,350</td>
<td>¥13,943</td>
</tr>
<tr>
<td>Other</td>
<td>1,565</td>
<td>1,632</td>
</tr>
<tr>
<td>Less: Accumulated</td>
<td>8,137</td>
<td>8,295</td>
</tr>
<tr>
<td>depreciation and amortization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>¥7,778</td>
<td>¥7,280</td>
</tr>
</tbody>
</table>

At December 31, 2002, future minimum lease payments for the remaining lease periods were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Due within one year</td>
<td>¥2,244</td>
<td>¥2,050</td>
</tr>
<tr>
<td>Due over one year</td>
<td>5,535</td>
<td>5,230</td>
</tr>
<tr>
<td>Total</td>
<td>¥7,779</td>
<td>¥7,280</td>
</tr>
</tbody>
</table>

At December 31, 2002, paid lease fees and equivalent depreciation expense amounts were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Paid lease fees</td>
<td>¥2,158</td>
<td>¥2,562</td>
</tr>
<tr>
<td>Equivalent depreciation expense fees</td>
<td>2,158</td>
<td>2,562</td>
</tr>
</tbody>
</table>

Note: Equivalent depreciation expense amount is calculated using the straight-line method, with the lease period as the useful life and zero (0) as the residual value.

At December 31, 2002, assets leased under non-capitalized operating leases were as follows:

Future minimum lease payments for the remaining lease periods:

<table>
<thead>
<tr>
<th></th>
<th>Millions of yen</th>
<th>Thousands of U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2001</td>
</tr>
<tr>
<td>Due within one year</td>
<td>¥ 53</td>
<td>¥ 67</td>
</tr>
<tr>
<td>Due over one year</td>
<td>143</td>
<td>157</td>
</tr>
<tr>
<td>Total</td>
<td>¥196</td>
<td>¥224</td>
</tr>
</tbody>
</table>

10. DERIVATIVE FINANCIAL INSTRUMENTS

The Company and certain subsidiaries enter into forward exchange contracts, interest rate swaps and commodity forwards for aluminum metal. The Company and its subsidiaries have their basic policies to use derivative financial instruments for risk hedging within the limit of hedged receivables and payables and do not hold or issue derivative financial instruments for trading purposes. Forward exchange contracts are used to hedge risk arising from future fluctuations of foreign currency exchange with respect to receivables and payables denominated in foreign currencies. Interest rate swaps are used to hedge risk arising from future fluctuations of interest rates and reduce interest expenses. Commodity forwards for aluminum metal are used to hedge risk arising from future fluctuations of commodity market prices with respect to commodity transactions.

Under the Japanese Accounting Standards for Financial Instruments, which have been effective for fiscal years beginning on or after April 1, 2000, the Companies have applied hedge accounting.
At December 31, 2002 and 2001, the derivative financial instruments of the Companies were as follows:

<table>
<thead>
<tr>
<th>Contract</th>
<th>Fair value</th>
<th>Valuation gain (loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>amount</td>
<td>2002</td>
<td>2002</td>
</tr>
</tbody>
</table>

**Related to interest rates**

**Interest rate swaps:**
- Paying fixed rates and receiving floating rates
  - 2002: ¥12,576
  - 2001: ¥20,427

**11. INCOME TAXES**

At December 31, 2002 and 2001, significant components of deferred tax assets and liabilities were as follows:

<table>
<thead>
<tr>
<th>Contract</th>
<th>Fair value</th>
<th>Valuation gain (loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>amount</td>
<td>2002</td>
<td>2001</td>
</tr>
</tbody>
</table>

**Deferred tax assets:**
- Tax loss carryforwards
- Write-down of marketable and investment securities
- Reserve for restructuring expenses
- Unrealized earnings from the sale of fixed assets
- Securities valuation surplus
- Non-deductible expenses:
  - Allowance for doubtful accounts
  - Employees’ severance indemnities
  - Accrued bonuses
  - Depreciation
- Other
d

**Deferred tax liabilities:**
- Amount of revaluation from the book value
- Special depreciation reserve
- Other
d

**Net deferred tax assets**
The net deferred tax assets at December 31, 2002 and 2001 are included in the consolidated balance sheets as follows:

<table>
<thead>
<tr>
<th></th>
<th>Thousands of yen</th>
<th>Millions of yen</th>
<th>U.S. dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred tax assets—current</td>
<td>¥7,834</td>
<td>¥07,834</td>
<td>$65,282</td>
</tr>
<tr>
<td>Deferred tax assets—non-current</td>
<td>24,410</td>
<td>18,034</td>
<td>203,417</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>(46)</td>
<td>(383)</td>
<td></td>
</tr>
<tr>
<td>Deferred tax liabilities—non-current</td>
<td>(5,995)</td>
<td>(4,790)</td>
<td>(49,958)</td>
</tr>
</tbody>
</table>

12. SEGMENT INFORMATION

The operations of the Companies for the years ended December 31, 2002 and 2001 are summarized by industry segment as follows:

<table>
<thead>
<tr>
<th>Year ended December 31, 2002</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrochemicals</td>
<td>Chemicals</td>
</tr>
<tr>
<td>Sales</td>
<td>Outside customers</td>
</tr>
<tr>
<td>Inter-segment</td>
<td>1,772</td>
</tr>
<tr>
<td>Total</td>
<td>229,524</td>
</tr>
<tr>
<td>Operating costs</td>
<td>219,569</td>
</tr>
<tr>
<td>Operating income</td>
<td>¥9,955</td>
</tr>
<tr>
<td>Assets</td>
<td>¥259,520</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>8,195</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>6,302</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year ended December 31, 2001</th>
<th>Millions of yen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrochemicals</td>
<td>Chemicals</td>
</tr>
<tr>
<td>Sales</td>
<td>Outside customers</td>
</tr>
<tr>
<td>Inter-segment</td>
<td>1,478</td>
</tr>
<tr>
<td>Total</td>
<td>235,125</td>
</tr>
<tr>
<td>Operating costs</td>
<td>228,995</td>
</tr>
<tr>
<td>Operating income</td>
<td>¥6,130</td>
</tr>
<tr>
<td>Assets</td>
<td>¥260,301</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>8,193</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>5,392</td>
</tr>
</tbody>
</table>
### Year ended December 31, 2002

<table>
<thead>
<tr>
<th>Sales</th>
<th>Outside customers</th>
<th>Inter-segment</th>
<th>Total</th>
<th>Operating costs</th>
<th>Operating income</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrochemicals</td>
<td>$1,897,938</td>
<td>$1,912,704</td>
<td>$1,926,747</td>
<td>$0,082,960</td>
<td>$5,616,815</td>
<td></td>
</tr>
<tr>
<td>Chemicals</td>
<td>$571,086</td>
<td>$585,926</td>
<td>$674,018</td>
<td>$0,047,328</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Electronics</td>
<td>$627,063</td>
<td>$632,730</td>
<td>$674,018</td>
<td>$0,047,328</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Inorganic Materials</td>
<td>$473,981</td>
<td>$478,936</td>
<td>$478,936</td>
<td>$0,047,328</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>$2,046,747</td>
<td>$2,204,647</td>
<td>$2,204,647</td>
<td>$0,047,328</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Elimination</td>
<td>$ —</td>
<td>$(198,128)</td>
<td>$(198,128)</td>
<td>$ —</td>
<td>$ —</td>
<td></td>
</tr>
<tr>
<td>Consolidated</td>
<td>$5,616,815</td>
<td>$5,616,815</td>
<td>$5,616,815</td>
<td>$0,047,328</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

| Operating costs | $1,829,744 | $1,829,744 | $1,829,744 | $0,082,960 | $5,616,815 |
| Operating income | $0,082,960 | $0,082,960 | $0,082,960 | $0,047,328 | — |

| Assets | $2,162,663 | $2,162,663 | $2,162,663 | $0,082,960 | $5,616,815 |
| Depreciation and amortization | $68,292 | $68,292 | $68,292 | $0,082,960 | $5,616,815 |
| Capital expenditures | $52,517 | $52,517 | $52,517 | $0,082,960 | $5,616,815 |

The operations of the Companies for the years ended December 31, 2002 and 2001 are summarized by geographic area as follows:

### Year ended December 31, 2002

<table>
<thead>
<tr>
<th>Sales</th>
<th>Outside customers</th>
<th>Inter-segment</th>
<th>Total</th>
<th>Operating costs</th>
<th>Operating income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic companies</td>
<td>¥608,433</td>
<td>¥3,384</td>
<td>¥608,433</td>
<td>¥0,346</td>
<td>¥31,303</td>
</tr>
<tr>
<td>Overseas companies</td>
<td>¥65,584</td>
<td>¥4,231</td>
<td>¥69,815</td>
<td>¥0,346</td>
<td>¥31,303</td>
</tr>
<tr>
<td>Elimination</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
</tr>
<tr>
<td>Consolidated</td>
<td>¥674,018</td>
<td>¥4,231</td>
<td>¥678,249</td>
<td>¥0,346</td>
<td>¥31,303</td>
</tr>
</tbody>
</table>

| Assets | ¥2,162,663 | ¥38,281 | ¥2,190,944 | — | — |

### Year ended December 31, 2001

<table>
<thead>
<tr>
<th>Sales</th>
<th>Outside customers</th>
<th>Inter-segment</th>
<th>Total</th>
<th>Operating costs</th>
<th>Operating income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic companies</td>
<td>¥635,894</td>
<td>¥3,517</td>
<td>¥639,411</td>
<td>¥0,319</td>
<td>¥30,989</td>
</tr>
<tr>
<td>Overseas companies</td>
<td>¥73,006</td>
<td>¥4,231</td>
<td>¥77,237</td>
<td>¥0,319</td>
<td>¥30,989</td>
</tr>
<tr>
<td>Elimination</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
<td>¥ —</td>
</tr>
<tr>
<td>Consolidated</td>
<td>¥708,900</td>
<td>¥4,231</td>
<td>¥713,131</td>
<td>¥0,319</td>
<td>¥30,989</td>
</tr>
</tbody>
</table>

| Assets | ¥2,162,663 | ¥53,132 | ¥2,190,944 | — | — |

### Notes to Financial Statements

- **Year ended December 31, 2002**
  - Thousands of U.S. dollars

- **Year ended December 31, 2001**
  - Millions of yen
Year ended December 31, 2002

Thousands of U.S. dollars

<table>
<thead>
<tr>
<th></th>
<th>Domestic companies</th>
<th>Overseas companies</th>
<th>Elimination</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside customers</td>
<td>$5,070,279</td>
<td>$546,536</td>
<td>—</td>
<td>$5,616,815</td>
</tr>
<tr>
<td>Inter-segment</td>
<td>240,808</td>
<td>28,203</td>
<td>(269,011)</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,311,087</td>
<td>574,739</td>
<td>(269,011)</td>
<td>5,616,815</td>
</tr>
<tr>
<td><strong>Operating costs</strong></td>
<td>5,024,874</td>
<td>559,609</td>
<td>(228,525)</td>
<td>5,355,958</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>$ 286,213</td>
<td>$ 15,130</td>
<td>(40,487)</td>
<td>$ 260,856</td>
</tr>
<tr>
<td><strong>Assets</strong></td>
<td>$7,748,696</td>
<td>$377,387</td>
<td>95,114</td>
<td>$8,221,197</td>
</tr>
</tbody>
</table>

Overseas sales, which represent sales to customers outside of Japan, of the Companies for the year ended December 31, 2002 were summarized by geographic area as follows:

Year ended December 31, 2002

Millions of yen

<table>
<thead>
<tr>
<th></th>
<th>Asia</th>
<th>Others</th>
<th>Overseas sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overseas sales</strong></td>
<td>¥81,550</td>
<td>¥57,939</td>
<td>¥139,489</td>
</tr>
<tr>
<td><strong>Consolidated net sales</strong></td>
<td>674,018</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ratio of overseas sales to consolidated net sales</strong></td>
<td>12.1%</td>
<td>8.6%</td>
<td>20.7%</td>
</tr>
</tbody>
</table>

Year ended December 31, 2002

Thousands of U.S. dollars

<table>
<thead>
<tr>
<th></th>
<th>Asia</th>
<th>Others</th>
<th>Overseas sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overseas sales</strong></td>
<td>$679,583</td>
<td>$482,825</td>
<td>$1,162,408</td>
</tr>
</tbody>
</table>

Overseas sales for the year ended December 31, 2001 totaled ¥138,708 million and accounted for 19.6% of consolidated net sales.

13. REVALUATION RESERVE

The Company and certain consolidated subsidiaries revaluated the land they own for business in accordance with the Law Concerning Revaluation of Land. The difference between the revalued amount and the book value, after the deduction of applicable tax, is stated as the revaluation reserve. The revaluation was conducted using methods stipulated in the ordinance for enforcement of the law, specifically, the method in Item 4, Article 2 (reasonable adjustment of the appraised value relating to land price tax), and the method in Item 5, Article 2 (estimation by experts). Revaluation was performed on December 31, 2000, March 30, 2001 and March 31, 2002. The difference between the market value and the book value on the revaluated land as of December 31, 2002 was ¥19,754 million (US$164,617 thousand).

Showa Homes K.K., which was merged with the Company effective June 21, 2002, revaluated the land during the current fiscal year. The Company took over the revaluation reserve on such land and included it in the amount stated in the previous paragraph.

The revaluation was conducted using methods stipulated in the ordinance for enforcement of the law, specifically, the method in Item 4, Article 2 (reasonable adjustment of the appraised value relating to land price tax). Revaluation was performed on March 31, 2002. The book value of the pertinent land decreased from ¥8,187 million (US$68,225 thousand) to ¥6,938 million (US$57,817 thousand).
REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Directors and Shareholders
Showa Denko K.K.

We have audited the accompanying consolidated balance sheets of Showa Denko K.K. and its subsidiaries as of December 31, 2002 and 2001, and the related consolidated statements of income, stockholders’ equity and cash flows for the years then ended, all expressed in Japanese yen. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Showa Denko K.K. and its subsidiaries as of December 31, 2002 and 2001, and the consolidated results of their operations and their cash flows for the years then ended in conformity with generally accepted accounting principles in Japan applied on a consistent basis during the periods.

As described in Note 2, Showa Denko K.K. and its subsidiaries have adopted the new Japanese accounting standards for financial instruments and have restated the value of Other securities with quoted market value at their market prices prevailing at the balance sheet date.

The amounts expressed in U.S. dollars, which are provided solely for the convenience of the readers, have been translated on the basis set forth in Note 3.

Tokyo, Japan
March 28, 2003

The Fuji Accounting Office
Certified Public Accountants
### MAJOR SUBSIDIARIES AND AFFILIATES

**[As of December 31, 2002]**

#### SUBSIDIARIES

<table>
<thead>
<tr>
<th>Name</th>
<th>Equity Participation (%)</th>
<th>Main Product or Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heisei Polymer Co., Ltd.* (T5193)</td>
<td>44.4</td>
<td>Plastic cloth, bags, sheeting, etc.</td>
</tr>
<tr>
<td>Hyosil Co., Ltd.</td>
<td>100.0</td>
<td>Plastic products for electrical appliances</td>
</tr>
<tr>
<td>Japan Polyolefins Co., Ltd.</td>
<td>65.0</td>
<td>High- and low-density polyethylene</td>
</tr>
<tr>
<td>Kokusai Eisei Co., Ltd.</td>
<td>100.0</td>
<td>Insecticides, insect and rodent control</td>
</tr>
<tr>
<td>PT. Showa Aluminum Indonesia</td>
<td>90.0</td>
<td>Evaporators for refrigerators</td>
</tr>
<tr>
<td>PT. Showa Esterindo Indonesia</td>
<td>67.0</td>
<td>Ethyl acetate</td>
</tr>
<tr>
<td>SDS Biotech K.K.</td>
<td>100.0</td>
<td>Agrochemicals</td>
</tr>
<tr>
<td>Shokin Co., Ltd.* (T8090)</td>
<td>43.9</td>
<td>General trading</td>
</tr>
<tr>
<td>Shotic America Corporation</td>
<td>100.0</td>
<td>Aluminum forged products</td>
</tr>
<tr>
<td>Shotic Europe-Industria de Aluminio Ltd.</td>
<td>100.0</td>
<td>Aluminum forged products</td>
</tr>
<tr>
<td>Shotic (Singapore) Pte. Ltd.</td>
<td>100.0</td>
<td>Aluminum forged products</td>
</tr>
<tr>
<td>Showa Aluminum Alloy K.K.</td>
<td>100.0</td>
<td>Aluminum alloy</td>
</tr>
<tr>
<td>Showa Aluminum Can Corporation</td>
<td>75.0</td>
<td>Beer and soft drink cans</td>
</tr>
<tr>
<td>Showa Aluminum Corporation of America</td>
<td>100.0</td>
<td>Heat exchange equipment for automobiles, photosensitive drums for laser beam printers</td>
</tr>
<tr>
<td>Showa Aluminum Czech S.R.O.</td>
<td>100.0</td>
<td>Heat exchange equipment for automobiles</td>
</tr>
<tr>
<td>Showa Aluminum Exterior Corporation</td>
<td>100.0</td>
<td>Home exterior products</td>
</tr>
<tr>
<td>Showa Aluminum (Malaysia) Sdn. Bhd.</td>
<td>100.0</td>
<td>Aluminum substrates for hard disks</td>
</tr>
<tr>
<td>Showa Aluminum Manufacturing</td>
<td>100.0</td>
<td>Evaporators for refrigerators</td>
</tr>
<tr>
<td>Showa Aluminum Powder K.K.</td>
<td>100.0</td>
<td>Aluminum paste</td>
</tr>
<tr>
<td>Showa Aluminum (Thailand) Co., Ltd.</td>
<td>97.5</td>
<td>Heat exchange equipment for automobiles</td>
</tr>
<tr>
<td>Showa Aluminum Viewtech Co., Ltd.</td>
<td>93.9</td>
<td>Flagstaffs, lightning rods, etc.</td>
</tr>
<tr>
<td>Showa Denko Cartoon, Inc.</td>
<td>100.0</td>
<td>Graphite electrodes</td>
</tr>
<tr>
<td>Showa Denko Elastomers K.K.*</td>
<td>100.0</td>
<td>Synthetic rubber</td>
</tr>
<tr>
<td>Showa Denko HD</td>
<td>80.1</td>
<td>Hard disks</td>
</tr>
<tr>
<td>Showa Denko Kenko Co., Ltd.</td>
<td>100.0</td>
<td>Grinding and polishing tools</td>
</tr>
<tr>
<td>Showa Denko Kenzai K.K.</td>
<td>100.0</td>
<td>Plaster materials, fire-proofing pipe, wall siding, etc.</td>
</tr>
<tr>
<td>Showa Denko Packaging Co., Ltd.</td>
<td>100.0</td>
<td>Packaging/containers for food, medicine, and electronic parts</td>
</tr>
<tr>
<td>Showa Engineering Co., Ltd.</td>
<td>100.0</td>
<td>Engineering, construction, maintenance</td>
</tr>
<tr>
<td>Showa Financing K.K.</td>
<td>95.4</td>
<td>Provision of finance to subsidiaries and affiliates</td>
</tr>
<tr>
<td>Showa Highpolymer Co., Ltd.* (T4214)</td>
<td>40.5</td>
<td>Unsaturated polyester, vinyl ester, etc.</td>
</tr>
<tr>
<td>Showa Titanium Co., Ltd.</td>
<td>100.0</td>
<td>Ceramics for electronics applications</td>
</tr>
<tr>
<td>Shunan Denko K.K.</td>
<td>80.0</td>
<td>High-carbon ferrochrome</td>
</tr>
<tr>
<td>Shunan Denko K.K.*</td>
<td>56.8</td>
<td>Electric power and steam generation, supply of water, treatment of wastewater</td>
</tr>
</tbody>
</table>

#### AFFILIATES

<table>
<thead>
<tr>
<th>Name</th>
<th>Equity Participation (%)</th>
<th>Main Product or Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middelburg Technochrome (Pty.) Ltd.</td>
<td>20.7</td>
<td>Low-carbon ferrochrome</td>
</tr>
<tr>
<td>Showa Cabot K.K.</td>
<td>50.0</td>
<td>Carbon black</td>
</tr>
<tr>
<td>Showa Tansan Co., Ltd.* (T4096)</td>
<td>20.6</td>
<td>Liquid oxygen, nitrogen, argon</td>
</tr>
<tr>
<td>SKY Aluminum Co., Ltd.</td>
<td>37.3</td>
<td>Sheets, plates</td>
</tr>
<tr>
<td>Sun Allomer Co., Ltd.</td>
<td>50.0</td>
<td>Polypolypylene and advanced polypolypylene-based materials</td>
</tr>
<tr>
<td>Tokyo Liquefied Oxygen Co., Ltd.</td>
<td>35.0</td>
<td>Liquefied oxygen, nitrogen, argon</td>
</tr>
<tr>
<td>Union Showa K.K.</td>
<td>50.0</td>
<td>Molecular sieves</td>
</tr>
</tbody>
</table>

*Tokyo Stock Exchange listed companies

As of December 31, 2002, Showa Denko K.K. had 43 consolidated subsidiaries, including the above.

Note: In November 2002, Showa DDE Manufacturing K.K., formerly accounted for by the equity method, became a wholly owned subsidiary of Showa Denko and changed its name to Showa Denko Elastomers K.K.
DIRECTORS, STATUTORY AUDITORS, CORPORATE OFFICERS, AND CHIEF TECHNOLOGISTS
(As of March 28, 2003)

DIRECTORS
◆ PRESIDENT AND CHIEF EXECUTIVE OFFICER
Mitsuo Ohashi

◆ EXECUTIVE VICE PRESIDENT
Iwao Kojima
Assistant to President, Executive Officer, Technology Headquarters; Chairman, Security Export Control Committee and Safety Measures Committee

◆ SENIOR MANAGING DIRECTOR
Akira Furusawa
Executive Officer, Aluminum Sector

◆ MANAGING DIRECTORS
Kunio Kashiwada
Executive Officer, Chemicals Sector
Tatsuo Sato
Chief Manager, Corporate Strategy Department; Chairman, IR Committee
Kyoei Takahashi
Executive Officer, Petrochemicals Sector
Tadahiro Hashimoto
Executive Officer, Electronics Sector
Kensuke Onishi
Deputy Executive Officer, Aluminum Sector (concurrently, President, Showa Aluminum Can Corporation)

◆ DIRECTORS
Hiroshi Ito
Director in charge of Audit Office; Chief Manager, Business Support Center
Norikuni Imoto
Chief Manager, Corporate Relations Center; Chairman, Corporate Ethics Committee
Toyoharu Fujii
Executive Officer, Inorganic Materials Sector; Chief Manager, Planning Department, Inorganic Materials Sector

Note: All directors listed above concurrently serve as corporate officers corresponding to their respective positions.

STATUTORY AUDITORS
◆ STANDING STATUTORY AUDITORS
Naoaki Yokobori
Minoru Kiyono

◆ AUDITORS
Takashi Kobayashi
Keiichi Sugiyama
Ken-ichiro Kikuchi

CORPORATE OFFICERS
Shinzou Miyamoto
General Manager, Rolled Products Division, Aluminum Sector
Hiromune Chuman
General Manager, HD Division, Electronics Sector
Tatsuo Otsuka
General Manager, Aluminum Specialty Products Division, Aluminum Sector
Koji Kudo
Oita Complex Representative; Plant Manager, Oita Plant
Tetsuo Tamada
General Manager, Carbons & Metallic Materials Division, Inorganic Materials Sector
Kenji Katagiri
General Manager, Specialty Chemicals Division, Chemicals Sector
Norio Masubuchi
General Manager, Gases & Chemicals Division, Chemicals Sector
Masayoshi Okamoto
General Manager, Heat Exchanger Division, Aluminum Sector
Toshio Ohi
Chief Manager, Production Technology Department, Technology Headquarters
Takumi Ui
General Manager, Shotic Division, Aluminum Sector
Kenji Tsukamoto
General Manager, Extrusion Division, Aluminum Sector

CHIEF TECHNOLOGISTS
Eiji Ogata
Manager, Ogata Laboratory, Corporate R&D Center, Technology Headquarters
Yorikatsu Hohokabe
Chief Manager, Intellectual Property Department, Technology Headquarters
CORPORATE DATA

INVESTOR INFORMATION

Regular General Meeting
The regular general meeting of stockholders was held on March 28, 2003.

Number of Shares Outstanding
1,138,100,738 at December 31, 2002

Number of Stockholders
104,427 at December 31, 2002

Classification of Stock
All stock issued by Showa Denko is common stock.

Stock Transfer Agent
Mizuho Trust & Banking Co., Ltd.
2-1, Yaesu 1-chome,
Chuo-ku, Tokyo 103-8670,
Japan

Stockholders by Sector  (At December 31, 2002)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of shares held (thousands)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial firms</td>
<td>586,884</td>
<td>51.57%</td>
</tr>
<tr>
<td>Individuals</td>
<td>365,931</td>
<td>32.15%</td>
</tr>
<tr>
<td>Japanese corporate entities</td>
<td>89,503</td>
<td>7.86%</td>
</tr>
<tr>
<td>Foreign corporate entities</td>
<td>85,559</td>
<td>7.52%</td>
</tr>
<tr>
<td>Securities firms</td>
<td>10,201</td>
<td>0.90%</td>
</tr>
<tr>
<td>Governmental bodies</td>
<td>22</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>1,138,100</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Head Office
Showa Denko K.K.
13-9, Shiba Daimon 1-chome,
Minato-ku, Tokyo 105-8518,
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Fax: 3-3436-2625

e-mail: sdk_prin@sdk.co.jp
URL: http://www.sdk.com

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Fax: 212-370-4566

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San Mateo, CA 94403,
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Phone: 650-345-1338
Fax: 650-345-5403

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Phone: 89-93996219
Fax: 89-939862-50

Showa Denko Singapore (Pte.) Ltd.
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Phone: 6223-1889
Fax: 6223-6007

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11F-A Zhong Cheng Bld.,
818 Dong Fang Rd., Pudong,
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Fax: 21-5820-2034

This annual report is printed on recycled paper and nonwood paper.