Main Products and Services
Waste treatment, controlled landfilling, soil remediation, metal recycling, household appliance recycling, automobile recycling, consulting on environmental matters, logistics

Environmental Management & Recycling
DOWA ECO-SYSTEM CO., LTD.

Waste Treatment | Soil Remediation | Recycling

Medium-Term Plan  VISION

Secure the top position in Asia in a bid to help improve the global environment as one of the leading environmental companies in the world

Dowa Eco-System Co., Ltd. offers one-stop integrated services with high traceability. These services range from the collection and transport of waste, contaminated soil, and metal recycling material to intermediate waste treatment, such as compacting/detoctification and metal recycling or controlled landfilling. By expanding into the consultation business, such as conducting environmental impact assessments, and responding to a wide range of environmental needs both in Japan and overseas, we aim to become the leading company in the environmental and recycling businesses.

Kenichi Sasaki
President

Net Sales
(Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
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</thead>
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<td>104.0</td>
<td>101.4</td>
<td>103.8</td>
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Operating Income
(Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
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<tbody>
<tr>
<td>Value</td>
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<td>6.4</td>
<td>9.4</td>
<td>7.3</td>
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Investment*
(Billions of yen)

<table>
<thead>
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<th>Year</th>
<th>12</th>
<th>13</th>
<th>14</th>
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<tr>
<td>Value</td>
<td>5.8</td>
<td>6.2</td>
<td>6.0</td>
<td>10.6</td>
</tr>
</tbody>
</table>

* The total of investments in property, plant and equipment, and R&D expenses
Business Conditions and Financial Performance in Fiscal 2015
The waste treatment business enhanced its collection network and expanded its orders. The soil remediation business took steps to develop its unique soil remediation method and expand orders, but sales were sluggish. The recycling business was affected by a fall in prices for precious metals. In Southeast Asia, our environmental management & recycling business was impacted by stagnation in oil and natural gas development.

As a result of these factors, segment consolidated sales decreased 5% year on year to ¥98.3 billion, and segment operating income fell 14% to ¥6.3 billion.

Key Initiatives for the Future
In the waste treatment business, we will increase the treatment of low-contaminated PCB waste in Japan. In the soil remediation business, we will work to expand domestic orders for on-site remediation services using our unique remediation method. In the recycling business, we will increase the collection of metal recycling materials from overseas, primarily from the United States and Asia. In Southeast Asia, we will make progress with initiatives toward the construction of new treatment facilities in Indonesia and Thailand.

Initiatives in Each Business

| Waste Treatment |

Through a range of initiatives, such as launching new facilities at Eco-System Akita Co., Ltd., and increasing treatment at Eco-System Sanyo Co., Ltd., we are expanding the treatment of low-contaminated PCB waste. The construction of new facilities at Meltec Iwaki Co., Ltd. is just one of the initiatives we are taking to increase the treatment of municipal waste.

| Soil Remediation |

Faced with demand for soil remediation relating to large-scale public investment in Japan, we are leveraging our unique soil remediation method and working to increase orders for on-site remediation services.

| Recycling |

By leveraging the Group’s bases in the United States and Southeast Asia, we will expand our collection of materials for recycling on a global basis and enhance our metal recycling business.

| Southeast Asia |

We will make progress with initiatives toward the construction of new waste treatment facilities in Indonesia and Thailand.
Nonferrous Metals

DOWA METALS & MINING CO., LTD.

Precious Metals and Copper Smelting
Platinum Metals Smelting
Zinc Smelting

Main Products and Services
Gold, silver, copper, zinc, zinc alloy, lead, platinum, palladium, indium, gallium, germanium, tin, antimony, nickel, bismuth, tellurium, sulfuric acid, and other metals

Medium-Term Plan VISION
Establish the world’s best recycling smelting complex

Utilizing its engineering capabilities honed over many years, Dowa Metals & Mining Co., Ltd. recovers more than 20 kinds of metal from a variety of raw materials, such as from ore and metal recycling materials, at its proprietary smelting complexes that focus mainly on the smelting and refining of copper as well as zinc. In the years to come, we will bolster our business base by promoting the further strengthening of such areas as the efficiency of our metal recovery and our raw material procurement.

Akira Sekiguchi
President

Net Sales
(Billions of yen)

Operating Income
(Billions of yen)

Investment*
(Billions of yen)

12 13 14 15 16
177.6 205.0 217.6 238.5 214.9
4.2 4.6 7.0 13.5 13.3
5.9 3.5 3.9 5.1 9.7

* The total of investments in property, plant and equipment, and R&D expenses
Business Conditions and Financial Performance in Fiscal 2015

The overall downward trend in metal prices continued, and on the foreign currency markets the yen was generally traded at around ¥120 to the U.S. dollar, a weaker level than in the previous fiscal year. Under such circumstances, each smelter secured production volumes that included by-product metals and those of platinum group material. While working to reduce costs, such as the electric power consumption rate and the costs of goods, the Nonferrous Metals business derived benefits from the cuts in electricity prices brought about by the fall in oil prices.

As a result of these factors, segment consolidated sales decreased 10% year on year to ¥214.9 billion, and segment operating income dipped 2% to ¥13.3 billion.

Key Initiatives for the Future

In the precious metals and copper smelting business, we will actively promote the processing of metal recycling materials and work to improve our profitability. In the platinum materials smelting business, we will engage in initiatives to launch the new Akita facilities and expand the collection of materials from overseas while strengthening the recovery of platinum group metals. In the zinc smelting business, we will work to increase production by promoting the building or renewing of important facilities. We will also give additional backing to overseas prospecting projects.

Initiatives in Each Business

Precious Metals and Copper Smelting

Kosaka Smelting & Refining Co., Ltd. will actively process recycling materials and intermediate materials from Akita Zinc Co., Ltd. by enhancing its ability to treat impurities, while promoting the expansion of metal collection and improvements in productivity.

Platinum Metals Smelting

In addition to expanding our raw material collection operations on a global scale by leveraging our sampling facilities, such as those in the United States and the Czech Republic, we will launch Nippon PGM Co., Ltd.’s new facilities and further expand the recovery of platinum group metals from used automobile exhaust catalysts.

Zinc Smelting

In addition to engaging in the building or renewing of important facilities such as roasting furnaces that are used at the time of refining at Akita Zinc Co., Ltd., we will promote the increased treatment of metal recycling materials and increase zinc production. Including further improvements in the rate at which we consume electric power, ongoing initiatives will enhance our cost competitiveness.

Resource and Raw Material Procurement

Giving added impetus to both of our mineral exploration projects—the Los Gatos Silver, Zinc, and Lead Project in Mexico and the Palmer Zinc and Copper Project in the U.S. state of Alaska—we will work to increase the proportion of zinc that we mine ourselves.
The decrease in sales from fiscal 2015 is mainly attributable to the change in classification of silver powder sales to contracted processing costs.

The total of investments in property, plant and equipment, and R&D expenses

<table>
<thead>
<tr>
<th></th>
<th>Net Sales* (Billions of yen)</th>
<th>Operating Income (Billions of yen)</th>
<th>Investment* (Billions of yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>82.7</td>
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<tr>
<td>13</td>
<td>71.3</td>
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<td>4.8</td>
</tr>
<tr>
<td>16</td>
<td>48.3</td>
<td>8.0</td>
<td>6.8</td>
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</tbody>
</table>

* The decrease in sales from fiscal 2015 is mainly attributable to the change in classification of silver powder sales to contracted processing costs.

Dowa Electronics Materials Co., Ltd. supplies products with distinctive features in each of the semiconductors, electronic materials, and advanced fine materials fields. We continue to maintain a high market share by striving to meet ever-changing market needs. Based on these products, which are supported by a high level of technological capability, we are currently focusing management resources on priority products. At the same time, we are advancing the development of new products and expediting the start-up of innovative businesses.

Akira Otsuka
President
Business Conditions and Financial Performance in Fiscal 2015

In the semiconductors business, there was a drop in the sales volumes of LEDs for smartphones. In the electronic materials business, sales of silver powder for new energy grew but net sales decreased, affected by transactions having been partly shifted to contracted processing not containing silver metal prices. The advanced fine materials business worked to expand sales of next-generation magnetic materials for data tapes. Ongoing initiatives addressed the development of new products to meet market needs.

As a result of these factors, segment consolidated sales fell 34% year on year to ¥48.3 billion, and segment operating income decreased 9% to ¥8.0 billion.

Key Initiatives for the Future

In the semiconductors business, we will work to expand the applications of our products into healthcare, such as the LEDs for sensors. In the electronic materials business, we will expand sales of silver powder for new energy and new electrode materials. In the advanced fine materials business, we will strengthen our production system by expanding the capacity for next-generation magnetic materials for data tapes. We will also work on the early commercialization of deep ultraviolet LEDs for sterilization and antibacterial equipment, and of electrode materials for fuel cells, the market demand for all of which is expected to grow in the years ahead.

Initiatives in Each Business

<table>
<thead>
<tr>
<th>Semiconductors</th>
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<tbody>
<tr>
<td>We will promote further improvements in the properties of LEDs for sensors as well as their development and expanded application in healthcare equipment and other areas. We will also work to improve the properties of deep ultraviolet LEDs for sterilization and antibacterial equipment as well as on their early commercialization, such as by sample work expansion.</td>
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<table>
<thead>
<tr>
<th>Electronic Materials</th>
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<tr>
<td>We will promote sales of silver powder for new energy, for which there is burgeoning demand. We will also work to expand and upgrade our product lineup by developing new products for which we will have painstakingly pinpointed user needs, such as improved properties in new semiconductor bonding materials that can be used as an alternative to solder.</td>
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<table>
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<tr>
<th>Advanced Fine Materials</th>
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<tr>
<td>In next-generation magnetic materials for data tapes used by archives, we will work to strengthen our production system to meet demand and continue to hold the top share of the global market. Also advancing improvements in the properties of the electrode materials for use in fuel cells, we will strive to expand sales.</td>
</tr>
</tbody>
</table>
Main Products and Services
Copper, brass, copper alloy strips, nickel alloy strips, reflow tin plated strips, brass rods, forged brass products, electroplated products, and metal-ceramic substrates

Medium-Term Plan VISION
Promote business expansion in growth fields and growth areas
Dowa Metaltech Co., Ltd. is developing business in its mainstay products—high-performance copper rolled products and electroplated products as well as metal-ceramic substrates—for growth fields such as next-generation automobiles. In concert with advancing the development of new products to meet market needs, such as for high conductivity and strength, we are expanding our business by, for example, upgrading and expanding our bases in Asia, where growth is forecast for the coming years, and augmenting our production capabilities.

Akira Sugawara
President

Net Sales
(Billions of yen)

Operating Income
(Billions of yen)

Investment*
(Billions of yen)

* The total of investments in property, plant and equipment, and R&D expenses
Business Conditions and Financial Performance in Fiscal 2015
The copper rolled products business worked to expand copper alloy sales, centered on those for hybrid cars and smartphones, but its efforts were hampered by partial adjustments made to production in those industries in Japan and elsewhere in Asia. Having addressed demand for in-vehicle equipment, the electroplating business expanded its orders. The metal-ceramic substrates business was buffeted by decreased capital investment, including in China.
As a result of these factors, segment consolidated sales decreased 12% year on year to ¥77.4 billion, and segment operating income decreased 15% to ¥4.9 billion.

Key Initiatives for the Future
In the copper rolled products business, we will develop and boost sales of high-performance copper alloys. In addition to ongoing efforts to improve productivity in Japan, we will promote business expansion elsewhere in Asia. In the electroplating business, we will enhance our global supply system, centered on the automobile industry. In the metal-ceramic substrates business, we will work to expand the applications of new products and address cost reductions, while enhancing our earning potential.

Initiatives in Each Business

Copper Rolled Products
In the face of ongoing burgeoning demand for hybrid cars and smartphones, we will develop and boost sales of high-performance copper alloys featuring advanced properties, such as heat resistance, conductivity, and strength. We will address ongoing initiatives, including the improvement of productivity in Japan. Overseas, we will start mass production at a press working plant in Taiwan and expand business elsewhere in Asia, such as by increasing production in China and Thailand.

Electroplating
We will strengthen our global supply system, which is centered on the automotive industry, by advancing the construction of our precious metal electroplating plant in Mexico—a market we have only recently entered—and working to increase production by improving productivity in Japan and Thailand.

Metal-Ceramic Substrates
We will work to expand sales channels to new industrial machinery and rail transportation users. With regard to base-integrated substrates that are compact, lightweight, and possess advanced heat dissipation properties, we will also expand applications in areas such as automobiles.
Heat Treatment
DOWA THERMOTECH CO., LTD.

Main Products and Services
Various types of heat treatment, various types of surface treatment, design, manufacture, marketing, and maintenance of various types of heat treatment furnaces and ancillary equipment

**Medium-Term Plan VISION**

Make a leap forward as a global manufacturer engaged in comprehensive heat treatment company

In the field of heat treatment, which increases the durability of metal parts, for example, in automobiles, Dowa Thermotech Co., Ltd. undertakes the manufacture, sales, and maintenance of heat treatment facilities as well as contracted heat treatment processing. In addition to advancing overseas business expansion in geographical areas where growth is expected in the years ahead, in Japan we are promoting R&D and production efficiency through process integration while strengthening our business competitiveness.

Toshiro Sumida
President

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**Net Sales**
(Billions of yen)

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**Operating Income**
(Billions of yen)

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**Investment**
(Billions of yen)

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* The total of investments in property, plant and equipment, and R&D expenses
Business Conditions and Financial Performance in Fiscal 2015
In the industrial furnace business, we promoted improvements in productivity by integrating our manufacturing bases in Japan and worked to expand overseas equipment sales and maintenance orders, but were also hampered by the adjustments made to automobile production in Japan and elsewhere in Asia. In the heat treatment processing business, we worked to expand orders in India, Thailand, and China.

As a result of these factors, segment consolidated sales decreased 12% year on year to ¥24.1 billion, and segment operating income fell 43% to ¥1.3 billion.

Key Initiatives for the Future
The industrial furnace business will work to expand sales in India, the United States, and Mexico, where demand is growing. Efforts will also be made to enhance its ability to handle maintenance for customers in Southeast Asia. The heat treatment processing business will seek to enhance its production capabilities in overseas regions where the automobile industry is experiencing growth. In Japan, the heat treatment processing business will pursue new orders and promote the consolidation of production processes in response to market trends.

Initiatives in Each Business

Industrial Furnaces
In India and Mexico, where the automobile industries continue to grow, we will work to expand sales of heat treatment facilities. In Thailand and Indonesia, where we will procure for heat treatment facilities, we will enhance our ability to handle maintenance for customers in Southeast Asia. In Japan, our efforts will include promoting the development of cost-competitive, compact heat treatment furnaces.

Heat Treatment Processing
The heat treatment processing business will seek to increase its overseas production capacity, for example, by advancing the construction of new bases in India and Mexico. In Japan, in addition to devising plans to gain new orders, we will promote the consolidation of production processes in response to market trends. We will also engage in the development of surface treatment that offers superior resistance to both abrasion and oxidation.