

A blurred photograph of a city street at night, showing light trails from cars and buildings in the background. The colors are predominantly blue, purple, and red, creating a dynamic and futuristic atmosphere.

Innovative applications for
sophisticated technology

NGK SPARK PLUG CO., LTD.

Profile

NGK Spark Plug Co., Ltd. is a leading manufacturer in the ceramic industry. The Company sells its products worldwide, chiefly to major manufacturers ranging from automobiles to electronics for use as components in their production line.

The Company is the world's largest manufacturer of spark plugs for use in automobiles, motorcycles and aircrafts, etc.

In the automotive field, oxygen sensors have become an increasingly important item, as well as IC packages for MPU in the electronics industry.

These main products occupy an important market share worldwide.

To cope with the highly advanced information-oriented society, we will continue to focus on our original objective; "contribute to the industry through the development of ceramics." We remain committed to creating and promoting a global development and production system for the fulfillment of our objective.

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Forward-Looking Statements

This Annual Report contains information about forward-looking statements related to such matters as the Company's plans, strategies, and business results. These forward-looking statements represent judgments made by the Company based on information available at present and are inherently subject to a variety of risks and uncertainties. The Company's actual activities and business results could differ significantly due to changes including, but not limited to, changes in the economic environment, business environment, exchange rates, laws, regulations, government policies, political circumstances, market demand for products, and price competition.

A Message from the President

Net Sales (Millions of Yen)	
'99	188,744
'00	195,595
'01	224,269
'02	221,419
'03	228,929

Net Income (Millions of Yen)	
'99	5,494
'00	6,578
'01	13,056
'02	4,844
'03	7,347

Shareholders' Equity (Millions of Yen)	
'99	149,117
'00	165,495
'01	208,797
'02	199,454
'03	189,522

In the fiscal year ended March 31, 2003, the business environment was marked by severe conditions in the Japanese automobile industry, brought on by sluggish consumer spending. Overseas, the US automobile market suffered a temporary slowdown, but a zero-interest sales campaign restored healthy sales. However, conditions in the IT industry remained adverse, marked by weak demand for end products such as PCs and downward pressure on prices.

Despite these difficult circumstances, consolidated net sales of NGK Spark Plug grew 3.4% to a record high ¥228,929 million. Although selling, general and administrative expenses increased, higher sales in our automotive components business resulted in a 33.9% increase in operating income, to ¥15,823 million, and net income jumped 51.7% to ¥7,347 million. Net income per share rose to ¥32.36.

Reasons for the increase in sales and earnings included higher exports of spark plugs and oxygen sensors, chiefly to the North American market, in our automotive components business. Together with this, domestic automobile production was healthy, supported by export demand, so demand for installation in new automobiles increased. In addition, with the contraction of business cycles and the rationalization of inventory management, the optimization of points of production is becoming a reality.

Sales of IC packages, a core product in our communication media components business, were sluggish as a result of the stagnation of the PC market, the lack of vigor in the recovery of the semiconductor manufacturers, and cost competition among component manufacturers. In the technical ceramics business, capital investments by manufacturers clouded the outlook and resulted in slow growth.

Outlook

In the automotive components business, the unit price of automotive components declined across the board. With regard to spark plugs, however, NGK Spark Plug has switched to iridium plugs and other high-value-added products, and is competing not only in terms of cost, but also on the basis of its superior R&D capabilities. We predict that we will expand our share of the market following this course. Demand for diesel-engine automobiles is expanding in the European markets, and this is expected to bring rising demand for the Company's glow plugs.

We will build a strong increase our corporate

NGK Spark Plug is supplying more oxygen sensors to major automobile companies in Europe and the US, and expects to expand its share of the Japanese market. In addition, increasingly severe exhaust-quality standards are expected to bring an increase in the number of oxygen sensors installed per automobile. While modest growth in the number of automobiles produced worldwide can be expected, the worsening of business conditions around the globe has weakened business confidence, which is expected to preclude sales growth next fiscal year.

In the communication media components business, last year major microprocessor unit (MPU) manufacturers began to switch from ceramic IC packages to plastic packages. Ceramic IC package sales are forecast to decline again in the coming fiscal year as a result. Adjustments to inventories of plastic IC packages for MPUs are in progress, and we expect to increase shipment to large suppliers. In the area of electronic components for mobile telephones, the Company has suspended production of piezoelectric ceramic filters, but is receiving a growing number of inquiries regarding low temperature co-fired ceramics (LTCC), which are expected to contribute to sales growth in the future. However, it will be difficult to offset declining sales of ceramic IC packages with plastic IC packages and LTCC, and as sales cannot be expected to grow substantially for some years, it is important that the Company develop a business structure that can generate profits.

Implementing a new medium-term management plan

In April 2003, NGK Spark Plug established a new medium-term management plan, formulated to guide the Company in the development of the capability to respond rapidly to ceaselessly changing external conditions. The new plan also establishes the policy of increasing corporate value by building a robust business structure through increasing the earnings of core businesses, and by realizing a balanced income structure. Goals for management indicators include boosting the operating profit ratio to 10% or higher, and increase ROE to 8%.

In the automotive components business, the Company has set a goal of becoming the world's leading firm, in name and in fact, through expansion of market share. We will also seek to increase the profitability of these operations through greater operational efficiency.

As a comprehensive IC package manufacturer, the Company will seek to become a leading technology supplier in the communication media components business, building a business structure that can yield stable profits. In the field of electronics components, we will build a business structure that will yield profits on rationalization and investments in expanding fields of business.

In our technical ceramics business, we will increase sales by rebuilding our overseas cutting tool operations. In our fine ceramics business we will proceed with selection and concentration. These measures will allow us to increase our sales of high-value-added products and to expand profit.

Strategies

Automotive components business

We will invest more management resources in spark plug and oxygen sensor technology development. Effectively applying our accumulated resources to these two core products, we will forge ahead of our competition in product development through a patent-oriented strategy. At the same time, we are establishing a worldwide manufacturing structure with five loci, supporting these by implementing CRT management (lead time management) and moving forward with efficient supply chain management involving the reduction of worldwide inventories. Through these measures, we will increase our share of the markets for spark plugs and oxygen sensors, and enhance the profitability of these operations.

corporate structure and value.

Communication media components and technical ceramics businesses

Semiconductor Components

We will increase sales in our semiconductor operations by entering and expanding sales in the fields of automotive and communications semiconductors, employing the multilayer technology developed in our ceramic IC package operations, and our existing manufacturing structure. The Company will use new materials to develop, manufacture, and expand applications for next-generation plastic IC packages. NGK Spark Plug will increase sales of multilayer LTCC substrates through tie-ups with modular component manufacturers. Anticipating customer requirements, we will rapidly develop and supply new technologies and products.

Electronic Components

The Company will concentrate on the development of new products in areas showing growth in demand, such as W-LAN and Bluetooth. In an ongoing effort to improve revenues, we are striving to reduce costs in this area by trimming personnel and facilities.

Cutting Tools

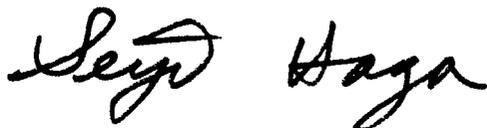
Through an augmented selection and concentration strategy, NGK Spark Plug is striving to offer technology and products available nowhere else. The Company has launched a subsidiary in Poland, has restructured plants in Japan and abroad, and has implemented a product manager system. We are also entering the aluminum-processing field.

Fine Ceramics

The Company is engaged in the development of products and applications that clearly target important areas. We are terminating production of unprofitable products, outsourcing others, and rationalizing operations in the endeavor to lower costs and raise profits.

In the communication media components and technical ceramics businesses, the Company is applying its accumulated technologies to the discovery of new materials and the development of new products. Together with this, emphasis is always on quickly responding to customer needs.

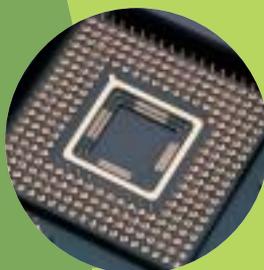
As described above, the new medium-term management plan calls for the strengthening of our automotive components business, at present the mainstay of our earnings, and, through rebuilding our communication media components and technical ceramics businesses, to become profitable in all sectors.



Seiji Haga
President



Special Feature



Creating new value thro

Automotive components business

Spark plugs, which are indispensable to the automobile engine, are this Company's history and the source of its progress. Spark plugs play the role of igniting the fuel-air mixture inside an engine. They must endure temperatures in excess of 2,000°C and pressures of 50kg/cm².

At high speeds or low, NGK spark plugs draw out an engine's best performance, which is useful in this era of rising fuel costs, energy conservation, and pollution controls. The advanced technological development capabilities that go into NGK spark plugs make them the choice of major automobile manufacturers the world over, and they are used in more than 140 countries. In Formula 1 racing, six of eleven teams, including Ferrari, use NGK spark plugs, as did the top three finishers in last year's Paris-Dakar Rally. We now have engine testing centers in Japan, the US, and Europe, where we conduct R&D on spark plugs for next-generation engines and spark plugs using new materials.

The automotive components business and the communication media components and technical ceramics businesses are the pillars of our business structure. Principal products in the automotive components business are spark plugs and oxygen sensors. The Company has about a 30% share of the world market for spark plugs, and about a 40% share of the oxygen sensor market. In the communication media components business, main products are ceramic and plastic IC packages and electronic parts for mobile telephones, which it supplies to major manufacturers of semiconductors, electronic devices, and mobile telephones worldwide. NGK Spark Plug's research and development activities, guided by its corporate philosophy, employ top-level technology and accumulated experience to the creation of new value. The R&D Center and the R&D divisions of each of our business departments play the key role, and project-specific development is also pursued.

In this section, we will introduce some of the products of the automotive components and the communication media components and technical ceramics businesses, and discuss the Company's technological expertise and corporate value.

ugh matchless technology

Superior Technology Around the World



Strength in development of practical applications

Oxygen sensors are a key element in automotive pollution control systems. A zirconia exhaust gas oxygen sensor detects the oxygen level in exhaust gasses, and passes the data to the system's central control unit for use in optimizing fuel-air mixture. The sensor makes use of zirconium ceramic's oxygen permeability to detect oxygen concentrations. Many automobile manufacturers the world over use oxygen sensors, which not only help protect the environment but conserve energy through reduced fuel consumption. NGK Spark Plug will continue its vigorous development of ecotechnology.

Also under development are hydrogen concentration sensors and hydrogen leak monitoring sensors for automobiles powered by fuel cells, which are a promising "clean" energy source.



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The Iridium IX series Plug

This plug uses an extra-fine iridium alloy central electrode for improved ignitability, engine start-up, and acceleration.

Superior acceleration-Because the iridium central electrode requires less voltage, this plug produces a high-energy ignition at low voltage with no burden on the battery. It also offers improved start-up and acceleration characteristics at low temperatures.

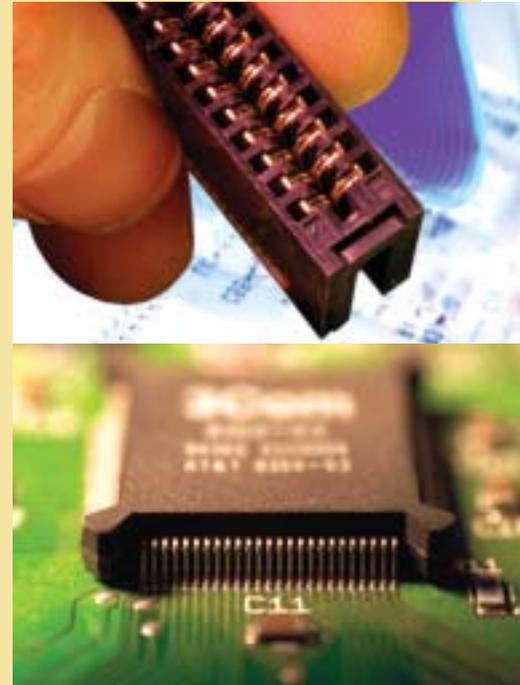
Higher combustion efficiency for lower fuel consumption-because the spark is concentrated at the tip of the electrode (the tapered ground electrode increases flame kernel expansion), this plug suffers less energy loss than earlier plugs. Instantaneous flame kernel expansion makes for outstanding combustion efficiency. There is less carbon buildup during long periods of idling, because carbon burns off these plugs even at low discharge. This gives them superior pollution prevention characteristics, and allows one to drive long distances at low speeds without undue concern.



Communication media components and technical ceramics businesses

NGK Spark Plug has been involved in the information and communications field since the 1960s.

The progress of IC technology toward ever-greater circuit density, speed and mounting density requires IC packages with improved electrical and heat-dissipation characteristics. We are also engaged in research that addresses the requirements of high-precision microfabrication technology, and are developing ceramic IC packages, organic IC packages for next-generation MPUs, and LTCC packages. Aside from MPU applications, we are developing aluminum nitride packages for high-power applications, and packages for SAW (surface acoustical wave) and optoelectronic devices.



New Technology Enhancing Our Daily Lives

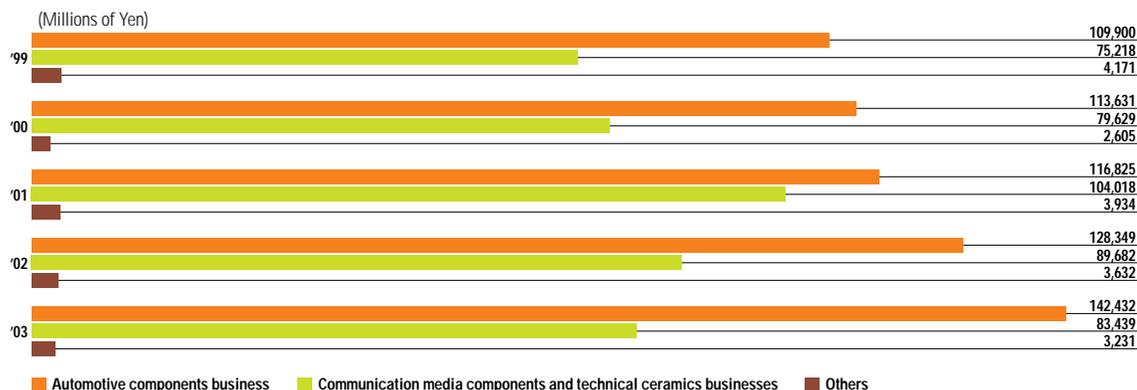
As mobile telephones and other communications devices become smaller, lighter, and more capable, advances in high-density mounting become increasingly important. In response, NGK Spark Plug is developing smaller antenna switch modules, laminated LC filters, dielectric duplexers, dielectric antennae, and other electronic components, as well as dielectric materials that offer higher performance and LTCC materials.

NGK Spark Plug is utilizing ceramics in the development of high-speed cutting tools for cast iron and aluminum, as well as in the development of small machine tools for precision processing.

In a departure from our previous technical ceramics-related activities, the Company is engaged in R&D on medical uses of ceramics. We have developed bioceramic bone substitutes and a ceramic paste bone filler that allows shaping to match the surrounding bone before it hardens. These are now awaiting approval by the Ministry of Health, Labour and Welfare. For respiratory ailment patients who need home oxygen therapy, we developed an oxygen concentrator, then enhanced its usability by making it smaller, more energy-efficient, and quieter.



Review of Operations



Automotive components business

Review of results

Affected by the persistent economic slump, domestic automobile sales were weak in the fiscal year ended March 31, 2003. However, the automobile markets were strong overseas last fiscal year, particularly in North America. In these market environments, net sales in the automotive components business grew 11.0% year on year, to a new historical high of ¥142,432 million. Operating income jumped 37% to ¥22,715 million, another new high.

Sales of high-value-added spark plugs in overseas markets, notably North America, were healthy. Rising export demand resulted in increased automobile production in Japan, and domestic sales of spark plugs for installation in new autos rose accordingly. Export demand for automobile sensors increased, and domestic sales grew substantially as a result of the increase in the number of automakers using sensors, which caused overall growth in auto sensor sales.

Outlook

One year ago we inaugurated a management reform project in our automotive components business, with the aim of minimizing unnecessary effort, inconsistency, and waste to build a lean structure. To maintain customer satisfaction we have in the past maintained large spark plug inventories. However, after a worldwide review, we are reducing inventories by 1/2 to 1/3, and cutting production times by more than half. This project is still in progress, however, last fiscal year we cut inventories by approximately ¥5,000 million, and achieved a reduction in assets as a result. We are also reorganizing our manufacturing bases worldwide to optimize supply.

Communication media components and technical ceramics businesses

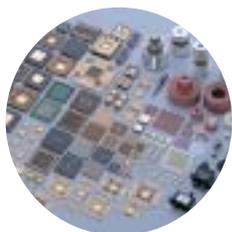
Review of performance

IT-related markets for products and components remained stagnant worldwide. This, together with the intensification of borderless competition ensured the continuation of harsh conditions in these businesses. Operating within this market environment, the communication media components and technical ceramics businesses posted an operating loss of ¥7,005 million on net sales of ¥83,439 million, which were down 7.0% from the previous term.

In the area of semiconductor parts, sales of ceramic IC packages for mobile telephone crystal devices and SAW filters were healthy, but major MPU manufacturers completely converted from ceramic IC packages to plastic, which caused net sales to decline. Sales of LTCC for 3rd-generation mobile telephones and Bluetooth devices were solid, but this was inadequate to offset the decline in sales of existing products. The Company worked to expand sales of core products, particularly cutting tools and applied ceramics, but achieved only slight gains.

Outlook

In the fiscal year ended March 31, 2003, we restructured our communication media components and technical ceramics businesses and reconsidered the content of these operations. As a result, we have terminated the manufacture of piezoelectric ceramic filters, which are used in mobile telephones and other devices, and have rationalized the subsidiary that manufactures ceramic IC packages. In the future, we will seek to expand sales and improve profits through investments in core fields such as LTCCs and dielectric antennae for dual band wireless LANs.



Six-Year Summary

NGK SPARK PLUG CO., LTD. and consolidated subsidiaries
Years ended March 31, 2003, 2002, 2001, 2000, 1999 and 1998

	Millions of Yen						Thousands of U.S. Dollars
	2003	2002	2001	2000	1999	1998	2003
For the year:							
Net sales	¥228,929	¥221,419	¥224,269	¥195,595	¥188,744	¥190,333	\$1,907,742
Operating income	15,823	11,820	25,465	14,437	12,899	14,606	131,858
Net income	7,347	4,844	13,056	6,578	5,494	6,669	61,226
Depreciation	18,478	19,981	18,118	19,365	18,220	15,897	153,983
Capital expenditures	10,811	25,508	23,479	17,492	22,803	28,658	90,092

At year-ends:							
Total assets	¥298,787	¥318,512	¥366,727	¥314,321	¥300,680	¥312,010	\$2,489,892
Shareholders' equity	189,522	199,454	208,797	165,495	149,117	146,139	1,579,350

	Yen						U.S. Dollars
	Per share data:						
Net income							
—Basic	¥ 32.36	¥ 20.51	¥ 57.19	¥ 29.56	¥ 24.69	¥ 30.01	\$0.27
—Diluted	31.06	19.95	51.91	27.37	22.82	27.43	0.26
Cash dividends	11.00	11.00	12.00	11.00	11.00	11.00	0.09
Shareholders' equity	854.89	869.04	871.72	743.65	670.11	656.73	7.12

	Percent					
	Ratios:					
Equity ratio	63.4%	62.6%	56.9%	52.7%	49.6%	46.8%
Return on net sales	3.2%	2.2%	5.8%	3.4%	2.9%	3.5%
Return on assets	2.5%	1.5%	3.8%	2.1%	1.8%	2.1%
Return on equity	3.9%	2.4%	7.0%	4.2%	3.7%	4.6%

Note: U.S. dollar amounts above and elsewhere in this Annual Report are converted from yen, for convenience only, at the rate of ¥120=U.S.\$1.

Financial Review

Net sales

In the fiscal year ended March 31, 2003 (below, "this fiscal year"), consolidated net sales rose 3.4% to ¥228,929 million. This was primarily the result of healthy demand in North America and favorable exchange rates.

Operating income

Consolidated operating income rose 33.9% to ¥15,823 million, chiefly due to sales and profit growth in the automotive-related business, cost reductions, and curtailed emphasis on less-profitable products.

Selling, general and administrative expenses

Increased testing and research expenses this fiscal year caused selling, general and administrative expenses to rise 5.6% to ¥35,249 million.

Net income

As identified above, net income rose 51.7% to ¥7,347 million.

Cash flows

Cash flows from operating activities

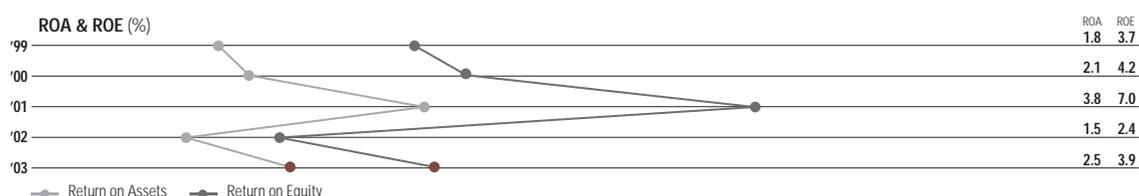
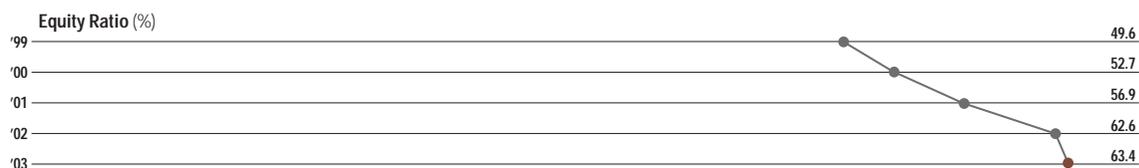
As a result of an increase in income before income taxes and minority interests, together with declines in trade receivables and income taxes, net cash provided by operating activities increased ¥15,806 million to ¥34,534 million.

Cash flows from investing activities

Reduced investments in the acquisition of tangible fixed assets and an increase in time deposits with a maturity greater than three months were primary factors in an increase in net cash used in investing activities, which rose ¥1,906 million to ¥28,718 million.

Cash flows from financing activities

Primarily because an expense of ¥19,970 million for redemption of the Company's bonds was incurred in the previous fiscal year, net cash used in financing activities declined ¥18,932 million to ¥13,787 million. As a result of these developments and changes in exchange rates, cash and cash equivalents declined ¥8,229 million to ¥31,207 million.



Financial position

Total assets as at the end of this fiscal year declined 6.2% to ¥298,787 million. Primary factors in this decline were investments of ¥6,426 million in treasury stock pursuant to a resolution adopted at the general meeting of shareholders, and a decline in latent profit on investment securities. Total liabilities contracted 8.3% to ¥108,436 million, mainly as a result of a decline in export bills discounted with banks, and to lower deferred tax liabilities caused by reduced latent profits on investment securities. Shareholders' equity fell 5.0% to ¥189,522 million, but the shareholders' equity ratio improved from 62.6% to 63.4%.

Capital investment

This fiscal year the Company made investments in the expansion of manufacturing facilities in its automotive components business. However, the persistently adverse conditions in the information and telecommunications-related markets mandated minimal investments in this area. Total capital investments of ¥10,811 million were made, which was 57.6% of the previous term's level.

Net sales by region

Japan

The weak market for IC packages, a coreproduct, resulted in the continuation of sluggish performance in the communication media components business. However, the health of the automotive components business allowed net sales to rise 2.5% to ¥192,650 million. Operating income in this region jumped 41.1% to ¥12,868 million.

North America

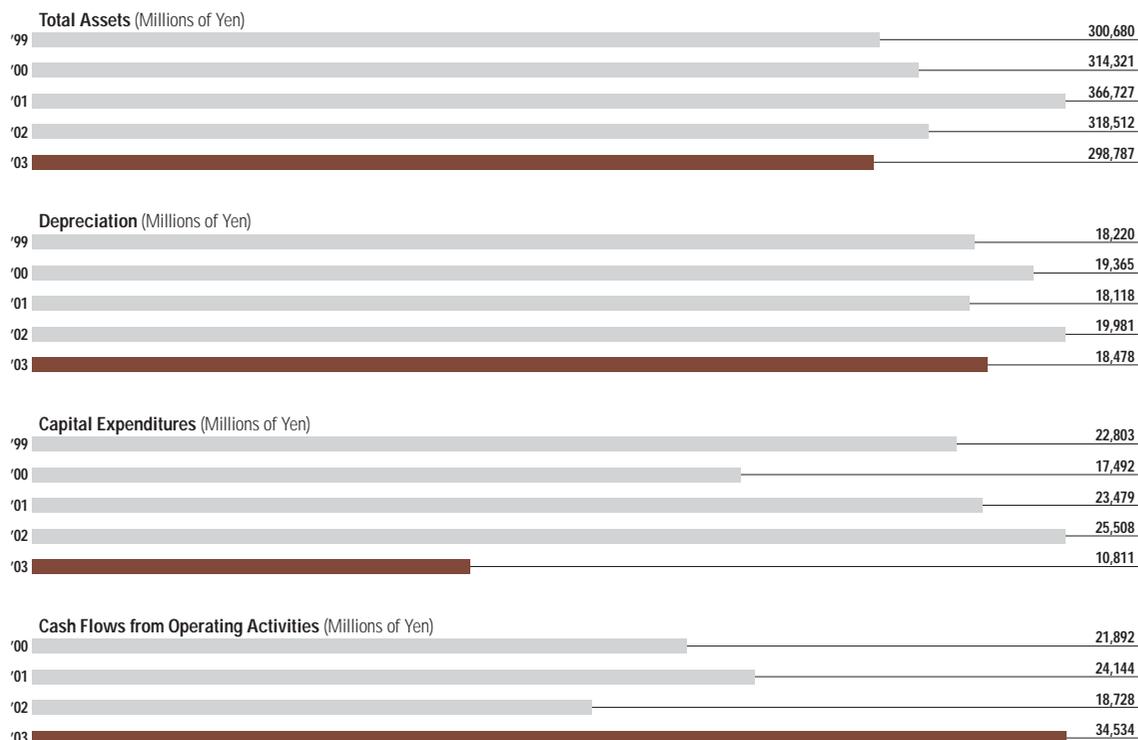
Although conditions in the communication media components business was poor, the automotive components business turned in solid performance on the strength of demand for automotive sensors. Net sales in North America rose 1.0% to ¥87,919 million, and operating income surged 30.3% to ¥858 million.

Europe

Here, too, the performance of the automotive components business, principally resting on demand for sensors, offset weak markets in the communication media components business. Net sales in Europe edged up 3.1% to ¥38,887 million, and operating income rose 17.1% to ¥1,650 million.

Other areas

Performance remained solid in the Pacific region and in Southeast Asia. Net sales rose 7.5% to ¥15,395 million, but operating income slid 13.6% to ¥986 million.



Consolidated Balance Sheets

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries
March 31, 2003 and 2002

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Assets			
Current assets:			
Cash and cash equivalents	¥ 31,207	¥ 39,436	\$ 260,058
Short-term investments (Note 5)	31,991	10,928	266,592
Notes and accounts receivable, net of allowance for doubtful accounts (Notes 3 and 16)	41,235	46,624	343,625
Inventories (Note 4)	45,989	51,114	383,242
Deferred tax assets (Note 14)	7,209	6,340	60,075
Other current assets	1,530	2,566	12,750
Total current assets	159,161	157,008	1,326,342
Investments and other assets:			
Investment securities (Note 5)	34,587	47,252	288,225
Investments in and long-term loans to unconsolidated subsidiaries and affiliates (Note 5)	4,463	3,906	37,192
Deferred tax assets (Note 14)	2,345	1,234	19,542
Other assets	1,472	1,710	12,266
	42,867	54,102	357,225
Property, plant and equipment (Note 6)	96,759	107,402	806,325
	¥298,787	¥318,512	\$2,489,892

See accompanying Notes to Consolidated Financial Statements.

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Liabilities, Minority Interests and Shareholders' Equity			
Current liabilities:			
Short-term borrowings (Note 8)	¥ 13,737	¥ 18,337	\$ 114,475
Current portion of long-term debt (Note 8)	20,114	537	167,617
Accounts payable (Notes 7 and 16)	22,947	26,138	191,225
Accrued expenses	11,079	12,479	92,325
Income taxes payable	4,633	1,482	38,608
Other current liabilities (Note 14)	1,262	1,447	10,517
Total current liabilities	73,772	60,420	614,767
Long-term debt (Note 8)	20,360	40,528	169,667
Employee retirement benefit liability (Note 9)	12,434	12,421	103,617
Deferred tax liabilities (Note 14)	518	3,576	4,317
Other long-term liabilities	1,352	1,335	11,266
Commitments and contingent liabilities (Notes 10, 11 and 12)			
Minority interests in consolidated subsidiaries	829	778	6,908
Shareholders' equity (Notes 13 and 17):			
Common stock, no par value:			
Authorized: 390,000,000 shares;			
Issued: 229,544,820 shares in 2003 and 2002	47,869	47,869	398,908
Additional paid-in capital	54,825	54,825	456,875
Retained earnings	94,261	89,480	785,508
Net unrealized gains on available-for-sale securities	7,056	11,885	58,800
Foreign currency translation adjustment	(7,813)	(4,570)	(65,108)
Less, treasury stock at cost — 7,934,888 shares in 2003 and 35,163 shares in 2002	(6,676)	(35)	(55,633)
	189,522	199,454	1,579,350
	¥298,787	¥318,512	\$2,489,892

Consolidated Statements of Income

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries

For the years ended March 31, 2003 and 2002

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Operating revenue:			
Net sales (Note 15)	¥228,929	¥221,419	\$1,907,742
Operating costs and expenses (Notes 15 and 16):			
Cost of goods sold	177,857	176,225	1,482,142
Selling, general and administrative expenses	35,249	33,374	293,742
	213,106	209,599	1,775,884
Operating income	15,823	11,820	131,858
Other income (expenses):			
Interest and dividend income	936	1,092	7,800
Interest expenses	(1,173)	(1,818)	(9,775)
Loss on sale or disposal of property, plant and equipment	(1,540)	(1,126)	(12,833)
Loss on write-down of investment securities	(1,039)	(2,671)	(8,658)
Gain on sales of investment securities	—	1,079	—
Foreign exchange gain	—	762	—
Miscellaneous, net	(568)	(1,078)	(4,733)
	(3,384)	(3,760)	(28,199)
Income before income taxes and minority interests	12,439	8,060	103,659
Income taxes (Note 14)	5,007	3,115	41,725
Less, minority interests in net income of consolidated subsidiaries	85	101	708
Net income	¥ 7,347	¥ 4,844	\$ 61,226

	Yen		U.S. Dollars
Per share:			
Net income:			
—Basic	¥32.36	¥20.51	\$0.27
—Diluted	31.06	19.95	0.26
Cash dividends	11.00	11.00	0.09

See accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Shareholders' Equity

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2003 and 2002

	Number of common shares issued	Common stock	Additional paid-in capital	Retained earnings	Net unrealized gains on available-for- sale securities	Foreign currency translation adjustment	Treasury stock
Millions of Yen							
Balance at March 31, 2001	239,522,827	¥47,854	¥54,810	¥97,706	¥15,180	¥(6,753)	¥ —
Net income for the year	—	—	—	4,844	—	—	—
Cash dividends	—	—	—	(2,819)	—	—	—
Bonuses to directors and statutory auditors	—	—	—	(72)	—	—	—
Conversion of convertible bonds	21,993	15	15	—	—	—	—
Cancellation of shares (Note 13)	(10,000,000)	—	—	(10,179)	—	—	—
Net change in unrealized gains on available-for-sale securities, net of applicable income taxes	—	—	—	—	(3,295)	—	—
Translation adjustment	—	—	—	—	—	2,183	—
Fractional shares acquired, net	—	—	—	—	—	—	(35)
Balance at March 31, 2002	229,544,820	47,869	54,825	89,480	11,885	(4,570)	(35)
Net income for the year	—	—	—	7,347	—	—	—
Cash dividends	—	—	—	(2,498)	—	—	—
Bonuses to directors and statutory auditors	—	—	—	(68)	—	—	—
Net change in unrealized gains on available-for-sale securities, net of applicable income taxes	—	—	—	—	(4,829)	—	—
Translation adjustment	—	—	—	—	—	(3,243)	—
Purchase of treasury stock and fractional shares, net	—	—	—	—	—	—	(6,641)
Balance at March 31, 2003	229,544,820	¥47,869	¥54,825	¥94,261	¥ 7,056	¥(7,813)	¥(6,676)

	Thousands of U.S. Dollars					
Balance at March 31, 2002	\$398,908	\$456,875	\$745,667	\$99,042	\$(38,083)	\$ (292)
Net income for the year	—	—	61,226	—	—	—
Cash dividends	—	—	(20,818)	—	—	—
Bonuses to directors and statutory auditors	—	—	(567)	—	—	—
Net change in unrealized gains on available-for-sale securities, net of applicable income taxes	—	—	—	(40,242)	—	—
Translation adjustment	—	—	—	—	(27,025)	—
Purchase of treasury stock and fractional shares, net	—	—	—	—	—	(55,341)
Balance at March 31, 2003	\$398,908	\$456,875	\$785,508	\$58,800	\$(65,108)	\$(55,633)

See accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Cash Flows

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2003 and 2002

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Cash flows from operating activities:			
Income before income taxes and minority interests	¥12,439	¥ 8,060	\$103,658
Adjustments for:			
Depreciation	18,478	19,981	153,983
Loss on sale or disposal of property, plant and equipment	1,540	1,126	12,833
Loss on write-down of investment securities	1,039	2,671	8,658
Gain on sales of investment securities	—	(1,079)	—
Decrease in receivables	4,297	1,159	35,808
Decrease in inventories	3,429	3,900	28,575
Decrease in payables	(2,473)	(4,937)	(20,608)
Other, net	(937)	33	(7,807)
Subtotal	37,812	30,914	315,100
Interest and dividend received	1,089	1,316	9,075
Interest paid	(1,159)	(2,016)	(9,658)
Income taxes paid	(3,208)	(11,486)	(26,734)
Net cash provided by operating activities	34,534	18,728	287,783
Cash flows from investing activities:			
Increase in property, plant and equipment	(10,256)	(28,450)	(85,467)
Increase in long-term investments and loans	(5,029)	(5,383)	(41,908)
Decrease in property, long-term investments and loans	245	5,334	2,042
Net (increase) decrease in short-term investments	(13,678)	1,687	(113,983)
Net cash used in investing activities	(28,718)	(26,812)	(239,316)
Cash flows from financing activities:			
Repayment of long-term debt	—	(19,973)	—
Net (decrease) increase in short-term borrowings	(4,621)	309	(38,508)
Dividends paid	(2,498)	(2,819)	(20,818)
Cancellation of shares	—	(10,179)	—
Purchase of treasury stock and fractional shares	(6,641)	(35)	(55,341)
Other, net	(27)	(22)	(225)
Net cash used in financing activities	(13,787)	(32,719)	(114,892)
Effect of exchange rate changes on cash and cash equivalents	(258)	498	(2,150)
Net decrease in cash and cash equivalents	(8,229)	(40,305)	(68,575)
Cash and cash equivalents at beginning of year	39,436	79,741	328,633
Cash and cash equivalents at end of year	¥31,207	¥39,436	\$260,058

See accompanying Notes to Consolidated Financial Statements.

Notes to Consolidated Financial Statements

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries

1. Basis of Consolidated Financial Statements

(a) Basis of presenting the consolidated financial statements

The accompanying consolidated financial statements of NGK SPARK PLUG CO., LTD. (the "Company") and its consolidated subsidiaries (together with the Company, the "NGK Group") have been prepared in accordance with the provisions set forth in the Commercial Code of Japan and the Securities and Exchange Law of Japan, and in conformity with accounting principles and practices generally accepted in Japan, which are different in certain respects from the application and disclosure requirements of International Accounting Standards. Certain items presented in the original consolidated financial statements in Japanese submitted to the Director of Kanto Finance Bureau of Japan have been reclassified in these accounts for the convenience of readers outside Japan.

The consolidated financial statements are not intended to present the consolidated financial position, results of operations and cash flows in accordance with accounting principles and practices generally accepted in countries and jurisdictions other than Japan.

(b) U.S. dollar amounts

The Company maintains its accounting records in Japanese Yen. The U.S. dollar amounts included in the accompanying consolidated financial statements and notes thereto represent the arithmetic results of translating Japanese Yen into U.S. dollars at a rate of ¥120 to \$1, the approximate rate of exchange at March 31, 2003. The inclusion of such dollar amounts is solely for the convenience of the readers and is not intended to imply that Yen and the assets and liabilities originating in Yen have been or could be readily converted, realized or settled in dollars at ¥120 to \$1 or at any other rate.

2. Summary of Significant Accounting Policies

(a) Principles of consolidation

The accompanying consolidated financial statements include the accounts of the Company and its significant subsidiaries. Investments in significant unconsolidated subsidiaries and affiliates are accounted for by the equity method. Investments in unconsolidated subsidiaries and affiliates not accounted for by the equity method are stated at cost. All intercompany transactions and accounts have been eliminated. The difference between the cost of investments in subsidiaries and the underlying equity in their net assets adjusted based on the fair value at the time of acquisition is amortized over five years on a straight-line basis.

The number of consolidated subsidiaries, unconsolidated subsidiaries and affiliates for the years ended March 31, 2003 and 2002 was as follows:

	2003	2002
Consolidated subsidiaries:		
Domestic	11	11
Overseas	18	17
Unconsolidated subsidiaries, stated at cost	5	5
Affiliates, accounted for by the equity method	5	5
Affiliates, stated at cost	2	2

The Company's overseas consolidated subsidiaries close their books at December 31 every year, three months earlier than the Company and other domestic consolidated subsidiaries. The Company consolidated such subsidiaries' financial statements as of their year-end. Significant transactions for the period between subsidiaries' year-end and the Company's year-end are adjusted on consolidation.

Overseas consolidated subsidiaries adopt accounting principles generally accepted in their respective countries, and no adjustments to conform to accounting principles generally accepted in Japan have been made to their financial statements on consolidation as allowed under accounting principles and practices generally accepted in Japan.

(b) Cash equivalents

The NGK Group considers cash equivalents to be highly liquid debt instruments purchased with an original maturity of three months or less.

(c) Investments and marketable securities

The NGK Group classifies certain investments in debt and equity securities as "held-to-maturity", "trading" or "available-for-sale", whose classification determines the respective accounting method as stipulated by the accounting standard for financial instruments. Marketable securities with market quotations for available-for-sale securities are stated at fair value and net unrealized gains or losses on these securities are reported as a separate component of shareholders' equity, net of applicable income taxes. Gains and losses on disposition of marketable securities are computed by the moving average method. Nonmarketable securities without available market quotations for available-for-sale securities are carried at cost determined by the moving average method. Adjustments in carrying values of individual investment securities are charged to income through write-downs, when a decline in value is deemed other than temporary.

(d) Accounting for derivatives

Derivative instruments are valued at fair value, if hedging accounting is not appropriate or where there is no hedging designation, and the gains or losses on derivatives are recognized in the current earnings.

(e) Inventories

Inventories are principally stated at moving average cost.

(f) Allowance for doubtful accounts

Allowance for doubtful accounts has been provided for at the aggregate amount of estimated credit loss based on the individual financial review approach for doubtful or troubled receivables and a general reserve for other receivables calculated based on the historical loss experience for a certain past period.

(g) Property, plant and equipment and depreciation

Property, plant and equipment, including significant renewals and additions, are stated at cost, and have been principally depreciated by the declining-balance method for the Company and its domestic consolidated subsidiaries and by the straight-line method for overseas consolidated subsidiaries at rates based on the estimated useful lives of the assets.

Expenditures on maintenance and repairs are charged to income as incurred. Upon the disposal of property, the cost and accumulated depreciation are removed from the related accounts and any gain or loss is recorded as income or expenses.

(h) Leases

Where financing leases do not transfer ownership of the leased property to the lessee during the term of the lease, the leased property of the Company and its domestic consolidated subsidiaries is not capitalized and the relating rental and lease expenses are charged to income as incurred.

(i) Employee retirement benefits

Employees who terminate their service with the NGK Group are entitled to retirement benefits generally determined by the reference of current basic rates of pay, length of service and conditions under which the termination occurs.

The Company has a lump-sum retirement benefit plan and has also established a non-contributory defined benefit pension plan, which covers 80 % of retirement benefits for employees of the Company who retire at the compulsory retirement age after ten years or more of service. Some of the Company's domestic consolidated subsidiaries have similar retirement benefit plans.

In accordance with the accounting standard for employee retirement benefits, the NGK Group has principally recognized the retirement benefits including pension cost and related liability based on actuarial present value of projected benefit obligation using actuarial appraisal approach and the pension plan assets available for benefits at the respective fiscal year-ends. Unrecognized actuarial differences as changes in the projected benefit obligation or pension plan assets resulting from the experience different from that assumed and from changes in assumptions are amortized on a straight-line basis over ten years as a certain period within remaining service lives of employees from the next year in which they arise.

(j) Accrued severance indemnities for officers

The NGK Group may pay severance indemnities to directors and statutory auditors, which are subject to the approval of the shareholders. The NGK Group has provided for the full amount of the liabilities of directors' and statutory auditors' severance indemnities

at the respective balance sheet dates. At March 31, 2003 and 2002, other long-term liabilities in the accompanying consolidated balance sheets included these accruals for directors and statutory auditors in the amounts of ¥1,010 million (\$8,417 thousand) and ¥811 million, respectively.

(k) Income taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carryforward. Deferred tax assets and liabilities are measured using the enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date.

(l) Translation of foreign currency accounts

Receivables, payables and securities, other than stocks of subsidiaries and certain other securities, are translated into Japanese Yen at the exchange rates at the fiscal year-end. Transactions in foreign currencies are recorded based on the prevailing exchange rates on the transaction dates. Resulting translation gains or losses are included in the current earnings.

In respect of the financial statement items of overseas consolidated subsidiaries, all asset and liability accounts are translated into Japanese Yen by applying the exchange rates in effect at the respective fiscal year-ends. All income and expense accounts are translated at the average rates of exchange prevailing during each year. Translation differences, after allocating to minority interests portions attributable to minority interests, are reported as foreign currency translation adjustment in a separate component of shareholders' equity in the accompanying consolidated balance sheets.

(m) Research and development expenses

Expenses related to research and development activities are charged to income as incurred. Research and development expenses relating to the NGK Group's activities such as not only a plan or design for a new product or process or for a significant improvement to an existing product or process, but also a daily improvement of an existing product, amounted to ¥13,590 million (\$113,250 thousand) and ¥13,368 million for the years ended March 31, 2003 and 2002, respectively, and were included in costs of goods sold and selling, general and administrative expenses in the accompanying consolidated statements of income.

(n) Appropriation of retained earnings

Cash dividends and bonuses to directors and statutory auditors are recorded in the fiscal year when a proposed appropriation of retained earnings is approved by the Board of Directors and/or shareholders.

(o) Per share data

Basic net income per share is computed by dividing income available to common shareholders by the weighted—average number of shares of common stock outstanding during the respective years. Diluted net income per share is computed assuming convertible bonds were converted at the time of issue unless having anti-dilutive effects and as if warrants were exercised at the beginning of the relevant year or (if later) on their first exercise date and as if the funds obtained thereby were used to purchase common stock at the average market price during the respective years under the treasury stock method. The NGK Group adopted the new accounting standard for earnings per share from the current fiscal year. Prior-period per share data has been restated to conform to the current computation.

Cash dividends per share shown for each fiscal year in the accompanying consolidated statements of income represent dividends declared as applicable to the respective years.

3. Notes and Accounts Receivable

At March 31, 2003 and 2002, notes and accounts receivable consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Trade receivables	¥35,820	¥41,367	\$298,500
Unconsolidated subsidiaries and affiliates	3,689	3,135	30,742
Other	1,986	2,353	16,550
Less, allowance for doubtful accounts	(260)	(231)	(2,167)
	¥41,235	¥46,624	\$343,625

4. Inventories

At March 31, 2003 and 2002, inventories consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Finished goods	¥28,119	¥29,915	\$234,325
Work in process	12,324	14,408	102,700
Raw materials	5,546	6,791	46,217
	¥45,989	¥51,114	\$383,242

5. Investments

At March 31, 2003 and 2002, short-term investments consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Marketable securities:			
Bonds	¥ 6,504	¥ 2,999	\$ 54,200
Other	3,498	2,999	29,150
	10,002	5,998	83,350
Other nonmarketable securities	193	206	1,608
Time deposits with an original maturity of more than three months	21,796	4,724	181,634
	¥31,991	¥10,928	\$266,592

At March 31, 2003 and 2002, investment securities consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Marketable securities:			
Equity securities	¥20,589	¥30,181	\$171,575
Bonds	8,593	10,122	71,608
Other	810	2,086	6,750
	29,992	42,389	249,933
Other nonmarketable securities	4,595	4,863	38,292
	¥34,587	¥47,252	\$288,225

Marketable securities are classified as available-for-sale and are stated at fair value with unrealized gains and losses excluded from the current earnings and reported as a net amount within the shareholders' equity account until realized. At March 31, 2003 and 2002, gross unrealized gains and losses for marketable securities are summarized as follows:

	Cost	Gross unrealized gains	Gross unrealized losses	Fair and carrying value
At March 31, 2003:				
Marketable securities:				
Equity securities	¥ 8,793	¥12,599	¥(803)	¥20,589
Bonds	15,008	98	(9)	15,097
Other	4,310	—	(2)	4,308
	¥28,111	¥12,697	¥(814)	¥39,994

At March 31, 2002:				
Marketable securities:				
Equity securities	¥ 9,799	¥20,515	¥(133)	¥30,181
Bonds	13,010	134	(23)	13,121
Other	5,099	—	(14)	5,085
	¥27,908	¥20,649	¥(170)	¥48,387

	Cost	Gross unrealized gains	Gross unrealized losses	Fair and carrying value
Thousands of U.S. Dollars				
At March 31, 2003:				
Marketable securities:				
Equity securities	\$ 73,275	\$104,992	\$(6,692)	\$171,575
Bonds	125,067	816	(75)	125,808
Other	35,916	—	(16)	35,900
	\$234,258	\$105,808	\$(6,783)	\$333,283

During the years ended March 31, 2003 and 2002, the NGK Group recorded a loss on write-down on marketable investment securities due to a permanent diminution in value in the amounts of ¥1,039 million (\$8,658 thousand) and ¥2,671 million, respectively.

Expected maturities of available-for-sale debt securities at March 31, 2003 were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Due in one year or less	¥10,193	\$ 84,942
Due after one year through five years	4,560	38,000
Due after five years through ten years	2,090	17,416
	¥16,843	\$140,358

At March 31, 2003 and 2002, investments in and long-term loans to unconsolidated subsidiaries and affiliates consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Investments, accounted for by the equity method for significant affiliates and at cost for others	¥4,453	¥3,884	\$37,109
Interest bearing long-term loans	10	22	83
	¥4,463	¥3,906	\$37,192

6. Property, plant and equipment

At March 31, 2003 and 2002, property, plant and equipment consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Land	¥ 14,418	¥ 14,433	\$ 120,150
Buildings and structures	89,648	88,561	747,067
Machinery and equipment	171,293	175,205	1,427,442
Construction in progress	1,919	2,688	15,991
	277,278	280,887	2,310,650
Less, accumulated depreciation	(180,519)	(173,485)	(1,504,325)
	¥ 96,759	¥107,402	\$ 806,325

7. Accounts Payable

At March 31, 2003 and 2002, accounts payable consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Trade payables	¥17,290	¥21,226	\$144,084
Unconsolidated subsidiaries and affiliates	2,578	2,205	21,483
Other	3,079	2,707	25,658
	¥22,947	¥26,138	\$191,225

8. Short-term Borrowings and Long-term Debt

At March 31, 2003 and 2002, short-term borrowings consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Unsecured bank loans with interest at rates ranging from 3.38% to 3.57% per annum at March 31, 2003	¥ 1,249	¥ 3,611	\$ 10,408
Export bills accepted by consolidated subsidiaries and discounted with banks by the Company with interest at rates ranging from 1.375% to 6.125% per annum at March 31, 2003	12,488	14,726	104,067
	¥13,737	¥18,337	\$114,475

At March 31, 2003 and 2002, long-term debt consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
1.4% convertible bonds due March 2004	¥ 19,930	¥ 19,930	\$ 166,083
1.4% bonds due March 2005	10,000	10,000	83,334
1.86% bonds due March 2007	10,000	10,000	83,334
Capital lease obligations for overseas consolidated subsidiaries	544	1,135	4,533
	40,474	41,065	337,284
Less, current portion	(20,114)	(537)	(167,617)
	¥ 20,360	¥ 40,528	\$ 169,667

The current conversion price of 1.4% convertible bonds due 2004 is ¥1,364 per share and is subject to adjustment in certain circumstances, including in the event of a stock split. The Company may, at its call option, redeem the bonds for the period from April 1, 2000 at 103% to 100% of the principal amount subject to certain conditions. At March 31, 2003, the number of shares of common stock necessary for conversion of all convertible bonds outstanding was approximately 15 million.

As is customary in Japan, substantially all bank borrowings are subject to general agreements which provide, among other things, that the banks may, under certain circumstances, request additional security for these loans and may treat any security so furnished to the banks, as well as cash deposited with them, as security for all present and future indebtedness. The banks have never requested the Company or its subsidiaries to submit such additional security. Also, as is customary in Japan, the Company and certain of its subsidiaries have time deposits with the banks from which they have short-term and long-term borrowings. However, there are no agreements with any banks, which would require maintaining such deposits.

The aggregate annual maturities of long-term debt at March 31, 2003 were as follows:

Years ending March 31	Millions of Yen	Thousands of U.S. Dollars
2004	¥20,114	\$167,617
2005	10,160	84,667
2006	40	333
2007	10,040	83,667
2008	40	333
2009 and thereafter	80	667
	¥40,474	\$337,284

9. Employee Retirement Benefits

The NGK Group has non-contributory defined benefit pension plans and lump-sum retirement benefit plans, which substantially cover all employees.

The following table reconciles the benefit liability and net periodic retirement benefit expense as at or for the years ended March 31, 2003 and 2002:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Reconciliation of benefit liability:			
Projected benefit obligation	¥ 37,822	¥ 33,976	\$ 315,183
Less, fair value of pension plan assets at end of year	(18,109)	(19,236)	(150,908)
Projected benefit obligation in excess of pension plan assets	19,713	14,740	164,275
Less, unrecognized actuarial differences (loss)	(7,279)	(2,319)	(60,658)
Net amounts of employee retirement benefit liability recognized on the consolidated balance sheets	¥ 12,434	¥ 12,421	\$ 103,617
Components of net periodic retirement benefit expense:			
Service cost	¥ 1,840	¥ 1,825	\$ 15,334
Interest cost	976	968	8,133
Expected return on pension plan assets	(337)	(329)	(2,808)
Recognized actuarial differences	247	155	2,058
Net periodic retirement benefit expense	¥ 2,726	¥ 2,619	\$ 22,717

Major assumptions used in the calculation of the above information for the years ended March 31, 2003 and 2002 were as follows:

	2003	2002
Method attributing the projected benefits to periods of services	Straight-line method	Straight-line method
Discount rate	2.5%	3.0%
Expected rate of return on pension plan assets	2.0%	2.0%
Amortization of actuarial differences	10 years	10 years

10. Contingent Liabilities

At March 31, 2003 and 2002, contingent liabilities in respect of trade notes and export bills discounted with banks with recourse in the ordinary course of business and guarantees of indebtedness principally of employees and the third parties aggregated ¥1,647 million (\$13,725 thousand) and ¥2,361 million, respectively.

11. Lease Commitments

The Company and its domestic consolidated subsidiaries have entered into various rental and lease agreements as lessee principally for buildings cancelable with a few months' advance notice and also for computer equipment, other office machines and vehicles which are not usually cancelable for 12 months to 84 months from the original contract dates.

Total rental and lease expenses including cancelable and non-cancelable leases for the years ended March 31, 2003 and 2002 were ¥3,562 million (\$29,683 thousand) and ¥3,494 million, respectively. For the years ended March 31, 2003 and 2002, lease expenses for non-cancelable lease agreements which were categorized as financing leases amounted to ¥1,086 million (\$9,050 thousand) and ¥1,081 million, respectively.

The aggregate future minimum payments for such non-cancelable leases, including the imputed interest portion, at March 31, 2003 and 2002 were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Due within one year	¥ 907	¥ 943	\$ 7,558
Due after one year	1,378	1,466	11,484
	¥2,285	¥2,409	\$19,042

12. Derivative Instruments

The NGK Group is a party to derivative instruments such as foreign currency forward exchange contracts in the normal course of business to reduce its own exposure to fluctuations in exchange rates principally for hedge purposes. These exposures include certain anticipated export sales or import purchases. The NGK Group is exposed to credit loss in the event of nonperformance by the other parties. However, the NGK Group does not expect nonperformance by the counterparties.

At March 31, 2003, aggregate contract balances of derivative instruments, other than those accounted for by hedge accounting, amounted to ¥6,086 million. Relating unrealized losses of ¥31 million (\$258 thousand) were recorded as other expenses for the year ended March 31, 2003. At March 31, 2002, the NGK Group had no outstanding derivative instrument contracts.

13. Shareholders' Equity

(a) The authorized number of shares of common stock, no par value, is 390 million at March 31, 2003, unless there may be a reduction due to a cancellation of treasury stock acquired.

During the year ended March 31, 2002, the Company acquired 10 million shares of the Company's common stock in consideration for ¥10,179 million, and canceled them through a charge to retained earnings. Pursuant to the Commercial Code of Japan and the resolution by shareholders at the annual general meeting on June 27, 2002, the Company purchased the treasury stock of 7,639,000 shares in the consideration for ¥6,426 million (\$53,550 thousand) for the period from June 27, 2002 through the date of its annual shareholders' general meeting held on June 27, 2003.

(b) At March 31, 2003 and 2002, retained earnings included legal reserve of the Company in the amounts of ¥5,838 million (\$48,650 thousand), respectively. The Commercial Code of Japan provides that an amount equivalent to at least 10% of cash payments as an appropriation of retained earnings shall be appropriated as legal reserve until a total amount of additional paid-in capital and such legal reserve equals 25% of common stock. The legal reserve is not available for distribution as dividends, but may be used to reduce a deficit or may be transferred to common stock by proper actions of the Board of Directors and/or shareholders of the Company.

14. Income Taxes

Income taxes for the years ended March 31, 2003 and 2002 consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Income taxes:			
Current	¥ 6,397	¥ 4,308	\$ 53,308
Deferred	(1,390)	(1,193)	(11,583)
	¥ 5,007	¥ 3,115	\$ 41,725

The tax effects on temporary differences that give rise to a significant portion of deferred tax assets and liabilities at March 31, 2003 and 2002 were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Deferred tax assets:			
Intercompany profits	¥ 3,346	¥ 2,908	\$ 27,883
Depreciation	2,884	3,039	24,033
Employee retirement benefit liability	3,199	2,428	26,658
Accrued bonus to employees	2,095	1,536	17,458
Inventories	781	979	6,509
Enterprise tax accruals	380	151	3,167
Other	1,960	2,490	16,334
	14,645	13,531	122,042
Deferred tax liabilities:			
Unrealized gains on available-for-sale securities	4,810	8,572	40,084
Accelerated depreciation	520	616	4,333
Other	411	481	3,425
	5,741	9,669	47,842
Net deferred tax assets	¥ 8,904	¥ 3,862	\$ 74,200

At March 31, 2003 and 2002, deferred tax assets and liabilities were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
Deferred tax assets:			
Current	¥7,209	¥6,340	\$60,075
Non-current	2,345	1,234	19,542
Deferred tax liabilities			
Current	132	136	1,100
Non-current	518	3,576	4,317

In assessing the realizability of deferred tax assets, management of the NGK Group considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of the future taxable income during the periods in which those temporary differences become deductible. At March 31, 2003 and 2002, no valuation allowance was provided to reduce the deferred tax assets since the management believes that the amount of the deferred tax assets is expected to be fully realizable.

The difference between the Japanese effective statutory tax rate and the actual effective income tax rate on pre-tax income reflected in the accompanying consolidated statements of income for the years ended March 31, 2003 and 2002 was not material.

With the implementation of the 'Revision of the Local Tax Law' on March 31, 2003, the effective statutory tax rate used in the calculation of deferred tax assets or liabilities effective from the fiscal year beginning on April 1, 2004 has been changed from 41.9% to 40.5%. As a result, at March 31, 2003, deferred tax assets decreased by ¥45 million (\$375 thousand) and net unrealized gains on available-for-sale securities increased by ¥163 million (\$1,358 thousand). In addition, deferred income tax expenses increased by ¥208 million for the year ended March 31, 2003.

15. Segment Information

The NGK Group's operations are classified into three segments, automotive components business, communication media components and technical ceramics business and other business. Automotive components segment is composed of those operations involved in the manufacture and sale of spark plugs, automotive sensors and other products for automobiles. Communication media components and technical ceramics segment is principally involved in the manufacture and sale of semiconductor parts, electronic parts, cutting tools and fine ceramics.

Information by industry segment for the years ended March 31, 2003 and 2002 was as follows:

	Automotive components	Communication media components and technical ceramics	Other	Total	Elimination	Consolidated
Millions of Yen						
For the year 2003:						
Operating revenue — Net sales:						
Outside customers	¥142,432	¥ 83,437	¥3,060	¥228,929	¥ —	¥228,929
Inter-segment sales	—	2	171	173	(173)	—
Total net sales	142,432	83,439	3,231	229,102	(173)	228,929
Operating costs and expenses	119,717	90,444	3,132	213,293	(187)	213,106
Operating income (loss)	¥ 22,715	¥ (7,005)	¥ 99	¥ 15,809	¥ 14	¥ 15,823
Identifiable assets	¥178,617	¥119,128	¥1,042	¥298,787	¥ —	¥298,787
Depreciation	8,304	10,164	10	18,478	—	18,478
Capital expenditures	6,758	4,044	9	10,811	—	10,811

For the year 2002:						
Operating revenue — Net sales:						
Outside customers	¥128,349	¥ 89,681	¥3,389	¥221,419	¥ —	¥221,419
Inter-segment sales	—	1	243	244	(244)	—
Total net sales	128,349	89,682	3,632	221,663	(244)	221,419
Operating costs and expenses	111,772	94,524	3,557	209,853	(254)	209,599
Operating income (loss)	¥ 16,577	¥ (4,842)	¥ 75	¥ 11,810	¥ 10	¥ 11,820
Identifiable assets	¥179,177	¥138,317	¥1,018	¥318,512	¥ —	¥318,512
Depreciation	8,014	11,960	7	19,981	—	19,981
Capital expenditures	12,593	12,904	11	25,508	—	25,508

Thousands of U.S. Dollars

For the year 2003:						
Operating revenue — Net sales:						
Outside customers	\$1,186,934	\$695,308	\$25,500	\$1,907,742	\$ —	\$1,907,742
Inter-segment sales	—	17	1,425	1,442	(1,442)	—
Total net sales	1,186,934	695,325	26,925	1,909,184	(1,442)	1,907,742
Operating costs and expenses	997,642	753,700	26,100	1,777,442	(1,558)	1,775,884
Operating income (loss)	\$ 189,292	\$ (58,375)	\$ 825	\$ 131,742	\$ 116	\$ 131,858
Identifiable assets	\$1,488,475	\$ 992,733	\$ 8,684	\$2,489,892	\$ —	\$2,489,892
Depreciation	69,200	84,700	83	153,983	—	153,983
Capital expenditures	56,317	33,700	75	90,092	—	90,092

Information summarized by geographic area for the years ended March 31, 2003 and 2002 was as follows:

	Japan	North America	Europe	Other	Total	Elimination	Consolidated
Millions of Yen							
For the year 2003:							
Operating revenue — Net sales:							
Outside customers	¥ 88,744	¥87,342	¥38,198	¥14,645	¥228,929	¥ —	¥228,929
Inter-segment sales	103,906	577	689	750	105,922	(105,922)	—
Total net sales	192,650	87,919	38,887	15,395	334,851	(105,922)	228,929
Operating costs and expenses	179,782	87,061	37,237	14,409	318,489	(105,383)	213,106
Operating income	¥12,868	¥ 858	¥ 1,650	¥ 986	¥ 16,362	¥ (539)	¥ 15,823
Identifiable assets	¥245,627	¥34,247	¥24,661	¥10,784	¥315,319	¥ (16,532)	¥298,787

	Japan	North America	Europe	Other	Total	Elimination	Consolidated
Millions of Yen							
For the year 2002:							
Operating revenue — Net sales:							
Outside customers	¥ 83,835	¥86,636	¥37,367	¥13,581	¥221,419	¥ —	¥221,419
Inter-segment sales	104,069	429	362	739	105,599	(105,599)	—
Total net sales	187,904	87,065	37,729	14,320	327,018	(105,599)	221,419
Operating costs and expenses	178,781	86,407	36,320	13,178	314,686	(105,087)	209,599
Operating income	¥ 9,123	¥ 658	¥ 1,409	¥ 1,142	¥ 12,332	¥ (512)	¥ 11,820
Identifiable assets	¥255,623	¥42,076	¥22,122	¥12,742	¥332,563	¥ (14,051)	¥318,512

	Japan	North America	Europe	Other	Total	Elimination	Consolidated
Thousands of U.S. Dollars							
For the year 2003:							
Operating revenue — Net sales:							
Outside customers	\$ 739,533	\$727,850	\$318,317	\$122,042	\$1,907,742	\$ —	\$1,907,742
Inter-segment sales	865,883	4,808	5,742	6,250	882,683	(882,683)	—
Total net sales	1,605,416	732,658	324,059	128,292	2,790,425	(882,683)	1,907,742
Operating costs and expenses	1,498,183	725,508	310,309	120,075	2,654,075	(878,191)	1,775,884
Operating income	\$ 107,233	\$ 7,150	\$ 13,750	\$ 8,217	\$ 136,350	\$ (4,492)	\$ 131,858
Identifiable assets	\$2,046,892	\$285,392	\$205,508	\$ 89,867	\$2,627,659	\$(137,767)	\$2,489,892

For the years ended March 31, 2003 and 2002, overseas sales which included export sales from Japan and net sales of overseas consolidated subsidiaries other than Japan were summarized as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
North America	¥105,300	¥108,023	\$ 877,500
Europe	42,442	40,516	353,683
Other area	35,944	32,812	299,534
	¥183,686	¥181,351	\$1,530,717
Percentage of overseas sales to total consolidated net sales	80.2%	81.9%	

16. Related Party Transactions

During the years ended March 31, 2003 and 2002, the NGK Group had operational transactions with a significant 50%-owned affiliate accounted for by the equity method. A summary of the significant transactions with such an affiliate for the years ended, or as at March 31, 2003 and 2002 is as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2003	2002	2003
For the year:			
Purchases of parts as work in process	¥28,406	¥22,844	\$236,717
Supply of raw materials	23,519	18,133	195,992
At the year-end:			
Accounts receivable	¥ 2,100	¥ 1,670	\$ 17,500
Accounts payable	2,486	2,121	20,717

17. Subsequent Event

On June 27, 2003, the following appropriations of retained earnings were approved at an annual general meeting of shareholders of the Company:

	Millions of Yen	Thousands of U.S. Dollars
Cash dividends	¥1,219	\$10,158
Bonuses to directors and statutory auditors	70	583

Report of Independent Auditors

To the Board of Directors and Shareholders of
NGK SPARK PLUG CO., LTD.

We have audited the accompanying consolidated balance sheets of NGK SPARK PLUG CO., LTD. and its consolidated subsidiaries as of March 31, 2003 and 2002, and the related consolidated statements of income, shareholders' equity, and cash flows for the years then ended, all expressed in Japanese Yen. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

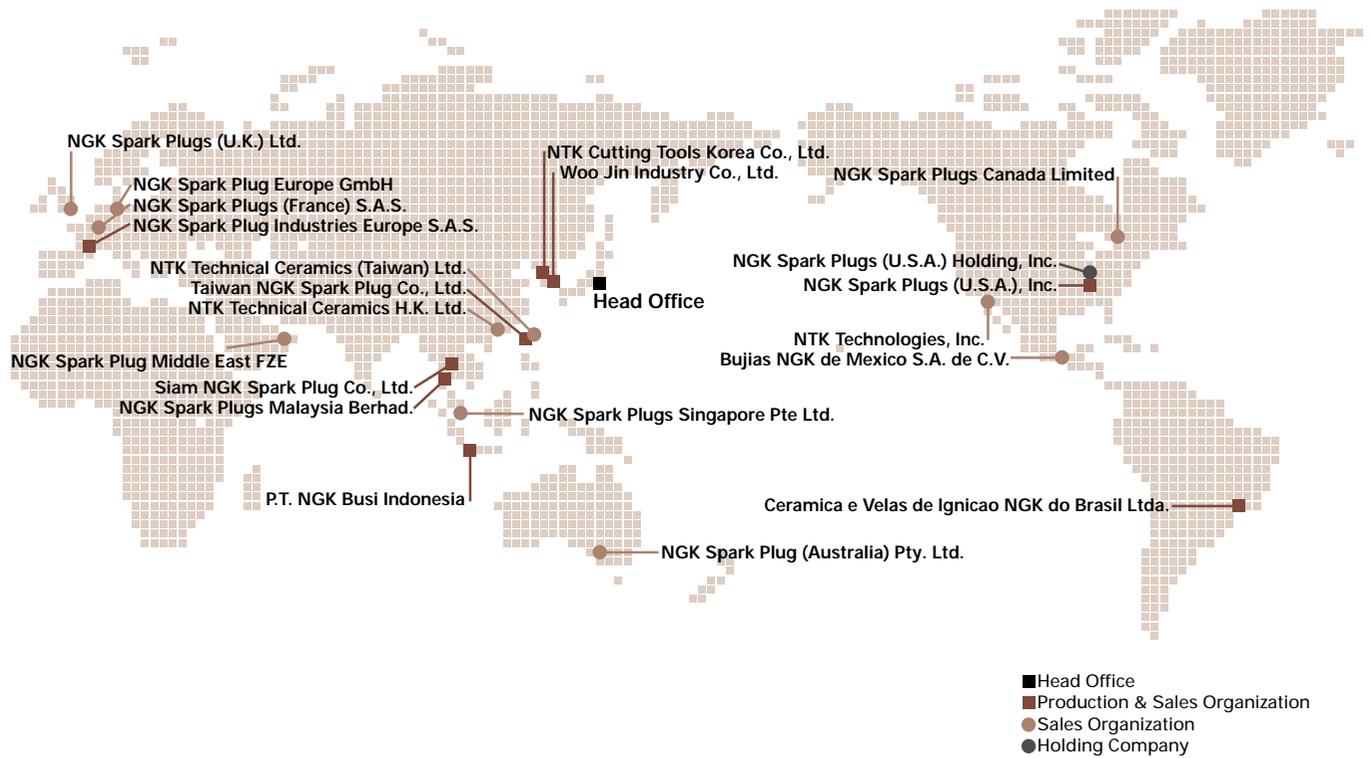
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of NGK SPARK PLUG CO., LTD. and its consolidated subsidiaries as of March 31, 2003 and 2002, and the consolidated results of their operations and their cash flows for the years then ended in conformity with accounting principles and practices generally accepted in Japan (see Note 1).

The amounts expressed in U.S. dollars, which are provided solely for the convenience of the reader, have been translated on the basis set forth in Note 1 to the accompanying consolidated financial statements.

Chuo Aoyama Audit Corporation

ChuoAoyama Audit Corporation
Nagoya, Japan
June 27, 2003

Global Network



NGK Spark Plugs (U.S.A.), Inc.



NTK Technologies, Inc.



NGK Spark Plug Industries Europe S.A.S.



Ceramica e Velas de Ignicao NGK do Brasil Ltda.



Siam NGK Spark Plug Co., Ltd.



NGK Spark Plugs Malaysia Berhad.



P.T. NGK Busi Indonesia



Taiwan NGK Spark Plug Co., Ltd.

Major Subsidiaries and Affiliates

(As of March 31, 2003)

Domestic Subsidiaries

- | | | |
|--|---|---|
| ■ Nittoku Seisakusho Co., Ltd.
<i>Production of spark plug parts and automotive sensors</i> | ■ Kamioka Ceramic Co., Ltd.
<i>Production of glow plugs and cutting tools</i> | ■ Nakatsugawa Ceramic Co., Ltd.
<i>Production of IC packages and automotive sensors</i> |
| ■ Nittoku Unyu Co., Ltd.
<i>Transportation of the Company's products</i> | ■ Kani Ceramic Co., Ltd.
<i>Production of IC packages and automotive sensors</i> | ■ Tono Ceramic Co., Ltd.
<i>Production of spark plug parts</i> |
| ■ Nichiwa Kiki Co., Ltd.
<i>Production of spark plug resistor covers and cables</i> | ■ Iijima Ceramic Co., Ltd.
<i>Production of IC packages</i> | ■ Nansei Ceramic Co., Ltd.
<i>Production of electronic components and automotive sensors</i> |
| ■ Oguchi Seiki Co., Ltd.
<i>Production of spark plug parts and automotive sensors</i> | ■ Nittoku Alpha Service Co., Ltd.
<i>Welfare services for employees of the Company</i> | |

Overseas Subsidiaries

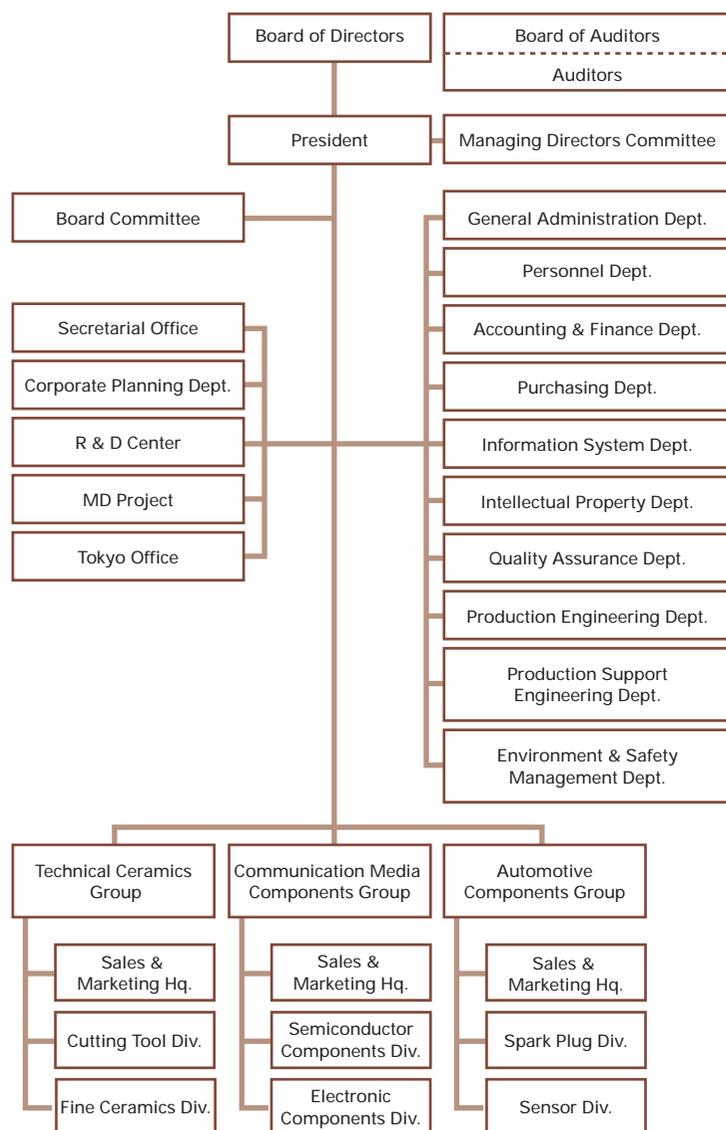
- | | | |
|--|---|--|
| ■ NGK Spark Plugs (U.S.A.), Inc.
<i>Production and sale of spark plugs, cutting tools and automotive sensors</i> | ■ Taiwan NGK Spark Plug Co., Ltd.
<i>Production and sale of spark plugs</i> | ■ NGK Spark Plugs (U.S.A.) Holding, Inc.
<i>Holding company for U.S. subsidiaries</i> |
| ■ NTK Technologies, Inc.
<i>Sale of communication media components and technical ceramics</i> | ■ NGK Spark Plug Industries Europe S.A.S.
<i>Production and sale of spark plugs</i> | ■ NGK Spark Plugs Singapore Pte Ltd.
<i>Sale of automotive components</i> |
| ■ NGK Spark Plugs (U.K.), Ltd.
<i>Sale of automotive components and communication media components and technical ceramics</i> | ■ Bujias NGK de Mexico S.A. de C.V.
<i>Sale of automotive components</i> | ■ Ceramica e Velas de Ignicao NGK do Brasil Ltda.
<i>Production and sale of spark plugs and technical ceramics</i> |
| ■ P.T. NGK Busi Indonesia
<i>Production and sale of spark plugs</i> | ■ NGK Spark Plugs (France) S.A.S.
<i>Sale of automotive components and communication media components and technical ceramics</i> | ■ NGK Spark Plug Europe GmbH
<i>Sale of automotive components and communication media components and technical ceramics</i> |
| ■ NGK Spark Plug (Australia) Pty. Ltd.
<i>Sale of automotive components and communication media components and technical ceramics</i> | ■ NTK Cutting Tools Korea Co., Ltd.
<i>Production and sale of cutting tools</i> | ■ NGK Spark Plug Middle East FZE
<i>Sale of automotive components</i> |
| ■ NGK Spark Plugs Canada Limited
<i>Sale of automotive components</i> | ■ NTK Technical Ceramics H.K. Ltd.
<i>Sale of communication media components and technical ceramics</i> | |
| | ■ NTK Technical Ceramics (Taiwan) Ltd.
<i>Sale of communication media components and technical ceramics</i> | |

Affiliates

- | | | |
|---|--|--|
| ■ NGK Spark Plugs Malaysia Berhad.
<i>Production and sale of spark plugs</i> | ■ Woo Jin Industry Co., Ltd.
<i>Production and sale of spark plugs and automotive sensors</i> | ■ Tokai Taima Kogu Co., Ltd.
<i>Production and sale of mold tools</i> |
| ■ Siam NGK Spark Plug Co., Ltd.
<i>Production and sale of spark plugs</i> | ■ Ceramic Sensor Co., Ltd.
<i>Production of automotive sensors</i> | |

Organization

(As of June 27, 2003)



Board of Directors

(As of June 27, 2003)

CHAIRMAN

Shigenobu Kanagawa*

PRESIDENT

Seiji Haga*

SENIOR MANAGING DIRECTORS

Norio Kato
Shin Suzuki
Toyoji Morimura
Masaru Aritani

MANAGING DIRECTORS

Takashi Terada
Akio Takami
Naomiki Kato
Ikuo Hotta
Genjiro Hashimoto

DIRECTORS

Kazuo Takiguchi
Jun Inagaki
Akiyo Kasugai
Atsuhiko Chinari
Kazuo Kawahara
Chikanori Abe
Michio Obara
Takao Okumura
Tsutomu Kawamitsu
Shigeyasu Yamada
Hideaki Yagi
Junichi Kagawa

STANDING STATUTORY AUDITORS

Harunobu Sato
Yoshiro Ushida

STATUTORY AUDITORS

Minoru Hoshino
Ikuko Ohtsuka

*Representative Director

Corporate Data

(As of March 31, 2003)

NGK SPARK PLUG CO., LTD.

Head Office

14-18 Takatsuji-cho, Mizuho-ku, Nagoya, 467-8525, Japan
<http://www.ngkntk.co.jp>

Established

October 1936

Common Shares

Authorized: 390,000,000

Issued: 229,544,820

Paid-in-Capital

¥47,869 million

Stock Listings

Tokyo Stock Exchange, First Section
Nagoya Stock Exchange, First Section

Number of Employees

5,441

Number of Shareholders

15,678

Transfer Agent

The Mitsubishi Trust and Banking Corporation

Independent Auditors

ChuoAoyama Audit Corporation

Common Stock Price Range

	FY2003	
	High	Low
2002/April–June	¥1,185	¥877
2002/July–September	955	767
2002/October–December	921	739
2003/January–March	860	733



NGK SPARK PLUG CO., LTD.

14-18 Takatsuji-cho, Mizuho-ku, Nagoya, 467-8525, Japan