



The Evolution to Real Value

## Annual Report 2013

Fiscal year ended March 31, 2013

**NGK SPARK PLUG CO., LTD.**

## Profile

NGK SPARK PLUG CO., LTD., established in 1936 as a manufacturer of spark plugs, has always cultivated ceramics as its core competence. The Company has a distinguished track record of applying the expertise cultivated in the field of ceramics in other fields to create new value. Today, NGK SPARK PLUG CO., LTD. is a leading manufacturer supplying its products to major manufacturers worldwide in the automotive, electronics and other industries. The Company's products are vital components of a host of finished products manufactured on production lines the world over.

NGK SPARK PLUG CO., LTD. is at the forefront of innovation in the information and communications and automotive industries that are destined to underpin 21st-century society. The Company is also increasingly active in the medical field, attuning its expertise to the needs of the aging society, and in the environmental sphere.

Drawing on a wealth of experience, NGK SPARK PLUG CO., LTD. continues to deploy its technological prowess in the service of its customers and society.



### Slogan

With established trust and confidence inside and outside the company, we aim to contribute to the peoples of the world by creating and putting at their disposal new values for the future.

### 1. Commitment

With full use of the most suitable technology and our accumulated experience, we continue striving to offer new values to the peoples of the world.

### 2. Management Policy

We offer a working environment in which each one of us is encouraged to make full use of his or her personality and capabilities.

With all our power we are dedicated to pursue management based on trust and confidence.

### 3. Action Guideline

Ever onward ! Always mindful of what is the best course, we swiftly put it into action.

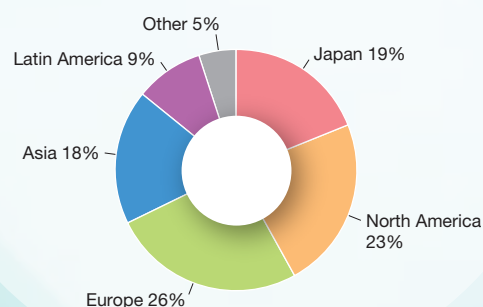
Net Sales  
**302,799**  
million yen

Operating Income  
**23,754**  
million yen

Spark Plugs  
World Share  
**No.1**

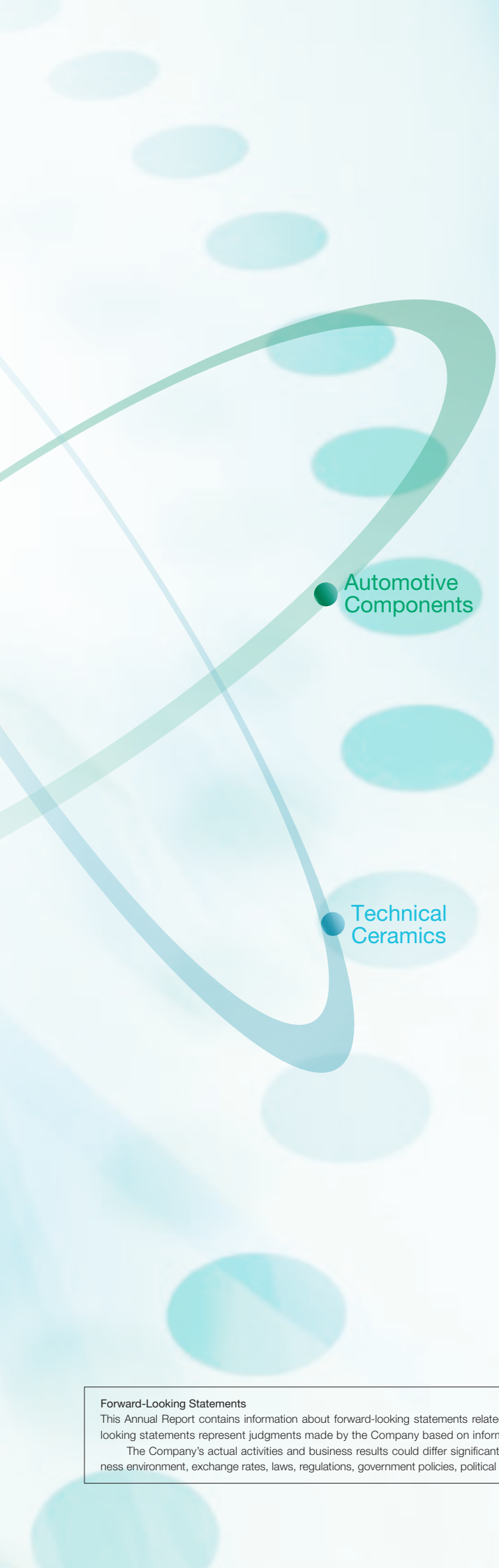
## Rate of Overseas Sales

**81%**



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## Automotive Components

### Automotive Components Group

In the Automotive Components Business, we manufacture and sell spark plugs, glow plugs, various automotive sensors, ceramic engine parts and other automotive components.

In Japan, the Company manufactures and sells these products. In addition, the Company supplies raw materials and parts to Ceramic Sensor Co., Ltd., Nittoku Seisakusho Co., Ltd. and four other subsidiaries in Japan to which manufacturing is consigned and from which the Company purchases finished products, semi-products and assembly parts and sells them. Overseas, Ceramica e Velas de Ignicao NGK do Brasil Ltda., a subsidiary in Brazil, is an integrated operation that manufactures and sells spark plugs, NGK Spark Plugs (U.S.A.), Inc. and ten other manufacturing and sales subsidiaries and associates in North America, China, South Korea, Southeast Asia and Europe purchase parts and raw materials from the Company, assemble finished products and sell them in their respective regions. Some of the semi-products and components manufactured at overseas factories are utilized as assembly parts by the Company and other manufacturing sites.

In addition, the above-mentioned overseas manufacturing and sales subsidiaries, NGK Spark Plug Europe GmbH and nine other overseas sales subsidiaries sell finished products procured from the Company and the overseas manufacturing subsidiaries to customers in their regions.

### Technical Ceramics Group

#### Semiconductor Division

In the Semiconductor Division, we manufacture and sell IC packages and other semiconductor components.

In Japan, the Company manufactures and sells these components. In addition, the Company supplies raw materials and parts to NTK Ceramic Co., Ltd., a subsidiary, to which manufacturing is consigned and from which the Company purchases finished products, semi-products and parts and sells them.

Overseas, NTK Technologies, Inc. and four other overseas sales subsidiaries sell finished products procured from the Company to customers in their regions.

#### Ceramics Division

In the Ceramics Division, we manufacture and sell cutting tools for machining, components for semiconductor manufacturing equipment, and other ceramics products for industrial applications.

In Japan, the Company manufactures and sells these products. In addition, the Company supplies raw materials and parts to Kamioka Ceramic Co., Ltd. and two other subsidiaries and associates in Japan to which manufacturing is consigned, purchases finished products, semi-products and parts from them and sells them. Overseas, Ceramica e Velas de Ignicao NGK do Brasil Ltda., a subsidiary in Brazil, is an integrated operation that manufactures and sells ceramics products for industrial applications and NTK Technical Ceramics Korea Co., Ltd. purchases semi-products and some raw materials from the Company, assembles finished cutting tools and sells them directly to customers or via the Company and its sales subsidiaries.

NGK Spark Plug Europe GmbH and eight other overseas sales subsidiaries sell finished products procured from the Company and the above-mentioned overseas manufacturing subsidiaries to customers in their regions.

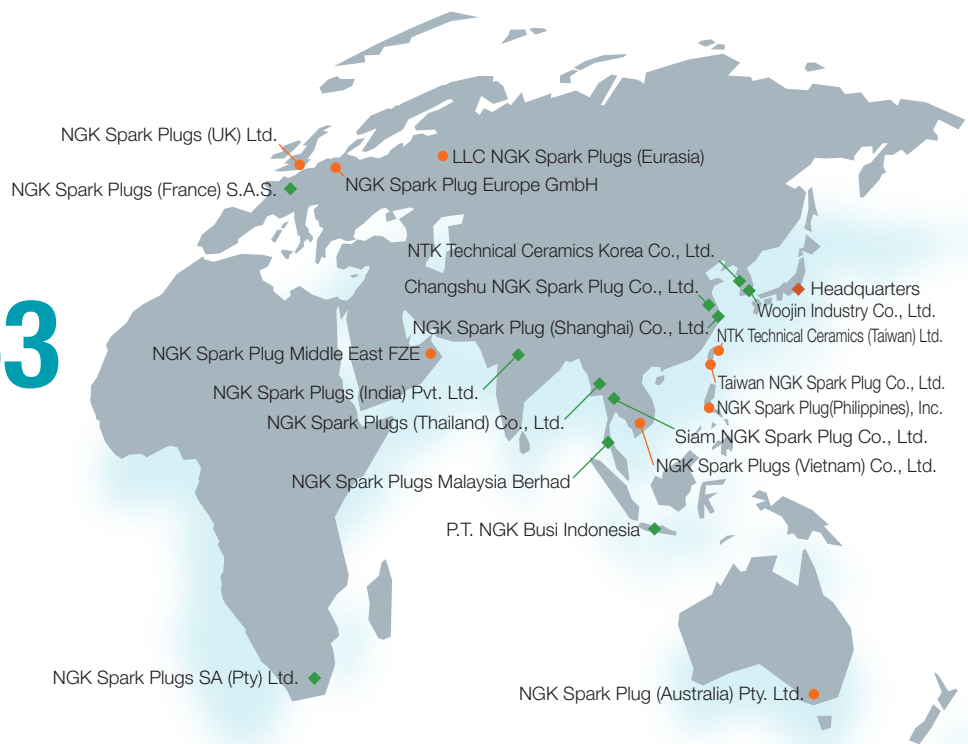
#### Forward-Looking Statements

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.

## Global Network

Employees  
**12,563**  
(As of March 31, 2013)



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



NGK Spark Plugs Malaysia Berhad



Siam NGK Spark Plug Co., Ltd.



P.T. NGK Busi Indonesia



Ceramica e Velas de Ignicao NGK do Brasil Ltda.



NGK Spark Plugs (Thailand) Co., Ltd.



Wootin Industry Co., Ltd.



NGK Spark Plugs (France) S.A.S.



NGK Spark Plugs SA (Pty) Ltd.



NTK Technical Ceramics Korea Co., Ltd.



NGK Spark Plug (Shanghai) Co., Ltd.



NGK Spark Plugs (India) Pvt. Ltd.



## 26 Overseas Sites

(As of June 30, 2013)

- ◆ Headquarters
- ◆ Manufacturing & Sales Organization
- Sales Organization
- Holding Company

### Domestic Subsidiaries

**Ceramic Sensor Co., Ltd.**  
Production of automotive sensors

**Nittoku Seisakusho Co., Ltd.**  
Production of spark plug parts and automotive sensor parts

**Nichiwa Kiki Co., Ltd.**  
Production of spark plug resistor covers and cables, and automotive sensor parts

**Kamioka Ceramic Co., Ltd.**  
Production of glow plugs and cutting tools

**NTK Ceramic Co., Ltd.**  
Production of IC packages and automotive sensor parts

**SparkTec TONO Co., Ltd.**  
Production of spark plug parts

**Nansei Ceramic Co., Ltd.**  
Production of electronic components

**Nittoku Unyu Co., Ltd.**  
Transportation of the Company products

**Nittoku Alpha Service Co., Ltd.**  
Welfare services for Company employees

### Overseas Subsidiaries

**NGK Spark Plugs (U.S.A.) Holding, Inc.**  
Holding company for U.S. subsidiaries

**NGK Spark Plugs (U.S.A.), Inc.**  
Production and sale of spark plugs and automotive sensors, sale of cutting tools

**NTK Technologies, Inc.**  
Sale of communication media components and technical ceramics

**NGK Spark Plugs Canada Limited**  
Sale of automotive components

**NGK Spark Plug Europe GmbH**  
Sale of automotive components, communication media components and technical ceramics

**NGK Spark Plugs (UK) Ltd.**  
Sale of automotive components, communication media components and technical ceramics

**NGK Spark Plugs (France) S.A.S.**  
Production of spark plugs, sale of automotive components, communication media components and technical ceramics

**LLC NGK Spark Plugs (Eurasia)**  
Sale of automotive components

**Taiwan NGK Spark Plug Co., Ltd.**  
Sale of automotive components

**NTK Technical Ceramics (Taiwan) Ltd.**  
Sale of communication media components and technical ceramics

**NTK Technical Ceramics Korea Co., Ltd.**  
Production and sale of technical ceramics

**P.T. NGK Busi Indonesia**  
Production and sale of spark plugs, sale of automotive sensors

**NGK Spark Plug (Shanghai) Co., Ltd.**  
Production and sale of spark plugs and automotive sensors, sale of cutting tools

**Changshu NGK Spark Plug Co., Ltd.**  
Production and sales of automotive sensors

**NGK Spark Plugs Malaysia Berhad**  
Production and sale of spark plugs, sale of automotive sensors

**NGK Spark Plugs (Philippines), Inc.**  
Sale of spark plugs

**Siam NGK Spark Plug Co., Ltd.**  
Production and sale of spark plugs and glow plugs, sale of automotive sensors

**NGK Spark Plugs (Thailand) Co., Ltd.**  
Production of automotive sensors, sale of automotive components and technical ceramics

**NGK Spark Plugs (Vietnam) Co., Ltd.**  
Sales of automotive components

**NGK Spark Plugs (India) Pvt. Ltd.**  
Production and sale of spark plugs, sale of automotive sensors

**Ceramica e Velas de Ignicao NGK do Brasil Ltda.**  
Production and sale of automotive components and technical ceramics

**Bujias NGK de Mexico S.A. de C.V.**  
Sale of automotive components

**NGK Spark Plug Middle East FZE**  
Sale of spark plugs

**NGK Spark Plugs SA (Pty) Ltd.**  
Production and sale of spark plugs

**NGK Spark Plug (Australia) Pty. Ltd.**  
Sale of automotive components and technical ceramics

### Associates

**Woojin Industry Co., Ltd.**  
Production and sale of automotive components

**Tokai Taima Kogu Co., Ltd.**  
Production and sale of mold tools

**Eastern Co., Ltd.**  
Production of IC packages

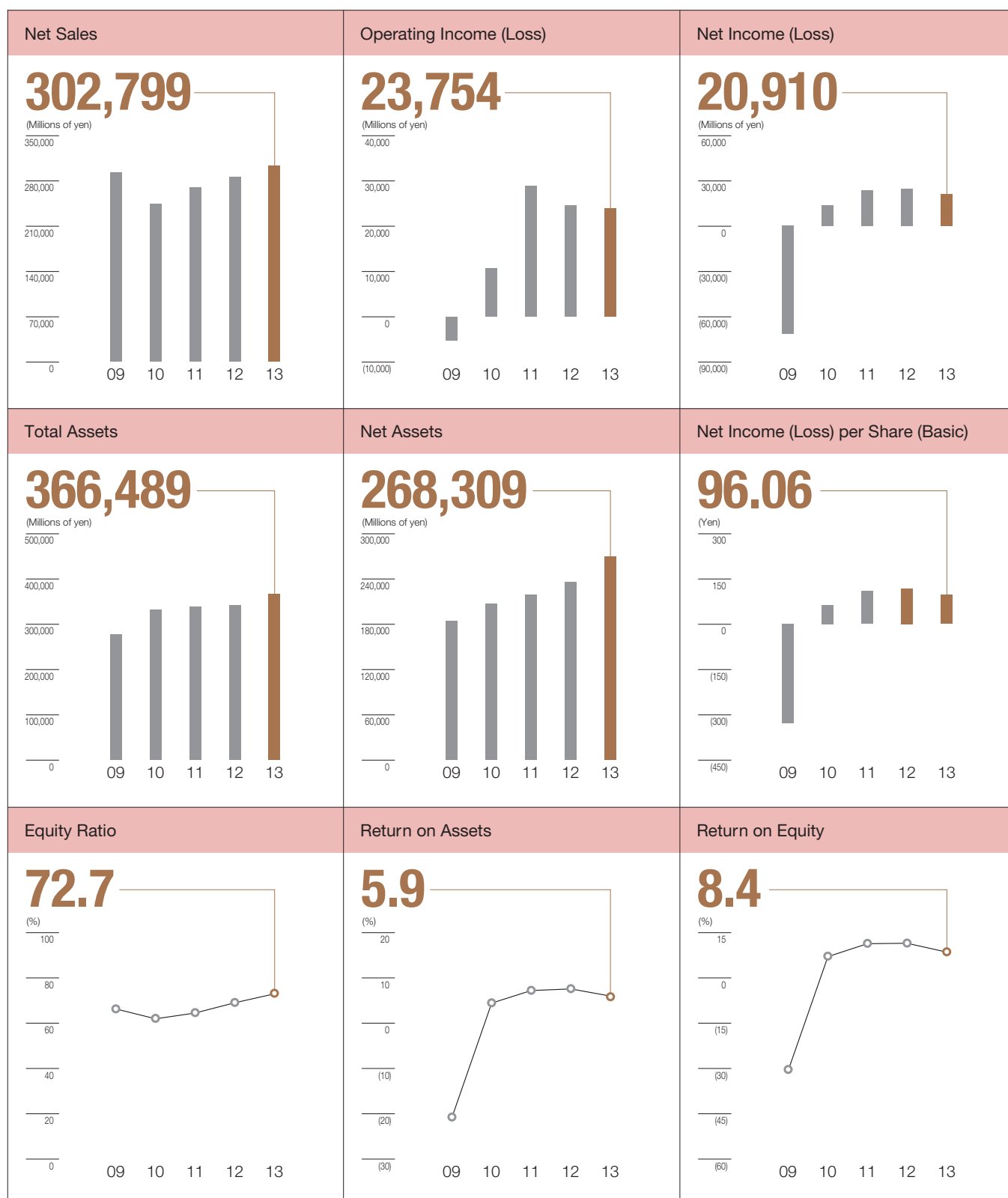
# Financial Highlights

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
Years ended March 31, 2013, 2012 and 2011

	Millions of yen			Change (%)	Thousands of U.S. dollars
	2013	2012	2011	2013/2012	2013
For the year:					
Net sales:	¥302,799	¥284,746	¥269,233	6.3 %	\$3,221,266
Automotive Components	248,795	222,636	197,214	11.7	2,646,755
Technical Ceramics:					
Semiconductor division	28,239	33,892	44,472	(16.7)	300,415
Ceramics division	22,054	23,738	23,053	(7.1)	234,617
Subtotal	50,293	57,630	67,525	(12.7)	535,032
Other	3,711	4,480	4,494	(17.2)	39,479
Operating income	23,754	24,478	28,771	(3.0)	252,702
Net income	20,910	25,524	23,680	(18.1)	222,447
At year-end:					
Total assets	¥366,489	¥340,296	¥337,318	7.7 %	\$3,898,819
Net assets	268,309	235,613	218,159	13.9	2,854,351
	%				
Ratios:					
Equity ratio	72.7%	68.8 %	64.2 %		
ROA (Return on assets)	5.9	7.5	7.1		
ROE (Return on equity)	8.4	11.3	11.2		
	Yen			Change (%)	U.S. dollars
Per share data:					
Net income:					
—Basic	¥96.06	¥117.25	¥108.71	(18.1)%	\$ 1.02
—Diluted	—	—	107.83	—	—
	Change (Yen)				
Cash dividends	22.00	22.00	22.00	¥0.0	0.24

Notes 1: U.S. dollar amounts above and elsewhere in this Annual Report are converted from yen, for convenience only, at the rate of ¥94=U.S.\$1

Notes 2: In April 2013, the "Communication media components" segment and "Technical ceramics" segment were integrated and changed the name to the "Technical ceramics" segment. The "Communication media components" segment and the "Technical ceramics" segment in the Segment information of the Notes of the Consolidated Financial Statements correspond to each of the "Semiconductor" division and the "Ceramics" division in the Technical Ceramics Group.



## We took the first decisive step toward a new round of growth

### Financial performance for the fiscal year ended March 31, 2013

In the first half of the fiscal year, the stock markets stagnated as the tempo of the world economy slowed, while the yen retained its exceptional strength in foreign exchange markets and created an unfavorable business environment for the Company. During the second half of the fiscal year, in contrast, stock prices rose sharply and the depreciation of the yen following the Abe administration's assumption of office in December 2012. The more favorable economic climate led to a noticeable improvement in the financial performance of export-related companies including the Company.

For the fiscal year ended March 31, 2013, consolidated net sales increased 6.3% year on year to ¥302,799 million, operating income decreased 3.0% to ¥23,754 million, and net income decreased 18.1% to ¥20,910 million.

Going forward, the Group's business environment is expected to remain challenging in view of the persisting sovereign debt crisis in Europe, unresolved fiscal problems in the U.S., and concerns about the slowing tempo of emerging economies. In these circumstances, assuming an exchange rate of ¥90 to the U.S. dollar and ¥115 to the euro, our plan for fiscal 2013 calls for consolidated net sales of ¥305.0 billion, an increase of 0.7% year on year, operating income of ¥38.0 billion, an increase of 60.0%, and net income of ¥23.5 billion, an increase of 12.4%.



**Shinichi Odo**  
*President and Chief Executive Officer*

### Three goals of the fifth medium-term management plan

- 1 | Re-establishment of the existing businesses by strengthening manufacturing and securing the foundation
- 2 | Development of new products capable of becoming next-generation mainstay products under the new R&D structure
- 3 | Strengthening of organizational power through strategic utilization of human resources

Reinforce corporate governance

### Review of the results of the fifth medium-term management plan; 1st SHINKA (Delving)\*

The Group has set out its vision of what NGK Spark Plug should be in 2020 as a distinguished manufacturing company, a highly profitable company, a progressive company, and a personnel “assets” company. To realize this vision, we formulated a management plan—NITTOKU SHINKA-RON (The Evolution of NGK Spark Plug)\*, together with a roadmap, dividing the road to 2020 into three three-year phases: 1st SHINKA (Delving), 2nd SHINKA (Renovating), 3rd SHINKA (Evolving)\*. We launched the fifth medium-term management plan; 1st SHINKA (“three years devoted to delving”)\* in fiscal 2010, the first step toward realization of the vision. Over the past three years, we concentrated on laying a foundation for the renovation of the Company, the next phase of the master plan. We identified the emerging challenges and opportunities ahead by delving into our business, delved into existing business as well as planted seeds for new businesses.

I think we were able to achieve the targets as planned. Our first priority was to reinforce corporate governance. In this regard, the introduction of the corporate officers system was a momentous step involving clarification of the responsibilities and authority of each corporate officer, and requiring corporate officers to ensure strong linkage between their commitment and corporate objectives. With authority delegated to them, corporate officers are able to

execute their duties with greater decisiveness based on their own judgment, and thus focus with greater vigor on the accomplishment of their missions. The fifth medium-term management plan had three goals: 1) re-establishment of the existing businesses by strengthening manufacturing and securing the foundation, 2) development of new products capable of becoming next-generation mainstay products under the new R&D structure, and 3) strengthening of organizational power through strategic utilization of human resources. For the first goal, we delved into manufacturing capabilities, our core competence, in order to pursue a corporate-wide approach. As a result, in April 2013 we established the MONODUKURI Center, a corporate organization aligned with our objective of becoming a distinguished manufacturing company and a highly profitable company. For the second goal, in order to prevent complacency in technology development, we made a clear distinction between technology development and new business development, and assigned a corporate officer to be in charge of each part. In new business development, which has a particularly important bearing on the Group’s future, I am personally leading NGK Spark Plug in our drive to become a progressive company. A milestone along the way was the establishment of the New Business Advancement Group whose mission is to develop market-oriented new products capable of becoming next-generation mainstay products. Regarding the third goal, we held discussions involving all corporate officers to identify the

\*See “Overview of Long-Term Management Plan; NITTOKU SHINKA-RON (The Evolution of NGK Spark Plug)” on page 10.

## A Message from the President



kinds of people we need in order to transform NGK Spark Plug and how best to develop human resources as “assets.” Through in-depth discussion, we charted a course. With the aim of becoming a personnel “assets” company, we will reform our personnel system over the next three years of the 2nd SHINKA (Renovating)\* phase as one of the initiatives to strengthen organizational power.

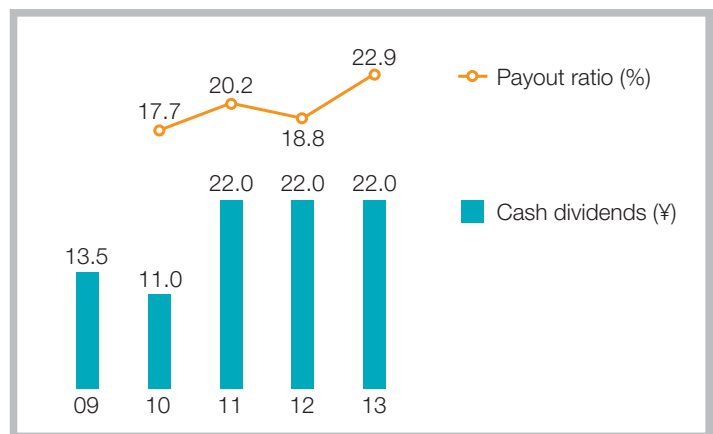
### **Sixth medium-term management plan; 2nd SHINKA (Renovating)\***

We launched the sixth medium-term management plan ; 2nd SHINKA (three years devoted to renovating)\* in April 2013. In accordance with the basic policy of “utilizing corporate resources to the utmost, toward the 3rd SHINKA (Evolving)\* phase, boldly challenge new industrial domains and fields,” we will strive to launch new products and new businesses by increasing the speed of decision-making and execution on the foundation laid during the previous three years devoted to delving. By thoroughly execut-

ing the sixth medium-term management plan, we aim to expand the scale of our business to a much larger size. However, achieving this target will be problematic unless we build up other businesses alongside the automotive components business, which currently accounts for a large share of sales. Thus, “reforming the business structure” is a pressing issue since it is the key to increasing our presence as a ceramics manufacturer, in businesses other than the automotive components business. Leveraging the Company’s manifold strengths, all our employees will make a concerted effort to reform the business structure to maximum advantage. While endeavoring to expand non-automotive components business, we will not neglect efforts to reform the automotive components business. By reinforcing our strong automotive components business, we intend to position the automotive components business and non-automotive components business as the two wheels driving our growth so that we can offer real value to all our stakeholders in 2020.

The Group’s performance goals for fiscal 2015, the final year of the sixth medium-term management plan, are net

\*See “Overview of Long-Term Management Plan; NITTOKU SHINKA-RON (The Evolution of NGK Spark Plug)” on page 10.



sales of ¥363.0 billion, operating income of ¥60.0 billion, and ROE of about 12%. Mindful that these target figures for net sales and operating income would be new records for the Group, we are determined to attain our ambitious performance goals.

### For further growth

For plugs and sensors, we will increase our production capacity through strategic investment with a view to satisfying demand in 2020. In the organic IC package business, through the alliance with Eastern Co., Ltd. we aim to strengthen cost competitiveness while cultivating the smart device market in collaboration with our partner. These are among our initiatives to achieve growth of NGK Spark Plug. In order to continue to be a distinguished manufacturing company, a highly profitable company, a progressive company, and a personnel “assets” company 10, 20 years further down the road, we will continue to implement various measures. As the industry leader in ceramics technology, we intend to offer optimal functional components geared to customer needs, thus positioning ourselves as No. 1 in manufacturing industry with unique technological abilities.

### Dividend policy

At NGK Spark Plug, we regard returning profits to shareholders as one of our most important management policies. We also think it is important to provide shareholders with returns in line with earnings. While maintaining a target dividend payout ratio of at least 20% of consolidated net income for the time being, the Company decides the amount of dividends by comprehensively taking into consideration R&D investment, investment in business expansion, and capital investment for rationalization of operations. In accordance with this policy, the Company paid dividends per share of ¥22.0 for fiscal 2012. While adhering to the basic policy of maintaining stable dividends, we aim to increase the payout ratio.

In these endeavors, I would be grateful for the understanding and support of our shareholders and the wider investor community.

Shinichi Odo  
President and Chief Executive Officer

By practicing  
1st SHINKA (Delving),  
2nd SHINKA (Renovating),  
3rd SHINKA (Evolving),

in 10 years (2020), NGK Spark Plug Co., Ltd. shall be a

- distinguished manufacturing company
- highly profitable company
- progressive company
- personnel “assets” company

and

Providing “Real Value” to all stakeholders.

- Overview of Long-Term Management Plan; NITTOKU SHINKA-RON (The Evolution of NGK Spark Plug)



## The New Medium-Term Management Plan; 2nd SHINKA [Renovating]

### Basic Policy

By utilizing corporate resources at most, toward the “Evolving” phase, we will boldly challenge at new industrial domains/fields.

#### Three Elements of the Basic Policy

1. Offer new value in new domains cultivated through strategic marketing.
2. Develop new core competences while reinforcing current core competences.
3. Recognize that personnel “assets” drive the Company’s renovation, make a commitment and fulfill it to accelerate the renovation of the Company.

### Basic Initiatives

- Establish and practice the strategies of sales / engineering marketing at new industrial domains.
- Establish and promote overwhelming dominance of own technologies, and develop new core technologies.
- Enhance factory floor capability for distinguished manufacturing.
- Establish and strengthen strategic supply chain and its function.
- Enhance group ability by clearly defining roles and responsibilities of the affiliated / outsourced companies.
- Establish system for fostering human “assets” who overcome any environmental changes and challenge for new “Real Value”.
- Strengthen corporate functional strategy and establish corporate management system.
- Complete prevalence of CSR application, and globalize CSR activities.

### Performance Goal

(Millions of yen)

	FY 2012	FY 2013	FY 2014	FY 2015
Net Sales	302,799	305,000	331,000	363,000
Operating Income (ratio)	23,754 (7.8%)	38,000 (12.5%)	48,000 (14.5%)	60,000 (16.5%)
Net Income	20,910	23,500	29,500	38,500
ROE	8.4%	8.5%	9.9%	11.7%

## Initiatives in the automotive components field while building a powerful presence in other fields

During the three years devoted to 2nd SHINKA in addition to further strengthening the automotive components business, which is our core business, we aim to increase the weight of non-automotive components business as a ceramics manufacturer. For this purpose, the technical ceramics group was launched in April 2013, integrating the communication media components business and the technical ceramics business. We are speeding the transformation of the business structure in order to build up the non-automotive components business. In this way, we will accelerate the speed of renovation, positioning the automotive components business and the non-automotive components business as the two wheels of the Group's resurgence.

### Initiatives of the Automotive Components Business

In the automotive components business, we have high shares of the global markets for plugs and sensors. In light of the ongoing growth of the rapidly evolving automotive market, we are establishing a production structure aligned with anticipated demand through 2020. In the plug operations, we are constructing a plug insulator plant in Japan. In addition, we have launched an aggressive restructuring initiative. Our plans call for plants to migrate to 24/7/365 operations through total optimization of deployment of human resources. Moreover, in order to tackle the volume zone in the Chinese market, in May 2013 we introduced plugs for the aftermarket featuring a low-cost design while maintaining the world-class quality that has long been the hallmark of NGK products. In the sensor operations, in addition to the expansion of oxygen sensor element production capacity at the Komaki Plant, we established a new oxygen sensor manufacturing plant in Changshu, China. In line with the growing numbers of two-wheel vehicles worldwide and the increasing reliance on diesel engine vehicles amid a general tightening of environmental regulations, we intend to respond to rising demand for oxygen sensors and NOx sensors.



Image of the completed Nino Plant



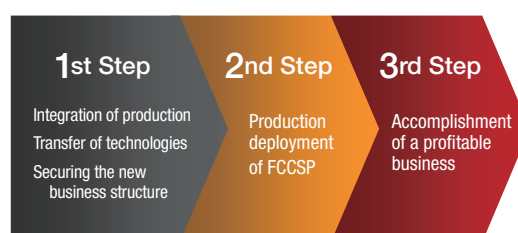
Komaki Sensor Material Plant



Changshu NGK Spark Plug Co., Ltd (China)

### Restructuring of the organic IC package Business

To tackle the pressing issue of restructuring of the organic IC package business, in February 2013 we formed a capital and business partnership with Eastern Co., Ltd., a company with cost competitiveness and flexibility. This partnership has enabled us to shift our organic IC package business to a fabless structure concentrating on design, development and sales functions. Production is consigned to Eastern as well as to other highly cost-competitive overseas strategic partners. Through combining our organic IC package development capabilities with Eastern's complementary strengths, we will sharpen our focus on growth markets, such as that for FCCSPs, with the aim of restoring the organic IC package business to profitability by fiscal 2015.



# Initiatives in new fields

The Company is boldly challenging new fields, including environment, energy, and next-generation vehicles, and is in particular focusing on SOFCs. In collaboration with a systems manufacturer, we are developing SOFCs for residential use, targeting the world's leading power generation efficiency.

In view of the tremendous potential of a future hydrogen economy, the Company is developing a hydrogen manufacturing module for use at hydrogen stations jointly with Tokyo Gas in a project supported by the New Energy and Industrial Technology Development Organization (NEDO) of Japan. We are also pushing forward with next-generation automotive-related R&D. In fiscal 2012, we participated in the Advanced Development Project's Electric Vehicle Model No. 3 (SIM-CEL) of SIM-Drive Corporation.



Hydrogen station



Exterior image of SIM-CEL

## What is a Solid Oxide Fuel Cell (SOFC)?

A SOFC directly generates electricity through the chemical reaction of oxygen and hydrogen. Compared with conventional methods of converting the energy generated into heat and then to electricity, a SOFC is a clean system with minimal emission of carbon dioxide during power generation. As it can generate electricity at the same location as it is consumed, it offers highly efficient power generation without loss during power transmission.



SOFC stack



Noboru Ishida  
Head of SOFC Project

### SOFC stack—the compilation of our expertise

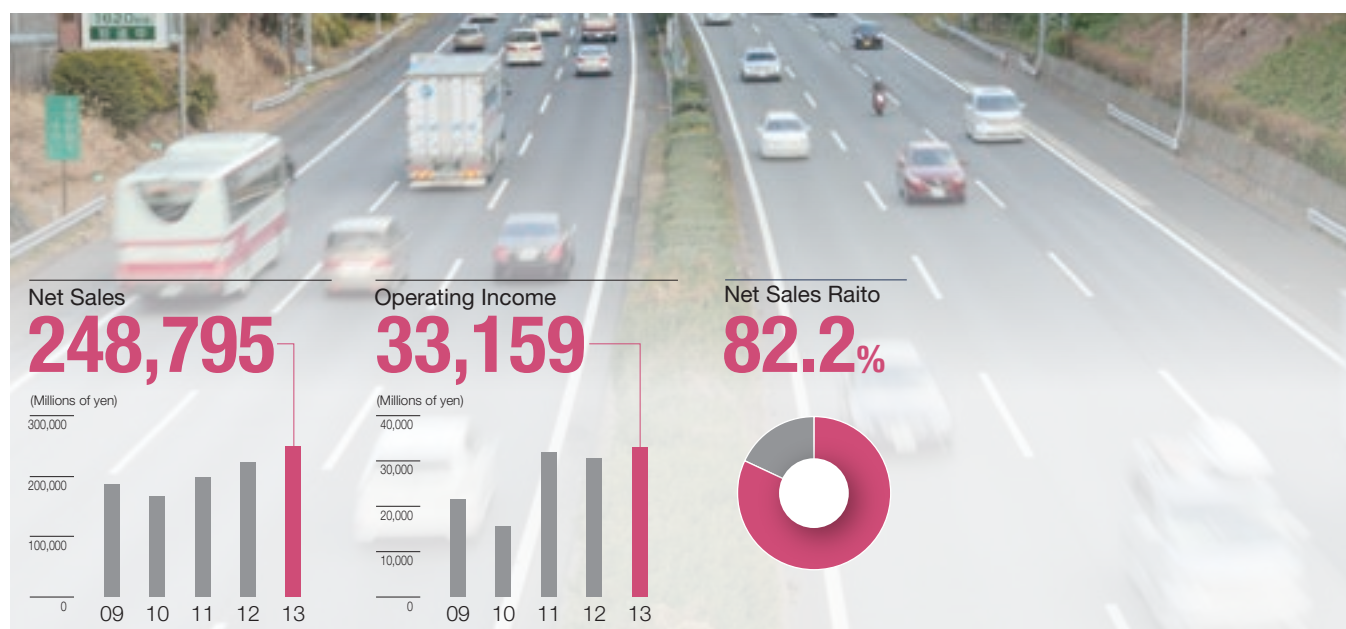
The advantages of NGK Spark Plug's SOFC include high output, highly efficient power generation, and compactness of the SOFC stack configuration.

To achieve these merits, One key to the high values achieved for both high power efficiency and compactness is our expertise developed through years of experience of developing ceramic materials. For example, we took technology originally perfected for plugs and applied it to the metal and ceramic assembling used for stacking, our sensor technology ensures excellent control, and we utilized our industry-leading lamination technology for ceramic packaging. The SOFC is the compilation of our expertise, and is a highly significant product through which NGK Spark Plug can contribute by resolving the world's energy and environmental issues.

Through the reorganization of April 2013, we established the SOFC Project as an organization equivalent to a business group. To meet rising expectations from market, we will accomplish commercialization of SOFC speedily.

My mission as the head of the SOFC Project is to contribute to society through this promising new technology. We will do our best to commercialize high-value added SOFC stacks with a determined mind.

# Automotive Components Group



### Review of Results

Whereas the Automotive Components Group was adversely affected by sluggish sales of new vehicles in Europe, shipments were robust in North America. In the first half of fiscal 2012, the strong yen greatly undermined sales, but in the second half, sales were aided by the weakened yen.

As a result, sales of the Automotive Components Group increased 11.7% year on year to ¥248,795 million and operating income rose 8.0% to ¥33,159 million.

### Outlook

In view of robust demand for automotive components overseas, mainly in the U.S. and China, for the fiscal year ending March 31, 2014, we forecast sales of ¥248,250 million, a decrease of 0.2% year on year, and operating income of ¥43,130 million, an increase of 30.1%.



Spark Plugs



NHTC (New High Temperature Ceramic) Glow Plugs



Zirconia Exhaust Gas Oxygen Sensors



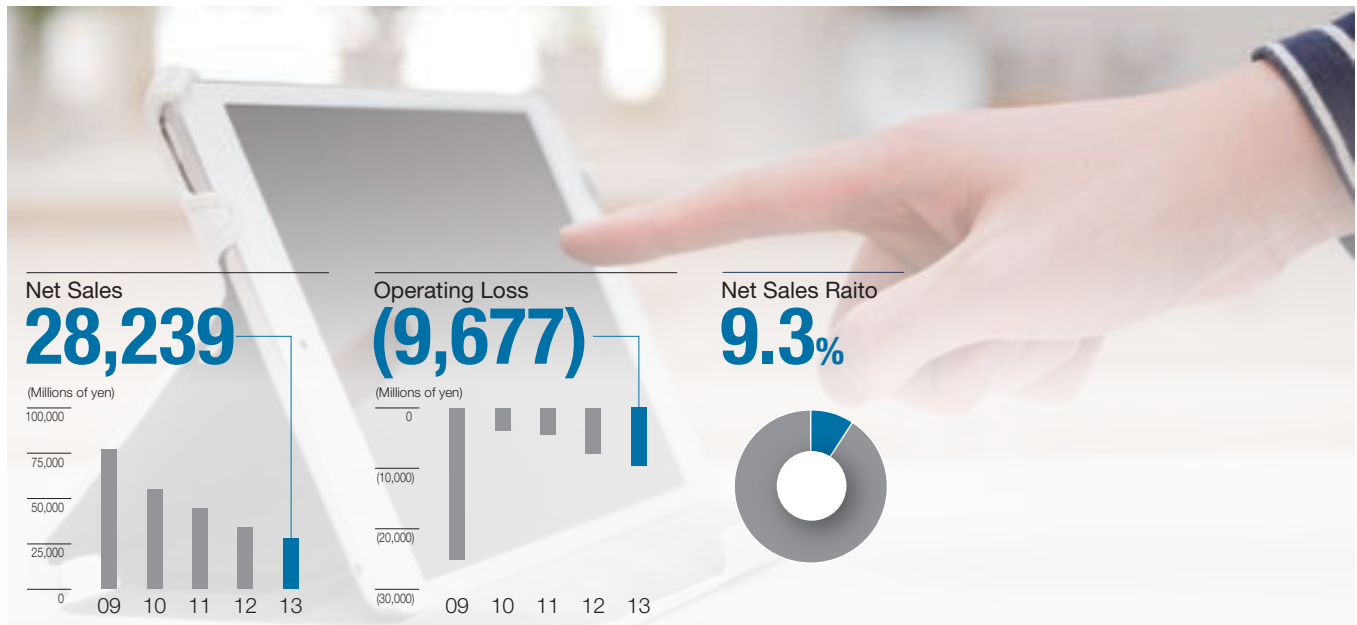
Universal A/F Heated Exhaust Gas Oxygen Sensors



Wide Range Exhaust Gas Temperature Sensors

# Technical Ceramics Group

## Semiconductor Division



### Review of Results

The Semiconductor Division's shipments of IC packages for personal computer CPUs, which are the mainstay products in this segment, remained lackluster due to customers' inventory adjustment. In the first half of fiscal 2012, sales were greatly undermined by the strong yen.

As a result, sales of the Semiconductor Division decreased 16.7% year on year to ¥28,239 million and an operating loss of ¥9,677 million was recorded compared with an operating loss of ¥7,583 million for fiscal 2011.

### Outlook

In accordance with our strategy of shifting the semiconductor operations to a fabless business model emphasizing design and development, we are promoting the consignment of production to outsourcees in Japan and overseas. For the fiscal year ending March 31, 2014, we forecast sales of ¥31,720 million, an increase of 12.3% year on year, and an operating loss of ¥6,370 million compared with the operating loss of ¥9,677 million recorded for fiscal 2012.



Ceramic IC Packages  
(for crystal device and  
SAW filter)



Organic IC Packages



Large-Scale Substrate for  
Wafer Tester



Optical Device Package

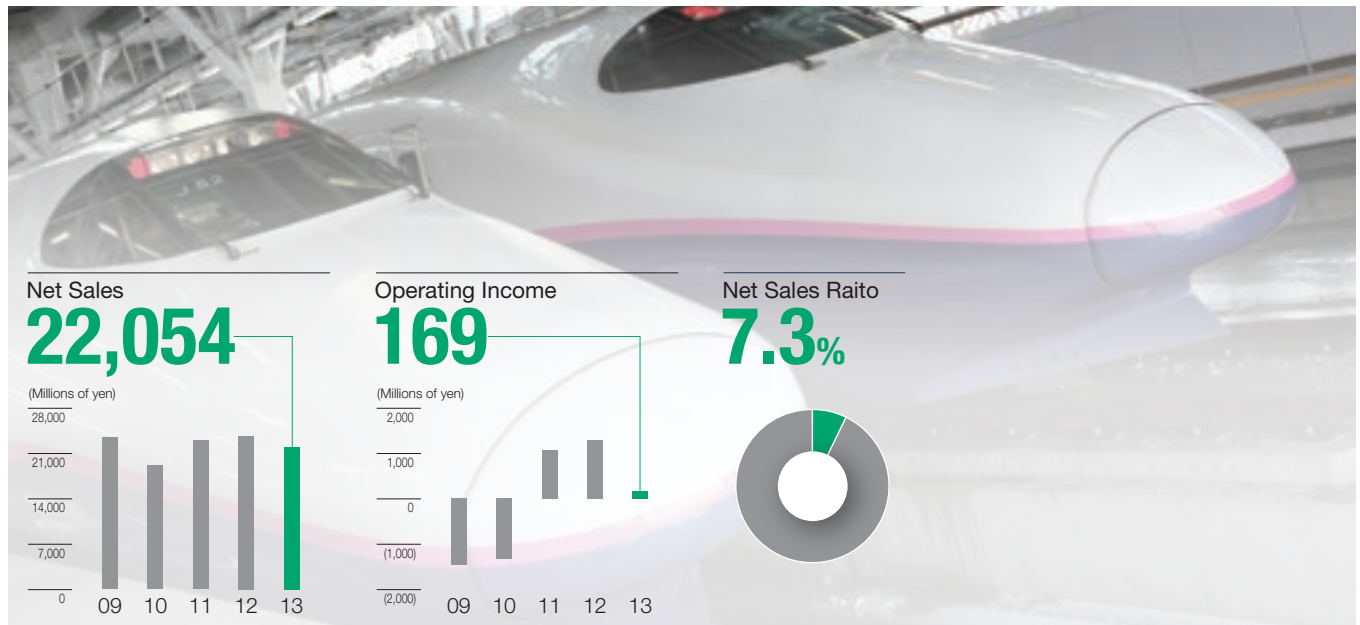


LED Package

## Review of Operations

# Technical Ceramics Group

## Ceramics Division



### Review of Results

The Ceramics Division's shipments of products for machine tools were robust in North America but remained weak in Europe. An unfavorable situation persisted for shipments of products for industrial equipment owing to inventory adjustment by customers and flagging semiconductor market.

As a result, sales of the Ceramics Division decreased 7.1% year on year to ¥22,054 million and operating income fell 87.1% to ¥169 million.

### Outlook

We are working to establish a more stable earnings structure for the ceramics business. For the fiscal year ending March 31, 2014, we forecast sales of ¥21,080 million, a decrease of 4.4% year on year, and operating income of ¥1,240 million, a surge of 634.3%.



Cutting Tools



Electro-Static Chuck,  
Vacuum Chuck



Ultrasonic Transducer



Bio Ceramics



Oxygen Concentrator

## Commitment to CSR

### CSR of NGK Spark Plug Group

We view CSR not just as a responsibility but as an opportunity to be accountable through review of the NGK Spark Plug Group's economic, environmental and social activities from a global perspective, to enhance corporate value, and to contribute to the sustainable development of society in accordance with our Corporate Philosophy.

Our CSR activities are wide ranging and diverse. They include offering excellent products to customers, disclosing corporate information to shareholders and the wider investor community in an optimal, easy-to-understand manner, collaborating with suppliers for mutual development, ensuring a safe and employee-friendly working environment, and participating in and supporting activities in the local community.

To articulate the Group's action guidelines for CSR activities, we established the CSR Policy in April 2011, which comprises the Compliance Policy and nine other policies. In accordance with the CSR Policy, we intend to review and promote CSR based on a multifaceted approach far into the future.

### CSR Promotion System

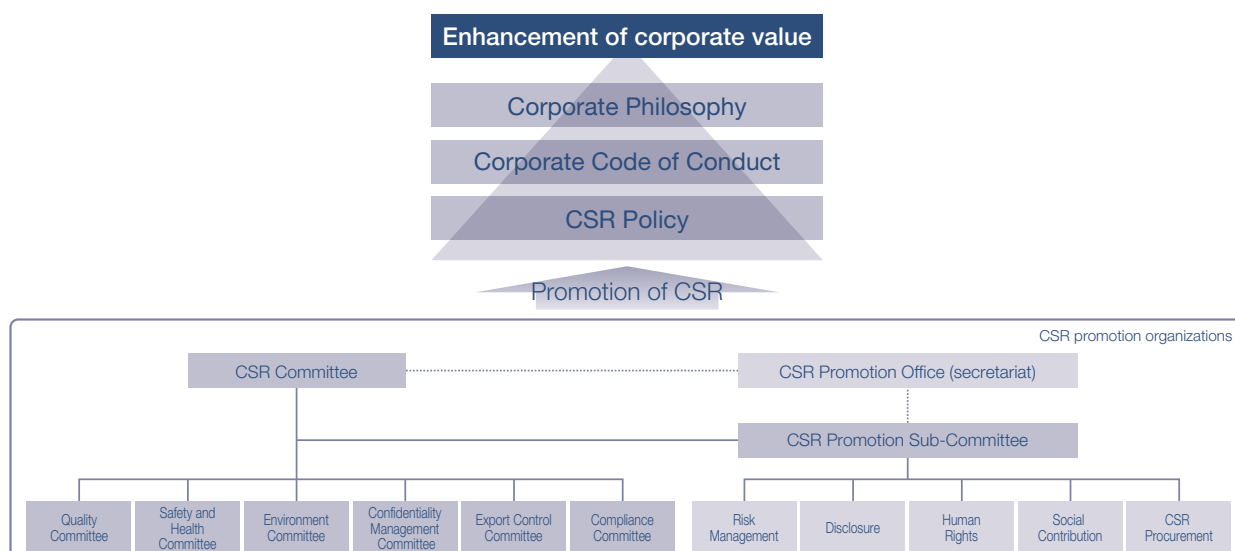
As well as determining each year's key tasks for implementation of the CSR Policy, the CSR Committee oversees and evaluates the CSR-related activities implemented by the respective committees, working groups and divisions, and makes proposals regarding them, in order to achieve total optimization of CSR activities, thereby strengthening the business foundation.

The CSR Promotion Sub-Committee establishes working groups as necessary to discuss specific themes and develops countermeasures. Through close collaboration among the CSR Committee, the CSR Promotion Sub-Committee, and the task force committees, a company-wide CSR promotion system is put in place.

We publish an annual CSR report on our CSR activities and results, which is also available on our website.



CSR Report 2013



### Corporate Governance

We believe that one of our most important managerial tasks is to establish and maintain a fair and efficient management system, thus securing soundness and transparency in management.

### Management Organization

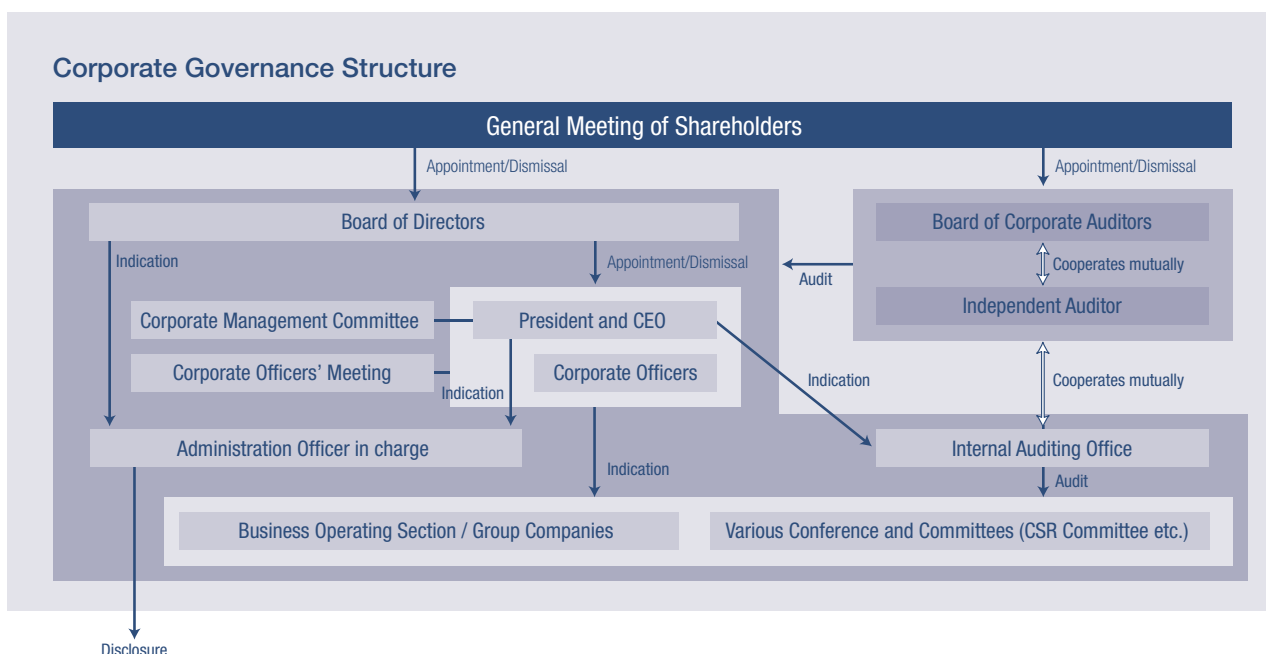
The Board of Directors, consisting of nine directors (of whom one is an outside director), deliberates and makes decisions on matters stipulated by laws or bylaws and management-related matters of importance, and supervises the execution of operations by each director. On April 1, 2012, we introduced the corporate officers system with the aim of expediting business execution in accordance with the policies decided by the Board of Directors and to clarify accountability. The 19 corporate officers, eight of whom concurrently serve as directors, are elected by resolution of the Board of Directors. At the corporate officers' meeting held once a month, corporate officers report on the progress of business execution, share information and exchange opinions. The term of office of a corporate officer and that of a director are one year. We also introduced a performance-based system for officers' remuneration to enhance fairness by clarifying accountability and to improve the execution of operations by enhancing officers' recognition of the need for improvement and their motivation to achieve it.

### Management Oversight Functions

The Company employs the Board of Corporate Auditors System and the Board of Corporate Auditors consists of four corporate auditors (two of whom are external corporate auditors). These auditors attend the meetings of the Board of Directors and, if necessary, various committee meetings, to grasp important issues. Through audits of major offices and subsidiaries, they also supervise directors' execution of duties.

### Internal Audits

The Internal Audit Department reports to management the results of audits of NGK Spark Plug Co., Ltd. and its affiliated companies, and, if necessary, makes proposals to correct problems and improve business operations. The department assesses the effectiveness of internal control over financial reporting in accordance with the requirements for the internal control report system pursuant to the Financial Instruments and Exchange Act so as to secure the reliability of the Group's financial reporting, thereby maintaining and improving internal control.



## Compliance

Recognizing that NGK Spark Plug is a member of society, we enhance corporate ethics, comply with laws and ordinances, international rules, and company regulations, striving to become a company trusted by the international community.

### Action Guidelines

- We comply with all relevant laws and ordinances, the Corporate Code of Conduct, and company regulations.
- We regularly educate and raise the awareness of all our employees so that they independently act ethically and knowledgeably to prevent compliance problems.
- Should a problem occur, we promptly deal with it and fulfill our accountability, striving to identify the causes and prevent recurrence.

## Compliance Promotion Structure

The Compliance Committee meets every three months, and checks the compliance situations, as well as investigates the circumstances of each department in its efforts to reduce compliance risks. We are establishing a system under which individual departments conduct self-checks of their compliance situation. In addition, we are establishing and improving measures for handling violations, enhancing systems for responding to laws and regulations, and working to raise the awareness and increase the knowledge of employees concerning compliance.

## Corporate Ethics Helpline

In the event that an employee detects any violation of compliance or any possible violation of compliance, he or she is required to report it without delay through the organizational reporting structure. If it is difficult to do so, employees may use the Corporate Ethics Helpline to consult and report anonymously. In accordance with the Whistleblower Protection Act of Japan, we protect the privacy of whistleblowers and prevent their unfavorable treatment. There were 15 cases of reporting in fiscal 2012, each of which was dealt with.

## Export Controls

The Company has established Export Control Rules to help ensure compliance with the relevant laws and regulations. We have also deployed a system that enables us to flexibly respond to amendments of laws. Recognized by Japan Customs as an enterprise with cargo security management and compliance systems in place, the Company is certified as an authorized exporter under the Authorized Exporters' Program. The Company has established Rules Governing Trade Operations and we are implementing appropriate export cargo control.

## Security Control / Information Security

We have established the Confidentiality Management Regulations and strive to appropriately manage confidential information of the

Company, our customers, and our suppliers. Our Privacy Policy is available on our website.

## Protection and Utilization of Intellectual Property Rights

NGK Spark Plug is active in the acquisition and utilization of intellectual property rights to protect its current and newly developed products. We investigate third-party intellectual property rights to confirm whether IP provisions in agreements are appropriate. It is our intention to strengthen management of intellectual property throughout the Group.

## Risk Management

NGK Spark Plug has made preparations to deal with various possible risks, such as natural disasters, accidents, and infectious diseases. If such a risk should arise, we will act to minimize the impact on our stakeholders. We will also work to restore and maintain the continuity of business operations, thereby earning the continued trust of our stakeholders.

### Action Guidelines

- We strive to prevent factors that could affect business continuity.
- We conduct our activities, always according top priority to the protection of human life.
- We minimize the impact on other parties.
- We strive to rapidly restore business operations and maintain stable supply of products and services.
- We implement measures to prevent the recurrence

## Review of the Business Continuity Plan (BCP)

We conducted a corporate-wide disaster drill in March 2013, assuming the occurrence of a major earthquake. The results of the drill are being reviewed and improvement measures will be implemented to prepare for possible future disasters.

Our priorities in emergency management are to ensure the safety of people's lives and to safeguard assets from four perspectives: damage control, preparation, response, and recovery.

We have applied the PDCA cycle to the business continuity plan (BCP) formulated in 2012 in order to continuously improve the plan and ensure it is always current. In addition, we are preparing a recovery strategy including contingency plans so that the resumption of operations is within the target recovery time set in accordance with the results of business impact analysis (BIA).

## Response to New Infectious Diseases

Mindful of the importance of protecting employee health, we are working to prevent the spread of influenza in the workplace. As group infection at workplaces may affect the performance of duties, we are implementing measures that are timely and focused with the departments concerned.

## CSR [Social]

The NGK Spark Plug Group endeavors to identify the expectations of its stakeholders, respond to them and enhance corporate value, capitalizing on stakeholders' confidence in the Group.

### With Our Customers

To grasp the diverse needs of customers and promptly take action from the viewpoint of customers, we are committed to making company-wide efforts to improve our quality assurance system, aiming to offer safe and reliable products that deliver greater customer satisfaction.

### With Our Shareholders and Investors

The Group is working to ensure the transparency and fairness of information disclosure to shareholders and investors. In addition to visiting institutional investors overseas, we are holding increasing the number of meetings for individual shareholders as part of our efforts to deepen investors' understanding of NGK Spark Plug.

### With Our Employees

Recognizing that employees are the most important management

resource, we respect the diversity and individuality of our employees and cultivate capable human resources for further development of the Group.

### With Our Suppliers

With a view to global optimization of procurement, we focus on strengthening cooperation with suppliers and promoting our CSR efforts throughout the supply chain. We released the NGK Spark Plug Group CSR Procurement Guidelines in May 2013, setting out our policy of promoting CSR-oriented procurement. We ask for the understanding and compliance of our suppliers. We hold an annual seminar for our main suppliers in order to share our policies with them.

### With Local Communities and International Society

As part of our concerted effort to fulfill our responsibility as a good corporate citizen, we are involved in various social contribution activities in communities where our production sites are located. In conducting business around the world, we respect local cultures and customs and engage in activities that contribute to the development of local communities.

## Social Contribution Activities of Our Sites Worldwide

### Spreading the Fun of Motorsports to People with Disabilities (UK)

NGK Spark Plugs (UK) Ltd. supports Motorsport Endeavour, an organization whose mission is to encourage people with disabilities to become involved in motorsports. We were one of the sponsors of a special track day in December 2012 at Donington Park, a famous circuit to the north of London, for former British troops who have suffered physical and psychological injuries in the line of duty. They spent a memorable day enjoying motorsports.



### Project Encouraging Children to Learn Math (Brazil)

Ceramica e Velas de Ignicao NGK do Brasil Ltda. has been active in the education field. In fiscal 2012, it conducted a project for children and their teachers at a public school in Mogi das Cruzes, São Paulo to encourage children to learn math by using a book called "Math Games: Adventures in the Library."



### Support of a School for Children with Special Needs (UAE)

Employees of NGK Spark Plug Middle East FZE visited the largest school for children with special needs in Dubai, UAE and donated 53 CCTV cameras. These cameras are installed in corridors and classrooms for security and for monitoring the students.



## CSR [Environment]

Recognizing that environmental issues are a common challenge for all humankind and have an important bearing on our business, NGK Spark Plug is making a concerted effort to minimize our business activities' environmental impacts, including CO<sub>2</sub> emissions, water consumption, waste, and chemical substances, and to develop products and technologies with excellent environmental performance. We are also endeavoring to deepen communication with our stakeholders, including those in local communities, and to work together with them to contribute to the emergence of a sustainable society.

### Eco Vision 2015

In accordance with the environmental policy and action plan of Eco Vision 2015, which sets out the Group's environmental goals for 2015, everyone in the Group is involved in the efforts to minimize the environmental impacts of our business and in the development and commercialization of products and services that contribute to environmental protection.

### Environmental Management

To conduct environmental protection activities systematically and effectively, we have established an environmental management system in accordance with the environmental policy shared throughout the

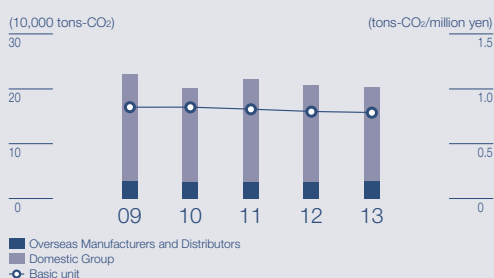
Group. Everyone in the Group is participating in the initiatives to achieve Eco Vision 2015.

Operation of the environmental management system is checked through internal audits, and the central and regional environment committees check progress toward goals and identify issues for the group, each division, region, and department in order to facilitate continuous improvement. We have obtained integrated ISO 14001 certification covering NGK Spark Plug and its 10 affiliated companies in Japan. Overseas subsidiaries are seeking to obtain ISO 14001 certification individually. In fiscal 2012, NGK Spark Plugs (Thailand) Co., Ltd. and Bujias NGK de Mexico S.A. de C.V. obtained the ISO 14001 certification. The certification ratio was 98% at the end of fiscal 2012, which is the ratio of the number of employees of the Group's business sites worldwide that are ISO 14001 certified to the Group's total number of employees.

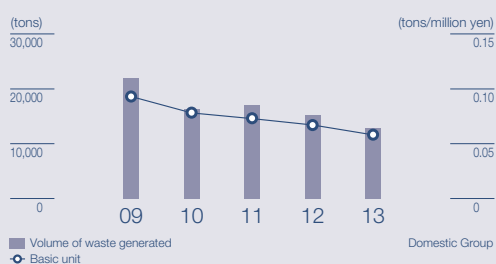
### Environmental Risk Management

NGK Spark Plug is doing its utmost to reduce environmental risks and to prevent environmental incidents and pollution. In this regard, we conduct soil surveys, apply stringent control for PCB, handle asbestos issues, and perform on-site checks of waste treatment contractors. We implement measures to prevent leakage of chemical substances and health hazards, and hold emergency drills.

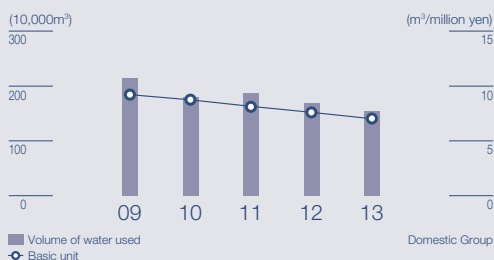
#### Trend in CO<sub>2</sub> Emissions



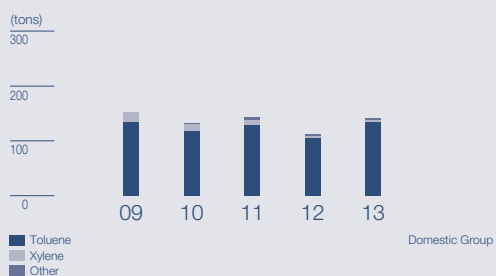
#### Transition of Volume of Waste Generated



#### Trends in Volume of Water Used



#### Emission Volumes of PRTR Substances



NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
Years Ended March 31, 2013, 2012, 2011, 2010, 2009 and 2008

Note: U.S. dollar amounts above and elsewhere in this Annual Report are converted from yen. for convenience only, at the rate of ¥94=U.S.\$1

# Management's Discussion and Analysis

## Overview of Results

During the fiscal year ended March 31, 2013, with regard to overseas economy, China's economic growth slowed somewhat mainly due to sluggish exports to Europe, but picked up in the second half of the fiscal year under review, supported by the government's economic measures centering on expansion of public investment. In ASEAN countries, domestic demand supported economic growth. In particular, the Thai economy bounced back following the economic havoc caused by flooding in the previous fiscal year. On the other hand, the European economies remained weak overall, reflecting deterioration of the labor market and personal incomes and concerns about the rekindling of the European sovereign debt crisis centering on Southern European countries, as well as downturn in demand within the region amid fiscal austerity. Although the U.S. economy continued to recover at a modest pace, the country's fiscal problems remain unresolved and the high unemployment rate persisted.

In Japan, recovery and reconstruction initiatives in the aftermath of the Great East Japan Earthquake gained momentum and boosted domestic demand. In the first half of the fiscal year, the stock market came under pressure as the world economy slowed, while the yen retained its exceptional strength in foreign exchange markets. However, during the second half of the fiscal year, share prices rose sharply and the

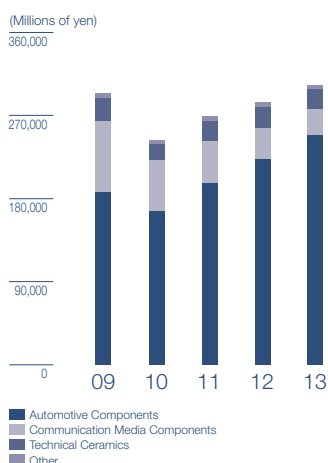
yen substantially weakened following the Abe administration's assumption of office in December 2012, creating favorable conditions for exporters and expectations of improvement in corporate financial performance.

In the automotive industry, which is the principal market for the NGK Spark Plug Group's products, worldwide demand for new vehicles remained robust led by the U.S. and China, despite a decline in new vehicle sales in Europe. In Japan, demand for new vehicles was robust thanks to government subsidies for purchasers of environmentally friendly vehicles and demand associated with reconstruction in the aftermath of the Great East Japan Earthquake. The semiconductor industry in the Technical Ceramics Group experienced strong sales for tablets as demand for smartphones expanded, although global demand for PCs were low.

As a result, consolidated net sales for the fiscal year ended March 31, 2013, increased 6.3% year on year to ¥302,799 million. Operating income decreased 3.0% to ¥23,754 million, and net income decreased 18.1% to ¥20,910 million.

Effective from the fiscal year under review, NGK Spark Plug Europe GmbH (Germany) and 16 other consolidated subsidiaries changed their fiscal year-end from December 31 to March 31. In addition, three consolidated subsidiaries in China and Mexico and one South Korean associate accounted for by the equity method provisionally closed their accounts as of March 31. Therefore, all subsidiaries and associates within the scope of consolidation close their accounts on the same date as the parent company.

## Net Sales by Business Segment



# Management's Discussion and Analysis

The objectives of unifying the financial closing date are to make formulation of the Group's business plan more efficient and improve the accuracy of financial closing processes, while also preparing for application of the International Financial Reporting Standards (IFRS) in the near future.

Accordingly, the Group's operating results for the fiscal year under review reflect the operating results of these 20 subsidiaries and one associate for the 15 months from January 1, 2012, to March 31, 2013. Due to the impact of this change, net sales, operating income, and net income were ¥39,063 million, ¥3,826 million, and ¥2,265 million higher, respectively.

## Results of Operation

### Net Sales

Consolidated net sales increased 6.3% year on year to ¥302,799 million.

Despite strong sales in North America and ASEAN countries, the mainstay Automotive Components Group was affected by a slowdown of new vehicle sales in Europe. While the sales were aided by the weak yen during the second half of fiscal 2012, they could not fully offset the impact of the exceptionally high yen in the first half. In the semiconductor business of the Technical Ceramics Group, unsatisfactory performance continued from the previous year, reflecting protracted inventory adjustment as the global demand for

smartphones and other smart devices soared while demand for PCs continued to weaken.

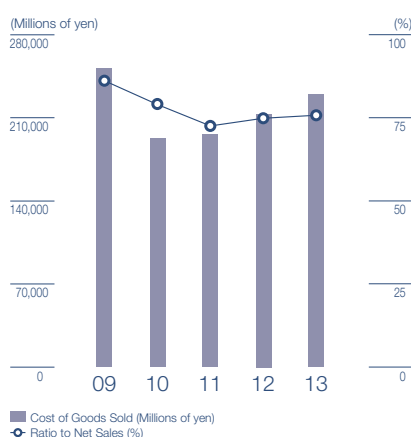
	2012	2013	Increase/ (decrease)
Automotive Components Business	¥222,636	<b>¥248,795</b>	¥26,159
Communication Media Components Business	33,892	<b>28,239</b>	(5,653)
Technical Ceramics Business	23,738	<b>22,054</b>	(1,684)
Other businesses	4,480	<b>3,711</b>	(769)
Consolidated net sales	284,746	<b>302,799</b>	18,053

\*On April 1, 2013, the Communication Media Components Business and the Technical Ceramics Business was integrated and became Technical Ceramics Business. The business results for the fiscal years ended March 31, 2013 and 2012, are presented according to the former segment classification.

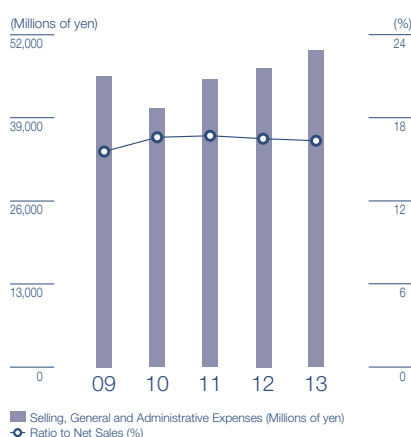
### Cost of goods sold

Cost of goods sold increased ¥16,121 million or 7.6% from the previous fiscal year to ¥229,530 million. The ratio of cost of goods sold to net sales deteriorated, having increased 0.9 percentage points from 74.9% for the previous fiscal year to 75.8% for the fiscal year under review.

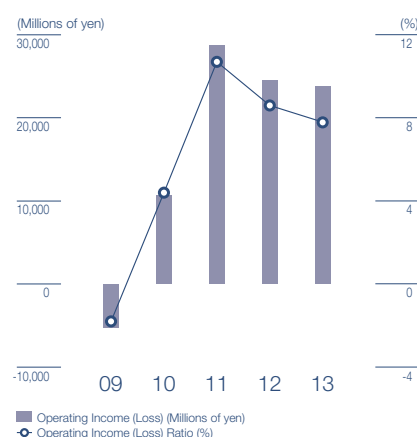
### Costs of Goods Sold and Ratio to Net Sales



### Selling, General and Administrative Expenses and Ratio to Net Sales



### Operating Income (Loss) and Operating Income (Loss) Ratio



### Selling, general and administrative expenses

Selling, general and administrative expenses increased ¥2,656 million or 5.7% from the previous fiscal year to ¥49,515 million, mainly because of increases in salaries and bonuses, advertising expenses, and R&D expenses.

### Operating income

As a result, operating income decreased ¥724 million or 3.0% from the previous fiscal year to ¥23,754 million. The ratio of operating income to net sales deteriorated, having decreased 0.8 percentage points from 8.6% for the previous fiscal year to 7.8% for the year under review.

### Net income

Net income decreased ¥4,614 million or 18.1% from the previous fiscal year to ¥20,910 million. Whereas both sales and operating income of the Automotive Components Business increased, the Communication Media Components Business and the Technical Ceramics Business experienced great declines in sales and operating income.

As a result, the return on equity decreased 2.9 percentage points from 11.3% at the previous fiscal year-end to 8.4%, and net income per share decreased ¥21.19 from ¥117.25 to ¥96.06 at the previous fiscal year-end.

### Capital Expenditures

Capital expenditures amounted to ¥24,013 million, most of which were used for expansion of production capacity for automotive components. The breakdown of capital expenditures was as follows: ¥17,961 million for the Automotive Components Business, ¥4,204 million for the Communication Media Components Business, ¥1,838 million for the Technical Ceramics Business, and ¥10 million for other businesses. Plans call for capital expenditures of ¥53.8 billion for fiscal 2013, including for construction of a spark plug plant to further strengthen the Automotive Components Business.

### R&D

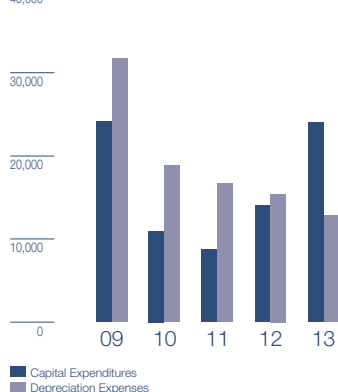
R&D expenses in the fiscal year under review amounted to ¥17,101 million, which included expenses related to improvements of existing products and applied research. The “research and development cost” pursuant to the “Accounting Standard for Research and Development Cost” (Business Accounting Council) amounted to ¥3,734 million.

### Financial Policy

The NGK Spark Plug Group's financial policy is to secure working capital to underpin smooth business operations and to systematically prepare for medium- to long-term funding needs

### Capital Expenditures and Depreciation Expenses

(Millions of yen)



## Management's Discussion and Analysis

enabling flexible capital expenditures in the future, in order to support stable management and the ability to respond to changing circumstances. For this purpose, as well as retention and management of current funds in accordance with financial planning, we are implementing ongoing measures to enhance the efficiency of receivables, payables and inventories. At the same time, while the Group is strengthening internal rules such as the Fund Management Regulations, the Investment Committee and other organizations are working to reduce investment risks.

To satisfy short-term funding requirements, the Group uses indirect financing, in addition to internal reserves. For medium- to long-term funding needs, the Group engages in direct financing from financial markets through the issuance of corporate bonds, etc.

### Financial Condition

#### Total Assets

Total assets were ¥366,489 million, having increased ¥26,193 million or 7.7% from the end of the previous fiscal year. The main factors were as follows:

- Of property, plant and equipment, machinery and equipment and vehicles increased due to capital expenditures.

#### Total Liabilities

Total liabilities amounted to ¥98,180 million, having decreased ¥6,503 million or 6.2% from the end of the previous fiscal year. The main factor was as follows:

- Bonds payable decreased due to redemption.

#### Net Assets

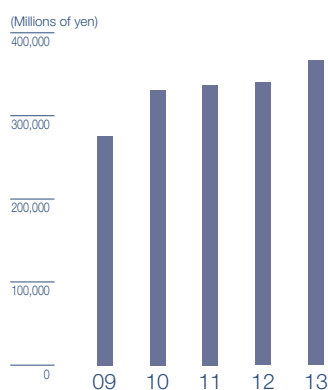
Net assets amounted to ¥268,309 million, having increased ¥32,696 million or 13.9% from the end of the previous fiscal year. The main items were an increase of ¥16,121 million in retained earnings and an increase of ¥11,770 million in foreign currency translation adjustment.

Net assets per share based on the number of shares issued and outstanding at the end of the fiscal year amounted to ¥1,223.41 compared with ¥1,075.24 at the end of the previous fiscal year.

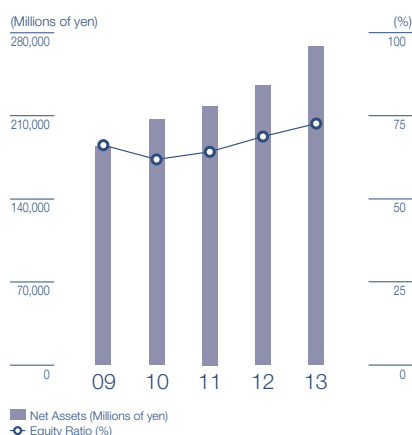
#### Cash Flows

Cash and cash equivalents at March 31, 2013, amounted to ¥49,875 million, in net value, including the effect of exchange rate changes on cash and cash equivalents amounting to ¥2,794 million, having decreased ¥1,950 million from the end of the previous fiscal year.

#### Total Assets



#### Net Assets and Equity Ratio



### Cash flows from operating activities

Net cash provided by operating activities was ¥26,194 million, having increased ¥5,114 million from the previous fiscal year. This increase was mainly attributable to an increase in income before income taxes and minority interests.

### Cash flows from investing activities

Net cash used in investing activities amounted to ¥15,443 million, having decreased ¥408 million from the previous fiscal year. This decrease was mainly attributable to an increase in proceeds from sales and redemption of investment securities.

### Cash flows from financing activities

Net cash used in financing activities amounted to ¥15,495 million, having increased ¥10,807 million from the previous fiscal year, mainly attributable to redemption of bonds.

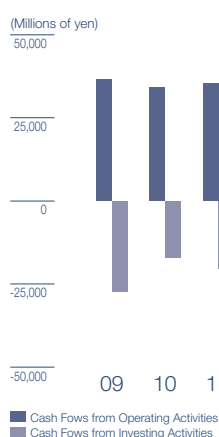
taking into consideration the basic policy of paying stable dividends and of maintaining sufficient internal reserves for R&D investment, investment in business expansion, capital investment for rationalization of operations, and investment in other companies, which are essential to future growth. The Company recognizes the effectiveness of share buybacks for enhancing capital efficiency and intends to repurchase its shares, as necessary. In order to ensure flexibility in the returning of profits to shareholders, the Company's Articles of Incorporation specifies dividends from surplus as a matter requiring resolution of the board of directors.

The Company paid dividends per share of ¥22.0 for the fiscal year ended March 31, 2013, consisting of an interim dividend of ¥11.0 and a year-end dividend of ¥11.0. The Company intends to pay out common dividends of ¥22.0 per share for the fiscal year ending March 31, 2014.

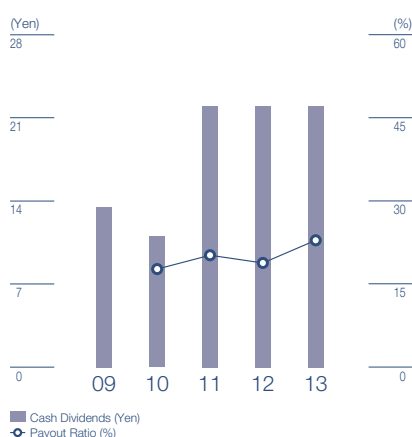
## Dividend Policy

The Company regards returning profits to shareholders as one of its most important management policies and will continue to meet the expectations of shareholders under the basic policy of continuing to pay stable dividends. The Company also thinks it is important to provide shareholders with returns in line with earnings. While maintaining a target dividend payout ratio of at least 20% of consolidated net income for the time being, the Company decides the amount of dividends by comprehensively

Cash Flows from Operating Activities and Investing Activities



Cash Dividends and Payout Ratio



# Consolidated Balance Sheets

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
March 31, 2013 and 2012

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
<b>Current assets:</b>			
Cash and cash equivalents (Note 3)	¥ 49,875	¥ 51,825	\$ 530,585
Short-term investments (Notes 3 and 6)	20,763	25,709	220,883
Notes and accounts receivable, net of allowance for doubtful accounts (Notes 3 and 4)	59,571	56,648	633,734
Inventories (Note 5)	67,845	62,062	721,755
Deferred tax assets (Note 17)	8,805	8,626	93,670
Other current assets	3,382	2,027	35,979
Total current assets	210,241	206,897	2,236,606
<b>Investments and other assets:</b>			
Investment securities (Notes 3 and 6)	47,205	40,845	502,181
Investments in unconsolidated subsidiaries and associates	5,873	2,340	62,479
Intangible assets (Note 7)	3,827	4,379	40,713
Deferred tax assets (Note 17)	926	843	9,851
Other assets	1,447	1,610	15,393
Less allowance for doubtful accounts	(104)	(101)	(1,106)
Total investments and other assets	59,174	49,916	629,511
<b>Property, plant and equipment (Note 16):</b>			
Land	15,131	15,018	160,968
Buildings and structures	134,995	132,005	1,436,117
Machinery and equipment	232,732	220,758	2,475,872
Construction in progress	8,967	2,722	95,394
Total property, plant and equipment	391,825	370,503	4,168,351
Less accumulated depreciation	(294,751)	(287,020)	(3,135,649)
Net property, plant and equipment	97,074	83,483	1,032,702
Total assets	¥366,489	¥340,296	\$3,898,819

See accompanying Notes to Consolidated Financial Statements.

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
<b>Current liabilities:</b>			
Short-term borrowings (Notes 3 and 9)	¥ 1,433	¥ 1,251	\$ 15,245
Current portion of long-term debt (Notes 3 and 9)	303	10,310	3,223
Accounts payable (Notes 3 and 8)	28,397	29,622	302,096
Accrued expenses	14,159	13,762	150,628
Income taxes payable	4,854	1,239	51,638
Deferred tax liabilities (Note 17)	94	76	1,000
Other current liabilities	2,059	1,958	21,904
Total current liabilities	51,299	58,218	545,734
<b>Long-term debt (Notes 3 and 9)</b>	25,683	25,838	273,223
<b>Employee retirement benefit liability (Note 10)</b>	17,401	17,729	185,117
<b>Deferred tax liabilities (Note 17)</b>	2,334	1,143	24,830
<b>Other long-term liabilities</b>	1,463	1,755	15,564
Total liabilities	98,180	104,683	1,044,468
<b>Commitments and contingent liabilities (Notes 11 and 12)</b>			
<b>Net assets (Note 14):</b>			
Shareholders' equity:			
Common stock:			
authorized 390,000,000 shares;			
issued 223,544,820 shares	47,869	47,869	509,245
Capital surplus	54,825	54,825	583,245
Retained earnings	167,562	151,441	1,782,574
Less treasury stock at cost:			
5,877,441 shares in 2013			
and 5,864,626 shares in 2012	(7,540)	(7,526)	(80,213)
Total shareholders' equity	262,716	246,609	2,794,851
Accumulated other comprehensive income:			
Net unrealized gains on available-for-sale securities	16,176	11,815	172,085
Foreign currency translation adjustments	(12,596)	(24,366)	(134,000)
Total accumulated other comprehensive income	3,580	(12,551)	38,085
Minority interests	2,013	1,555	21,415
Total net assets	268,309	235,613	2,854,351
Total liabilities and net assets	¥366,489	¥340,296	\$3,898,819

# Consolidated Statements of Income

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
For the Years Ended March 31, 2013 and 2012

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
<b>Operating revenue:</b>			
Net sales (Note 19)	¥302,799	¥284,746	\$3,221,266
<b>Operating costs and expenses:</b>			
Costs of goods sold	229,530	213,409	2,441,809
Selling, general and administrative expenses	49,515	46,859	526,755
	279,045	260,268	2,968,564
Operating income (Note 19)	23,754	24,478	252,702
<b>Other income (expenses):</b>			
Interest and dividend income	1,802	1,973	19,170
Interest expense	(556)	(630)	(5,915)
Gain (loss) on sale or disposal of property, plant and equipment	118	(147)	1,256
Depreciation of idle property, plant and equipment	(393)	(899)	(4,181)
Impairment loss on fixed assets (Note 15)	—	(1,141)	—
Equity in net earnings (losses) of associates	575	(25)	6,117
Foreign exchange gain (loss)	1,626	(1,341)	17,298
Other, net	804	(368)	8,553
	3,976	(2,578)	42,298
Income before income taxes and minority interests	27,730	21,900	295,000
<b>Income tax expenses (benefits) (Note 17):</b>			
Current	8,059	4,077	85,734
Deferred	(1,554)	(7,951)	(16,532)
Total income tax expenses (benefits)	6,505	(3,874)	69,202
Income before minority interests	21,225	25,774	225,798
<b>Less minority interests in net income of consolidated subsidiaries</b>	<b>315</b>	<b>250</b>	<b>3,351</b>
Net income	¥ 20,910	¥ 25,524	\$ 222,447

	Yen	U.S. dollars
<b>Per share:</b>		
Net income- basic	<b>¥96.06</b>	¥117.25 <b>\$1.02</b>
Cash dividends (Note 14)	<b>22.00</b>	22.00 <b>0.24</b>

See accompanying Notes to Consolidated Financial Statements.

# Consolidated Statements of Comprehensive Income

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
For the Years Ended March 31, 2013 and 2012

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
<b>Income before minority interests</b>	<b>¥21,225</b>	<b>¥25,774</b>	<b>\$225,798</b>
<b>Other comprehensive income:</b>			
Unrealized gains on available-for-sale securities	4,343	1,397	46,202
Foreign currency translation adjustments	11,522	(4,555)	122,574
Share of other comprehensive income of associates accounted for using the equity method	631	(150)	6,713
Total other comprehensive income (Note 18)	16,496	(3,308)	175,489
<b>Comprehensive income</b>	<b>¥37,721</b>	<b>¥22,466</b>	<b>\$401,287</b>
<b>Comprehensive income attributable to:</b>			
Owners of the parent	¥37,040	¥22,396	\$394,042
Minority interests	681	70	7,245
Total comprehensive income	¥37,721	¥22,466	\$401,287

See accompanying Notes to Consolidated Financial Statements.

## Consolidated Statements of Changes in Net Assets

NGK SPARK PLUG CO., LTD. and Consolidated Subsidiaries  
For the Years Ended March 31, 2013 and 2012

	Number of shares of common stock issued	Shareholders' equity					Accumulated other comprehensive income					Total net assets
		Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Net unrealized gains on available—for—sale securities	Foreign currency translation adjustments	Total accumulated other comprehensive income	Minority interests		
Millions of yen												
Balance at April 1, 2011	229,544,820	¥47,869	¥55,163	¥138,071	¥(15,202)	¥225,901	¥10,433	¥(19,856)	¥ (9,423)	¥1,681	¥218,159	
Net income for the year	—	—	—	25,524	—	25,524	—	—	—	—	25,524	
Cash dividends	—	—	—	(4,789)	—	(4,789)	—	—	—	—	(4,789)	
Purchases of treasury stock and fractional shares, net of sales	—	—	(1)	—	(26)	(27)	—	—	—	—	(27)	
Retirement of treasury stock (Note 14)	(6,000,000)	—	(337)	(7,365)	7,702	—	—	—	—	—	—	
Net changes other than changes in shareholders' equity for the year	—	—	—	—	—	—	1,382	(4,510)	(3,128)	(126)	(3,254)	
Balance at March 31, 2012	223,544,820	47,869	54,825	151,441	(7,526)	246,609	11,815	(24,366)	(12,551)	1,555	235,613	
Net income for the year	—	—	—	20,910	—	20,910	—	—	—	—	20,910	
Cash dividends	—	—	—	(4,789)	—	(4,789)	—	—	—	—	(4,789)	
Purchases of treasury stock and fractional shares, net of sales	—	—	—	—	(14)	(14)	—	—	—	—	(14)	
Net changes other than changes in shareholders' equity for the year	—	—	—	—	—	—	4,361	11,770	16,131	458	16,589	
Balance at March 31, 2013	223,544,820	¥47,869	¥54,825	¥167,562	¥ (7,540)	¥262,716	¥16,176	¥(12,596)	¥ 3,580	¥2,013	¥268,309	
Thousands of U.S. dollars												
Balance at March 31, 2012		\$509,245	\$583,245	\$1,611,074	\$(80,064)	\$2,623,500	\$125,691	\$(259,213)	\$(133,522)	\$16,543	\$2,506,521	
Net income for the year		—	—	222,447	—	222,447	—	—	—	—	222,447	
Cash dividends		—	—	(50,947)	—	(50,947)	—	—	—	—	(50,947)	
Purchases of treasury stock and fractional shares, net of sales		—	—	—	(149)	(149)	—	—	—	—	(149)	
Net changes other than changes in shareholders' equity for the year		—	—	—	—	—	46,394	125,213	171,607	4,872	176,479	
Balance at March 31, 2013		\$509,245	\$583,245	\$1,782,574	\$(80,213)	\$2,794,851	\$172,085	\$(134,000)	\$ (38,085)	\$21,415	\$2,854,351	

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, 2013 and 2012

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
<b>Cash flows from operating activities:</b>			
Income before income taxes and minority interests	¥27,730	¥21,900	\$295,000
Adjustments for:			
Depreciation	12,798	15,439	136,149
Impairment loss on fixed assets	—	1,141	—
Amortization of goodwill	(16)	11	(170)
Equity in net (earnings) losses of associates	(575)	25	(6,117)
Decrease (increase) in trade receivables	4,674	(8,097)	49,723
Decrease (increase) in inventories	1,559	(2,343)	16,585
Decrease in trade payables	(12,720)	(4,509)	(135,319)
Other, net	(4,337)	566	(46,138)
Subtotal	29,113	24,133	309,713
Interest and dividends received	2,126	1,810	22,617
Interest paid	(581)	(629)	(6,181)
Income taxes paid	(4,464)	(4,234)	(47,490)
Net cash provided by operating activities	26,194	21,080	278,659
<b>Cash flows from investing activities:</b>			
Increase in property, plant and equipment	(19,467)	(12,472)	(207,095)
Increase in intangible assets	(993)	(427)	(10,564)
Increase in long-term investments	(8,986)	(4,631)	(95,596)
Decrease in long-term investments	13,801	6,570	146,819
Net increase in short-term investments	(832)	(5,218)	(8,851)
Other, net	1,034	327	11,000
Net cash used in investing activities	(15,443)	(15,851)	(164,287)
<b>Cash flows from financing activities:</b>			
Repayment of long-term debt	(10,373)	(279)	(110,351)
Net (decrease) increase in short-term borrowings	(90)	599	(957)
Dividends paid	(4,795)	(4,785)	(51,011)
Purchase of treasury stock and fractional shares, net of sales	(14)	(27)	(149)
Other, net	(223)	(196)	(2,372)
Net cash used in financing activities	(15,495)	(4,688)	(164,840)
Effect of exchange rate changes on cash and cash equivalents	2,794	(604)	29,723
Net decrease in cash and cash equivalents	(1,950)	(63)	(20,745)
Cash and cash equivalents at beginning of year	51,825	51,888	551,330
Cash and cash equivalents at end of year	¥49,875	¥51,825	\$530,585

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

The accompanying consolidated financial statements of NGK SPARK PLUG CO., LTD. (the "Company") and its consolidated subsidiaries (together with the Company, the "NGK Spark Plug Group") have been prepared in accordance with the provisions set forth in the Financial Instrument and Exchange Law of Japan and its related accounting regulations and in conformity with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards ("IFRS").

The accompanying consolidated financial statements have been reformatted and translated into English, with some expanded descriptions, from the consolidated financial statements of the Company prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Financial Instrument and Exchange Law of Japan. Certain supplementary information included in the statutory Japanese language consolidated financial statements is not presented in the accompanying consolidated financial statements.

The translation of the Japanese yen amounts into U.S. dollar amounts is included solely for the convenience of readers outside Japan, using the approximate exchange rate prevailing at March 31, 2013, which was ¥94 to U.S. \$1.00. The translation should not be construed as a representation that the Japanese yen amounts have been, could have been or could in the future be converted into U.S. dollars at this or any other rate of exchange.

Certain comparative figures have been reclassified to conform to the current year's presentation.

## 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 associates are accounted for by the equity method. Investments in unconsolidated subsidiaries and associates 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 principally deferred as goodwill and amortized over the estimated useful life, generally 5 years, on a straight-line basis.

The number of consolidated subsidiaries and associates accounted for by the equity method for the years ended March 31, 2013 and 2012 was as follows:

	2013	2012
Consolidated subsidiaries:		
Domestic	9	9
Overseas	24	23
Associates accounted for by the equity method	3	2

Investments in the remaining unconsolidated subsidiaries and associated companies are stated at cost. If the equity method of

accounting had been applied to the investments in these companies, the effect on the accompanying consolidated financial statements would not have been material.

Through the fiscal year ended March 31, 2011, all of the Company's overseas consolidated subsidiaries closed their books at December 31, three months earlier than the Company and the domestic consolidated subsidiaries. For these overseas subsidiaries, the Company consolidated the subsidiaries' financial statements as of their year-end. Significant transactions for the period between the December 31 year-end and the Company's year-end were adjusted for on consolidation. Effective from the fiscal year ended March 31, 2012, however, three consolidated subsidiaries located in the U.S.A., NGK Spark Plugs (U.S.A.) Holding, Inc., NGK Spark Plugs (U.S.A.), Inc. and NTK Technologies, Inc., changed their fiscal year-end date from December 31 to March 31. Accordingly, the accompanying consolidated statements of income for the year ended March 31, 2012 included those consolidated subsidiaries' operating results for the 15-month period from January 1, 2011 to March 31, 2012. As a result, for the year ended March 31, 2012, net sales, operating income and net income were ¥15,899 million, ¥266 million and ¥237 million more, respectively, than the amounts that would have been recorded without the change.

Effective from the fiscal year ended March 31, 2013, seventeen overseas consolidated subsidiaries (NGK Spark Plug Europe GmbH, etc.) changed their fiscal year-end date from December 31 to March 31. These changes were made in order to improve the NGK Spark Plug Group's managerial planning and disclosures on a consolidated basis and to prepare for the future adoption of IFRS. The fiscal year-end date of NGK Spark Plug (Shanghai) Co., Ltd., Changshu NGK Spark Plug Co., Ltd., Bujias NGK de Mexico S.A. de C.V. and Woo Jin Industry Co., Ltd. is December 31. However, when preparing consolidated financial statements, the Company uses the financial statements of the three consolidated subsidiaries and one associate which have been compiled by a temporary closing of their accounts as of March 31. Accordingly, the accompanying consolidated statements of income for the year ended March 31, 2013 included the operating results of twenty consolidated subsidiaries and one associate for the 15-month period from January 1, 2012 to March 31, 2013. As a result, for the year ended March 31, 2013, net sales, operating income and net income were ¥39,063 million (\$415,564 thousand), ¥3,826 million (\$40,702 thousand) and ¥2,265 million (\$24,096 thousand) more, respectively, than the amounts that would have been recorded without the change.

### (Unification of accounting policies applied to foreign subsidiaries for consolidated financial statements)

The Company has adopted Practical Issues Task Force ("PITF") No. 18, "Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for Consolidated Financial Statements," issued by the Accounting Standards Board of Japan ("ASBJ"). PITF No. 18 requires that accounting policies and procedures applied by a parent company and its subsidiaries to similar transactions and events under similar circumstances should, in principle, be unified for the preparation of the consolidated financial statements. PITF No. 18, however, as a tentative measure, allows a parent company to prepare consolidated financial statements using foreign subsidiaries' financial statements prepared in accordance with either IFRS or

U.S. generally accepted accounting principles ("U.S. GAAP"). In this case, adjustments for the following five items are required in the consolidation process so that their impact on net income is accounted for in accordance with Japanese GAAP, unless the impact is not material.

- (a) Goodwill not subject to amortization
- (b) Actuarial gains and losses of defined benefit retirement plans recognized outside profit and loss
- (c) Capitalized expenditures for research and development activities
- (d) Fair value measurement of investment properties and revaluation of property, plant and equipment and intangible assets
- (e) Accounting for net income attributable to minority interests

**(Unification of accounting policies applied to associates accounted for using the equity method)**

The Company also has adopted ASBJ PITF No. 24, "Practical Solution on Unification of Accounting Policies Applied to Associates Accounted for Using the Equity Method." PITF No. 24 requires that accounting policies and procedures applied by an investment company and its associates to similar transactions and events under similar circumstances should, in principle, be unified for applying the equity method. PITF No. 24, however, as a tentative measure, allows an investment company to apply the equity method using foreign associates' financial statements prepared in accordance with either IFRS or U.S. GAAP. In this case, adjustments for the same five items as PITF No. 18 are required in the consolidation process so that their impact on net income is accounted for in accordance with Japanese GAAP, unless the impact is not material.

**(b) Cash equivalents**

The NGK Spark Plug 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 Spark Plug Group classifies certain investments in debt and equity securities as "held-to-maturity," "trading" or "available-for-sale." The classification determines the respective accounting method to be applied to the investments as stipulated by the accounting standards for financial instruments. The NGK Spark Plug Group has no securities categorized as trading or held-to-maturity securities. Available-for-sale securities are stated at fair value if such value is available, and net unrealized gain or loss on these securities is reported as a component of accumulated other comprehensive income, net of applicable income taxes. Gains and losses on the disposal of available-for-sale securities are computed by the moving average method. Available-for-sale securities without available fair value are carried at cost determined by the moving average method. Adjustments in the 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 hedge accounting is not appropriate or when there is no hedging designation, and the gains and losses on the derivatives are recognized in current earnings.

**(e) Inventories**

Inventories held for sale in the ordinary course of business are valued at the lower of cost, determined principally by the moving average method, or net realizable value. If net realizable value has fallen below cost at the end of the period, the cost basis is reduced to net realizable value and regarded as decreased profitability of inventories.

**(f) Allowance for doubtful accounts**

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

**(g) Property, plant and equipment and depreciation**

Property, plant and equipment, including significant renewals and additions, are stated at cost. Depreciation is calculated based on the estimated useful life of the asset by the straight-line method.

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

**(Changes in accounting policies for depreciation methods that are not distinguishable from changes in accounting estimates)**

The Company and its domestic consolidated subsidiaries had depreciated property, plant and equipment, except for buildings, using the declining balance method. From the fiscal year ended March 31, 2013, the Company and its domestic consolidated subsidiaries have changed their depreciation method for all properties to the straight-line method. This change is based on the NGK Spark Plug Group's judgment that employing the depreciation method to maintain matching revenues and expenses by allocating acquisition costs of property, plant and equipment equally over the useful life would be more appropriate as a result of a reassessment of actual use of the properties, in response to an expansion of capital expenditures in accordance with domestic "Automotive components" operations growth and the steady contributions for investment and earnings. In addition, unifying the NGK Spark Plug Group's accounting policies to the straight-line method is consistent with the practices of the overseas consolidated subsidiaries, which calculate depreciation by the straight-line method and whose capital expenditures are on the rise. As a result, for the year ended March 31, 2013, depreciation costs decreased by ¥2,637 million (\$28,053 thousand), operating income increased by ¥2,123 million (\$22,585 thousand) and income before income taxes and minority interests increased by ¥2,345 million (\$24,947 thousand) compared with the amounts that would have been recorded without the change.

#### **(Change of accounting estimates for the useful life of property)**

From the fiscal year ended March 31, 2013, the Company and its domestic consolidated subsidiaries have changed the useful life of machinery and equipment of "Automotive components" and "Technical ceramics" business to the years of actual product operation, considering years of usage, repair cycles and payout periods of machinery and equipment. As a result, for the year ended March 31, 2013, depreciation costs decreased by ¥1,667 million (\$17,734 thousand) and operating income and income before income taxes and minority interests increased by ¥1,426 million (\$15,170 thousand) compared with the amounts that would have been recorded without the change.

#### **(h) Leases**

The Company and its domestic consolidated subsidiaries have adopted the "Accounting Standard for Lease Transactions" (ASBJ Statement No. 13) and its "Guidance on Accounting Standard for Lease Transactions" (Guidance No. 16), revised by ASBJ on March 30, 2007. The revised accounting standard requires that all finance lease transactions be accounted for in a manner similar to that used for ordinary sale and purchase transactions. The Company and its domestic consolidated subsidiaries as lessee capitalize the assets used under finance leases commenced on or after April 1, 2008, except for certain immaterial or short-term finance leases which are accounted for as operating leases, in accordance with the revised standard. Depreciation is calculated using the straight-line method over the lease term and assuming no residual value. As permitted, finance leases which commenced prior to April 1, 2008 and have been accounted for with accounting treatment similar to that used for operating leases continue to be accounted for with accounting treatment similar to that used for operating leases, with the disclosure of certain "as if capitalized" information.

#### **(i) Impairment of fixed assets**

The Company and its domestic consolidated subsidiaries have adopted the "Accounting Standard for Impairment of Fixed Assets" and the related practical guidance. The standard requires that fixed assets be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss is recognized in the income statement by reducing the carrying amount of the impaired asset or a group of assets to the recoverable amount, measured by the higher of the asset's net selling price or value in use. Fixed assets include land, plants, buildings and other forms of property, as well as intangible assets, and are to be grouped at the lowest level for which there are identifiable cash flows from other groups of assets. For the purpose of recognition and measurement of an impairment loss, fixed assets of the NGK Spark Plug Group, other than idle or unused property, are grouped into cash generating units based on managerial accounting classifications.

#### **(j) Employee retirement benefits**

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

In accordance with the accounting standard for employee

retirement benefits, the NGK Spark Plug Group has recognized retirement benefits including pension cost and the related liability based principally on the actuarial present value of the projected benefit obligation using the actuarial appraisal approach and the fair value of pension plan assets available for benefits at the respective fiscal year-end. Unrecognized actuarial differences arising from changes in the projected benefit obligation or the value of pension plan assets from the amounts assumed and from changes in the assumptions themselves are amortized on a straight-line basis over ten years, a period not exceeding the average remaining service period of employees, from the year following the year in which they arise. Past service cost is amortized on a straight-line basis over ten years, a period not exceeding the average remaining period of the employees.

#### **(k) Translation of foreign currency accounts**

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

For financial statement items of the overseas consolidated subsidiaries, all asset and liability accounts are translated into Japanese yen by applying the exchange rate in effect at the respective fiscal year-end. All income and expense accounts are translated at the average rate of exchange prevailing during each year. Translation differences, after allocating portions attributable to minority interests, are reported in foreign currency translation adjustments as a component of accumulated other comprehensive income in the accompanying consolidated balance sheets.

#### **(l) Research and development expenses**

Expenses related to research and development activities are charged to income as incurred. Research and development expenses arise from a wide range of the NGK Spark Plug Group's activities, including basic and applied research for material development, the planning and designing of new products and processes and activities aimed at improving existing products and processes. For the years ended March 31, 2013 and 2012, research and development expenses aggregated ¥17,101 million (\$181,926 thousand) and ¥16,036 million, respectively. These amounts included research and development activities for basic and applied research and the development of new products and processes in the amount of ¥3,734 million (\$39,723 thousand) and ¥3,543 million at March 31, 2013 and 2012, respectively, and were recorded as general and administrative expenses. The remaining expenses were recorded for the respective years in the accompanying consolidated statements of income as manufacturing costs.

#### **(m) Income taxes**

Income taxes are accounted for by the asset-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 carryforwards. 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 promulgation date.

#### **(n) Enterprise taxes**

The NGK Spark Plug Group records enterprise taxes calculated based on the “added value” and “capital” amounts when levied as size-based corporate taxes for local government enterprise taxes, which are included in selling, general and administrative expenses.

#### **(o) Appropriation of retained earnings**

Cash dividends are recorded in the fiscal year when a proposed appropriation of retained earnings is approved by the Board of Directors of the Company.

#### **(p) 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 year. Diluted net income per share is not disclosed as the NGK Spark Plug Group had no dilutive common shares. Cash dividends per share shown for each fiscal year in the accompanying consolidated statements of income represent dividends declared by the Company as applicable to the respective year.

#### **(q) Accounting standards for accounting changes and error corrections**

The Company and its consolidated domestic subsidiaries have adopted the “Accounting Standard for Accounting Changes and Error Corrections” (ASBJ Statement No. 24, issued on December 4, 2009) and “Guidance on Accounting Standard for Accounting Changes and Error Corrections” (ASBJ Guidance No. 24, issued on December 4, 2009) for accounting changes and corrections of prior period errors made from the fiscal year beginning on April 1, 2011.

#### **(r) New accounting standards issued but not yet adopted (Accounting standard for retirement benefits)**

On May 17, 2012, the ASBJ issued ASBJ Statement No. 26, “Accounting Standard for Retirement Benefits” and ASBJ Guidance No. 25, “Guidance on Accounting Standard for Retirement Benefits,” which together replaced the accounting standard for retirement benefits originally issued by the Business Accounting Council of Japan in 1998.

Under the amended rule, actuarial differences and past service costs that have not been recognized in profit or loss are to be recognized within the net asset section, after adjusting for tax effects, and the deficit or surplus is to be recognized as a liability or asset without any adjustments. For determining the method of attributing expected benefit to periods, the new standard allows the choice of benefit formula basis or straight-line basis. Method for determination of discount rate has also been amended.

Except for amendments related to the determination of retirement benefit obligations and current service costs, the new

standard and guidance are effective from the end of annual periods ending on or after March 31, 2014. Amendments related to the determination of retirement benefit obligations and current service costs are effective from the beginning of annual periods ending on or after March 31, 2015.

The Company and its domestic consolidated subsidiaries are currently in the process of determining the effects of this new standard on the consolidated financial statements.

### **3. Financial Instruments**

#### **(a) Qualitative information on financial instruments**

The NGK Spark Plug Group does not permit the investment of surplus funds in securities other than short-term bank deposits and debt securities with high liquidity from issuers with high credit ratings in accordance with fund management policies. The NGK Spark Plug Group uses indirect financing from financial institutions such as correspondent banks to satisfy short-term funding requirements and direct financing from financial markets principally by the issuance of corporate bonds to satisfy long-term funding requirements.

The NGK Spark Plug Group is exposed to credit risk primarily with respect to trade receivables. In order to reduce the credit risk of these receivables, the NGK Spark Plug Group sets payment terms according to the credit capability of its customers. In some cases, the NGK Spark Plug Group receives security deposits in advance.

The NGK Spark Plug Group holds investments in securities such as negotiable certificates of deposits, debt securities and equity securities whose fair values are monitored on a quarterly basis.

The NGK Spark Plug Group is a party to derivative instruments such as foreign currency forward exchange contracts and currency option contracts in the normal course of business principally for hedging purposes in order to reduce its own exposure to fluctuations in exchange rates. The NGK Spark Plug Group does not hold or issue derivative financial instruments for trading purposes. Under the NGK Spark Plug Group’s financial management policies, contract balances of currency derivatives are limited to certain anticipated export sales or import purchases.

## (b) Fair value of financial instruments

The fair and carrying value of financial instruments at March 31, 2013 and 2012, other than unlisted equity securities for which the fair value was extremely difficult to determine, was as follows:

	Carrying value	Fair value	Difference
	Millions of yen		
At March 31, 2013:			
Financial assets:			
Cash and cash equivalents	¥ 49,875	¥ 49,875	¥ —
Short-term investments	20,763	20,763	—
Trade receivables	53,103	53,103	—
Investment securities:			
Available-for-sale securities	46,489	46,489	—
Total	¥170,230	¥170,230	¥ —
Financial liabilities (*1):			
Short-term borrowings	¥ (1,433)	¥ (1,433)	¥ —
Trade payables	(18,814)	(18,814)	—
Bonds payable, including current portion	(25,000)	(25,588)	(588)
Total	¥ (45,247)	¥ (45,835)	¥(588)
Derivative instruments (*2)	¥ (419)	¥ (419)	¥ —

At March 31, 2012:

Financial assets:			
Cash and cash equivalents	¥ 51,825	¥ 51,825	¥ —
Short-term investments	25,709	25,709	—
Trade receivables	50,727	50,727	—
Investment securities:			
Available-for-sale securities	40,116	40,116	—
Total	¥168,377	¥168,377	¥ —
Financial liabilities (*1):			
Short-term borrowings	¥ (1,251)	¥ (1,251)	¥ —
Trade payables	(23,558)	(23,558)	—
Bonds payable, including current portion	(35,000)	(35,833)	(833)
Total	¥ (59,809)	¥ (60,642)	¥(833)
Derivative instruments (*2)	¥ (639)	¥ (639)	¥ —

Thousands of U.S. dollars

At March 31, 2013:

Financial assets:			
Cash and cash equivalents	\$ 530,585	\$ 530,585	\$ —
Short-term investments	220,883	220,883	—
Trade receivables	564,925	564,925	—
Investment securities:			
Available-for-sale securities	494,564	494,564	—
Total	\$1,810,957	\$1,810,957	\$ —
Financial liabilities (*1):			
Short-term borrowings	\$ (15,245)	\$ (15,245)	\$ —
Trade payables	(200,149)	(200,149)	—
Bonds payable, including current portion	(265,957)	(272,212)	(6,255)
Total	\$ (481,351)	\$ (487,606)	\$ (6,255)
Derivative instruments (*2)	\$ (4,457)	\$ (4,457)	\$ —

\*1) Amounts in parenthesis reflect liabilities.

\*2) The value of derivative instruments is shown as a net position.

Notes:

(1) Details of the methods and assumptions used to estimate the fair value of financial instruments are summarized below:  
The fair value of cash and cash equivalents, trade receivables, short-term borrowings and trade payables is approximately equal to the carrying value due to their short-term maturities. The fair value of investment equity securities is based on quoted market prices. The fair value of bonds and other securities included in investment securities, bonds payable and derivative instruments is based on the price provided by corresponding financial institutions.

(2) The following securities are not included in the table above because the fair value was extremely difficult to determine.

	Carrying value		Thousands of U.S. dollars
	Millions of yen	2012	2013
Investments (equity securities) in unconsolidated subsidiaries and associates	¥5,873	¥2,340	\$62,479
Unlisted equity securities	409	417	4,351

(3) Expected maturities of financial assets at March 31, 2013 were as follows:

	Due in one year or less	Due after one year through five years	Due after five years
	Millions of yen		
At March 31, 2013:			
Cash and cash equivalents	¥ 47,969	¥ —	¥—
Trade receivables	53,103	—	—
Investments	19,470	8,801	—
	¥120,542	¥8,801	¥—

Thousands of U.S. dollars

At March 31, 2013:

Cash and cash equivalents	\$ 510,309	\$ —	\$ —
Trade receivables	564,925	—	—
Investments	207,128	93,628	—
	\$1,282,362	\$93,628	\$ —

Contractual maturities of bonds payable at March 31, 2013 were as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2014	¥ —	\$ —
2015	10,000	106,383
2016	15,000	159,574
	¥25,000	\$265,957

#### 4. Notes and Accounts Receivable

At March 31, 2013 and 2012, notes and accounts receivable consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Trade receivables	¥51,214	¥48,813	\$544,830
Unconsolidated subsidiaries and associates	1,894	1,916	20,149
Other	6,762	6,091	71,936
Less allowance for doubtful accounts	(299)	(172)	(3,181)
	¥59,571	¥56,648	\$633,734

#### 5. Inventories

At March 31, 2013 and 2012, inventories consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Finished goods	¥41,704	¥38,648	\$443,660
Work-in-process	17,364	15,897	184,723
Raw materials	8,777	7,517	93,372
	¥67,845	¥62,062	\$721,755

For the years ended March 31, 2013 and 2012, a write-down of ¥1,080 million (\$11,489 thousand) and ¥520 million, respectively, was recognized as costs of goods sold.

#### 6. Investments

At March 31, 2013 and 2012, short-term investments consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Securities with fair value:			
Bonds	¥10,806	¥17,329	\$114,957
Other	4,288	3,086	45,617
	15,094	20,415	160,574
Time deposits with an original maturity of more than three months	5,669	5,294	60,309
	¥20,763	¥25,709	\$220,883

At March 31, 2013 and 2012, investment securities consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Securities with fair value:			
Equity securities	¥37,614	¥30,334	\$400,149
Bonds	8,875	9,293	94,415
Other	—	489	—
	46,489	40,116	494,564
Other securities without fair value	716	729	7,617
	¥47,205	¥40,845	\$502,181

At March 31, 2013 and 2012, the cost and fair value of available-for-sale securities were summarized as follows:

	Cost	Gross unrealized gains	Gross unrealized losses	Fair and carrying value
	Millions of yen			
At March 31, 2013:				
Equity securities	¥12,645	¥25,406	¥ (437)	¥37,614
Bonds	19,600	106	(25)	19,681
Other	4,281	110	(103)	4,288
	¥36,526	¥25,622	¥ (565)	¥61,583

At March 31, 2012:				
Equity securities	¥12,093	¥19,337	¥(1,096)	¥30,334
Bonds	26,737	21	(136)	26,622
Other	3,582	5	(12)	3,575
	¥42,412	¥19,363	¥(1,244)	¥60,531

	Thousands of U.S. dollars			
At March 31, 2013:				
Equity securities	\$134,521	\$270,277	\$(4,649)	\$400,149
Bonds	208,510	1,128	(266)	209,372
Other	45,543	1,170	(1,096)	45,617
	\$388,574	\$272,575	\$(6,011)	\$655,138

For the years ended March 31, 2013 and 2012, a loss on the write-down of available-for-sale securities in the amount of ¥63 million (\$670 thousand) and ¥552 million, respectively, was recognized as other expenses due to the other than temporary diminution in value.

#### 7. Intangible Assets

At March 31, 2013 and 2012, intangible assets consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Software	¥3,591	¥4,185	\$38,202
Other intangible assets	236	194	2,511
	¥3,827	¥4,379	\$40,713

#### 8. Accounts Payable

At March 31, 2013 and 2012, accounts payable consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Trade payables	¥18,735	¥23,447	\$199,309
Unconsolidated subsidiaries and associates	86	112	915
Other	9,576	6,063	101,872
	¥28,397	¥29,622	\$302,096

## 9. Short-term Borrowings and Long-term Debt

At March 31, 2013 and 2012, short-term borrowings consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Unsecured bank loans with interest at rates ranging from 1.7% to 13.5% per annum at March 31, 2013	¥1,433	¥1,251	\$15,245

At March 31, 2013 and 2012, long-term debt consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
1.65% unsecured bonds due July 2012	¥ —	¥10,000	\$ —
1.85% unsecured bonds due July 2014	10,000	10,000	106,383
1.22% unsecured bonds due September 2015	15,000	15,000	159,574
Capitalized lease obligations	986	1,148	10,489
	25,986	36,148	276,446
Less current portion	(303)	(10,310)	(3,223)
	¥25,683	¥25,838	\$273,223

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 bank, as well as cash deposited with it, 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 may have time deposits with 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, 2013 were as follows:

Year ending March 31,	Millions of yen	Thousands of U.S. dollars
2014	¥ 303	\$ 3,223
2015	10,255	109,096
2016	15,183	161,521
2017	129	1,372
2018	47	500
Thereafter	69	734
	¥25,986	\$276,446

## 10. Employee Retirement Benefits

The Company has a lump-sum retirement benefit plan and has established a defined benefit pension plan that cover 80% of the 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. Some of the overseas consolidated subsidiaries have defined contribution plans.

The following tables reconcile the benefit liability and net periodic retirement benefit expense as of and for the years ended March 31, 2013 and 2012:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Reconciliation of benefit liability:			
Projected benefit obligation *	¥50,075	¥46,591	\$532,712
Less fair value of pension plan assets at end of year	(26,568)	(24,183)	(282,638)
Projected benefit obligation in excess of value of pension plan assets	23,507	22,408	250,074
Unrecognized actuarial differences	(5,887)	(4,422)	(62,628)
Unrecognized past service cost	(219)	(257)	(2,329)
Net amounts of employee retirement benefit liability	¥17,401	¥17,729	\$185,117

\*The projected benefit obligation of certain domestic consolidated subsidiaries was calculated using the simplified calculation method as permitted by the accounting standard for employee retirement benefits.

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Components of net periodic retirement benefit expense:			
Service cost	¥2,582	¥2,500	\$27,468
Interest cost	934	894	9,936
Expected return on pension plan assets	(647)	(628)	(6,883)
Recognized actuarial differences	844	801	8,979
Amortization of past service cost	38	38	404
Net periodic retirement benefit expense	¥3,751	¥3,605	\$39,904

Major assumptions used in the calculation of the above information for the years ended March 31, 2013 and 2012 were as follows:

	2013	2012
Method attributing the projected benefits to periods of services	Straight-line method	Straight-line method
Discount rate	1.5%	2.0%
Expected rate of return on pension plan assets	2.75%	2.75%
Amortization of actuarial differences	10 years	10 years
Amortization of past service cost	10 years	10 years

## 11. Lease Commitments

At March 31, 2013 and 2012, the NGK Spark Plug Group had annual commitments under operating leases as lessee. The aggregate future minimum payments for non-cancelable operating leases were as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Due within one year	¥ 455	¥337	\$ 4,840
Due after one year	723	432	7,692
	¥1,178	¥769	\$12,532

As disclosed in Note 2(h), as lessee, finance leases which commenced prior to April 1, 2008 and have been accounted for with accounting treatment similar to that used for operating leases continue to be accounted for with accounting treatment similar to that used for operating leases, with the disclosure of certain "as if capitalized," information and are not capitalized. However, the aggregate future minimum payments under such finance leases is not material and, therefore, not disclosed.

## 12. Contingent Liabilities

At March 31, 2013 and 2012, contingent liabilities in respect to guarantees of indebtedness, principally of employees, amounted to ¥51 million (\$543 thousand) and ¥64 million, respectively.

## 13. Derivative Instruments

At March 31, 2013 and 2012, derivative instruments which were stated at fair value, except for the derivative instruments accounted for by hedge accounting, and recognized for valuation gains and losses as current earnings are summarized as follows:

	Notional principal or contract amounts	Fair value	Valuation gains (losses)
	Millions of yen		
At March 31, 2013:			
Foreign exchange contracts:			
Forward contracts to sell	¥12,688	¥(413)	¥(413)
Currency call options	1,474	(21)	(21)
Currency put options	737	15	15
			¥(419)

At March 31, 2012:

Foreign exchange contracts:			
Forward contracts to sell	¥14,246	¥(574)	¥(574)
Currency call options	1,364	(71)	(71)
Currency put options	1,118	6	6
			¥(639)

Thousands of U.S. dollars

At March 31, 2013:

Foreign exchange contracts:			
Forward contracts to sell	\$134,979	\$(4,394)	\$(4,394)
Currency call options	15,681	(223)	(223)
Currency put options	7,840	160	160
			\$(4,457)

## 14. Net Assets

Under Japanese laws and regulations, the entire amount paid for new shares is required to be designated as common stock. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one half of the price of the new shares as additional paid-in capital, which is included in capital surplus.

Under Japanese Corporate Law (the "Law"), in cases in

which a dividend distribution of surplus is made, the smaller of an amount equal to 10% of the dividend or the excess, if any, of 25% of common stock over the total of additional paid-in capital and legal earnings reserve must be set aside as additional paid-in capital or legal earnings reserve. Legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets.

Under the Law, legal earnings reserve and additional paid-in capital can be used to eliminate or reduce a deficit by a resolution of the shareholders' meeting. Additional paid-in capital and legal earnings reserve may not be distributed as dividends. All additional paid-in capital and all legal earnings reserve may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends.

At March 31, 2013 and 2012, respectively, capital surplus consisted principally of additional paid-in capital. In addition, retained earnings included legal earnings reserve of the Company in the amount of ¥5,838 million (\$62,106 thousand) at March 31, 2013 and 2012, respectively.

The maximum amount that the Company can distribute as dividends is calculated based on the separate financial statements of the Company in accordance with Japanese laws and regulations.

During the year ended March 31, 2012 and pursuant to a resolution of its Board of Directors, the Company retired 6,000,000 shares of its treasury stock through a recording of decreases in retained earnings of ¥7,365 million and capital surplus of ¥337 million.

During the year ended March 31, 2013, the Company paid interim dividends of ¥2,394 million (\$25,468 thousand), ¥11.00 (\$0.12) per share. On May 8, 2013, the Board of Directors of the Company approved cash dividends of ¥2,394 million (\$25,468 thousand), ¥11.00 (\$0.12) per share, for the appropriation of retained earnings to shareholders of record as of March 31, 2013.

## 15. Impairment Loss on Fixed Assets

Although no impairment loss was recorded for the year ended March 31, 2013, the NGK Spark Plug Group recognized an impairment loss on fixed assets in the amount of ¥1,141 million as other expenses for the year ended March 31, 2012. The loss arose in connection with machinery and equipment and other properties used for production and sale of IC packages in the "Communication media components" segment that became impaired because performance in the IC package business worsened due to a change in the supply and demand balance, increased costs to stabilize quality and a weaker dollar against the yen. Recoverable amounts were estimated using value in use as nil.

## 16. Investment and Rental Property

The Company and certain consolidated subsidiaries had idle property and rental property located in Aichi prefecture, Japan and elsewhere. The NGK Spark Plug Group recorded net rental income from rental property as other income in the accompanying consolidated statements of income in the amount of ¥17 million (\$181 thousand) and ¥18 million for the years ended March 31, 2013 and 2012, respectively. At March 31, 2013 and 2012, respectively, investment and rental property consisted of idle property of ¥2,491 million (\$26,500 thousand) and ¥11,015 million and rental property of ¥125 million (\$1,330 thousand) and ¥126 million. Information about fair value of investment and rental property at March 31, 2013 and 2012 is as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Carrying amount at the beginning of the year	¥11,141	¥14,838	\$118,521
Changes during the year:			
Decrease as depreciation of idle property	(393)	(899)	(4,181)
Decrease as transfer of assets for business use	(8,970)	(2,680)	(95,425)
Other	838	(118)	8,915
Carrying amount at the end of the year	¥ 2,616	¥11,141	\$ 27,830
Fair value at the end of the year *	¥ —	¥11,291	\$ —

\*Fair value was measured principally at reasonably adjusted value based on appraisal values or municipal property tax bases. Fair value at March 31, 2013 is not disclosed as carrying amount at the end of the year was not material.

## 17. Income Taxes

The tax effects of temporary differences that gave rise to a significant portion of deferred tax assets and liabilities at March 31, 2013 and 2012 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Deferred tax assets:			
Net operating loss carryforwards	¥ 2,033	¥ 4,263	\$ 21,628
Impairment loss on fixed assets	4,879	5,668	51,904
Employee retirement benefit liability	6,588	6,602	70,085
Depreciation	3,767	2,895	40,074
Accrued expenses	3,570	3,574	37,979
Inventories	2,361	2,002	25,117
Inter-company profits	3,415	267	36,330
Other	1,379	965	14,670
Less valuation allowance	(6,586)	(7,608)	(70,064)
	21,406	18,628	227,723
Deferred tax liabilities:			
Unrealized gains on available-for-sale securities	8,852	6,261	94,170
Retained earnings of overseas consolidated subsidiaries	3,972	2,923	42,255
Other	1,279	1,194	13,607
	14,103	10,378	150,032
Net deferred tax liabilities	¥ 7,303	¥ 8,250	\$ 77,691

At March 31, 2013 and 2012, deferred tax assets and liabilities were as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Deferred tax assets:			
Current	¥8,805	¥8,626	\$93,670
Noncurrent	926	843	9,851
Deferred tax liabilities:			
Current	94	76	1,000
Noncurrent	2,334	1,143	24,830

In assessing the realizability of deferred tax assets, management of the NGK Spark Plug Group considers whether 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 future taxable income during the periods in which the temporary differences become deductible. At March 31, 2013 and 2012, a valuation allowance was provided to reduce deferred tax assets to the amount that management believed the deferred tax assets were realizable.

For the years ended March 31, 2013 and 2012, the reconciliation of the differences between the combined Japanese statutory tax rate and the effective income tax rate on pre-tax income reflected in the accompanying consolidated statements of income was as follows.

	Percentage of pre-tax income (%)	
	2013	2012
Combined Japanese statutory tax rate	37.7	40.6
Increase (decrease) due to:		
Permanently nondeductible expenses	1.7	0.7
Tax exempt income	(0.9)	(0.6)
Tax credit for research and development expenses	(3.6)	—
Differences between Japanese and foreign tax rates	(2.9)	(4.7)
Changes in unrecognized intercompany profit	(7.7)	(3.5)
Changes in valuation allowance	(3.7)	(59.1)
Effect on income tax rate changes	—	7.0
Other	2.9	1.9
Effective income tax rate	23.5	(17.7)

On December 2, 2011, the “Act on the Partial Amendment of the Income Tax Act, etc., for the Purpose of Creating a Taxation System Responding to Changes in Economic and Social Structures” (Act No. 114, 2011) and “Act on Special Measures for Securing Financial Resources Necessary to Implement Measures for Reconstruction Following the Great East Japan Earthquake” (Act No. 117, 2011) were promulgated. Accordingly, corporate income tax rates have been lowered and a special restoration surtax imposed from the fiscal years beginning on or after April 1, 2012. Therefore, the effective statutory income tax rates used for the measurement of deferred tax assets and liabilities are changed and depend on when temporary differences are expected to be recovered or settled. As a result of the changes, deferred income tax expense increased by ¥1,543 million for the year ended March 31, 2012 from the amount that would have been reported without the changes.

## 18. Other Comprehensive Income

Amounts reclassified as net income (loss) in the current period that were recognized in other comprehensive income in the current or previous periods and the tax effects for each component of other comprehensive income were as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Unrealized gains on available-for-sale securities			
Increase (decrease) during the year	¥ 6,878	¥ (31)	\$ 73,170
Reclassification adjustments	55	552	585
Subtotal, before tax	6,933	521	73,755
Tax effect	(2,590)	876	(27,553)
Subtotal, net of tax	4,343	1,397	46,202
Foreign currency translation adjustments			
Increase (decrease) during the year	11,522	(4,518)	122,574
Reclassification adjustments	—	(37)	—
Subtotal	11,522	(4,555)	122,574
Share of other comprehensive income of associates accounted for by the equity method			
Increase (decrease) during the year	631	(150)	6,713
Total other comprehensive income	¥16,496	¥(3,308)	\$175,489

## 19. Segment Information

### (a) General information about reportable segments

The reportable segments of the Company are the business units for which the Company is able to obtain financial information separately in order for the Board of Directors of the Company to conduct periodic investigations to determine the distribution of management resources and evaluate business results. The Company has its business units identified by products. Each business unit plans its comprehensive domestic and overseas strategy for its products and conducts its business activities. Accordingly, the NGK Spark Plug Group consists of three reportable segments. “Automotive components,” “Communication media components” and “Technical ceramics.”

- In the “Automotive components” segment, the Company manufactures and sells spark plugs, glow plugs, various automotive sensors, ceramic engine parts and other automotive components.
- In the “Communication media components” segment, the Company manufactures and sells IC packages and other semiconductor components.
- In the “Technical ceramics” segment, the Company manufactures and sells cutting tools, ceramics products for industrial and medical applications.

## (b) Information about reportable segment profit and loss, segment assets and other material items

Information about reportable segments as of and for the years ended March 31, 2013 and 2012 was as follows:

	Reportable segments						
	Automotive components	Communication media components	Technical ceramics	Other	Total	Adjustments	Consolidated
	Millions of yen						
For the year 2013:							
Operating revenue - net sales:							
External customers	¥ 248,795	¥ 28,239	¥ 22,054	¥ 3,711	¥ 302,799	¥—	¥ 302,799
Intersegment sales	—	—	—	—	—	—	—
Total net sales	248,795	28,239	22,054	3,711	302,799	—	302,799
Segment income (loss)	¥ 33,159	¥ (9,677)	¥ 169	¥ 103	¥ 23,754	¥—	¥ 23,754
Segment assets	¥ 305,116	¥ 31,918	¥ 28,229	¥ 1,226	¥ 366,489	¥—	¥ 366,489
Other items:							
Depreciation	¥ 10,157	¥ 1,546	¥ 1,087	¥ 8	¥ 12,798	¥—	¥ 12,798
Increase in property, plant and equipment and intangible assets	17,961	4,204	1,838	10	24,013	—	24,013

For the year 2012:							
Operating revenue - net sales:							
External customers	¥ 222,636	¥ 33,892	¥ 23,738	¥ 4,480	¥ 284,746	¥—	¥ 284,746
Intersegment sales	—	—	—	—	—	—	—
Total net sales	222,636	33,892	23,738	4,480	284,746	—	284,746
Segment income (loss)	¥ 30,703	¥ (7,583)	¥ 1,308	¥ 50	¥ 24,478	¥—	¥ 24,478
Segment assets	¥ 276,426	¥ 33,654	¥ 28,821	¥ 1,395	¥ 340,296	¥—	¥ 340,296
Other items:							
Depreciation	¥ 12,260	¥ 1,836	¥ 1,329	¥ 14	¥ 15,439	¥—	¥ 15,439
Impairment loss on fixed assets	—	1,141	—	—	1,141	—	1,141
Increase in property, plant and equipment and intangible assets	11,855	1,294	856	—	14,005	—	14,005

Thousands of U.S. dollars

For the year 2013:							
Operating revenue - net sales:							
External customers	\$2,646,755	\$ 300,415	\$234,617	\$39,479	\$3,221,266	\$—	\$3,221,266
Intersegment sales	—	—	—	—	—	—	—
Total net sales	2,646,755	300,415	234,617	39,479	3,221,266	—	3,221,266
Segment income (loss)	\$ 352,755	\$(102,947)	\$ 1,798	\$ 1,096	\$ 252,702	\$—	\$ 252,702
Segment assets	\$3,245,915	\$ 339,553	\$300,308	\$13,043	\$3,898,819	\$—	\$3,898,819
Other items:							
Depreciation	\$ 108,053	\$ 16,447	\$ 11,564	\$ 85	\$ 136,149	\$—	\$ 136,149
Increase in property, plant and equipment and intangible assets	191,074	44,723	19,553	107	255,457	—	255,457

Note: As disclosed in Note 2(a), from the fiscal year ended March 31, 2012, three consolidated subsidiaries located in U.S.A. changed their fiscal year-end date from December 31 to March 31. As a result, for the year ended March 31, 2012, net sales and segment income were ¥12,429 million and ¥295 million more, respectively, in the "Automotive components" segment, net sales and segment loss were ¥2,641 million and ¥55 million more, respectively, in the "Communication media components" segment and net sales and segment income were ¥829 million and ¥26 million more, respectively, in the "Technical ceramics" segment than the amounts that would have been recorded without the change.

As also disclosed in Note 2(a), from the fiscal year ended March 31, 2013, seventeen overseas consolidated subsidiaries (NGK Spark Plug Europe GmbH, etc.) changed their fiscal year-end date from December 31 to March 31. The fiscal year-end date of NGK Spark Plug (Shanghai) Co., Ltd., Changshu NGK Spark Plug Co., Ltd., Bujias NGK de Mexico S.A. de C.V. and Woo Jin Industry Co., Ltd. is December 31. However, when preparing consolidated financial statements, the Company uses the financial statements of three consolidated subsidiaries and one associate which have been compiled by a temporary closing of their accounts as of March 31. As a result, for the year ended March 31, 2013, net sales and segment income were ¥36,548 million (\$388,809 thousand) and ¥3,759 million (\$39,989 thousand) more, respectively, in the "Automotive components" segment, net sales and segment loss were ¥1,119 million (\$11,904 thousand) and ¥44 million (\$468 thousand) more, respectively, in the "Communication media components" segment and net sales and segment income were ¥1,396 million (\$14,851 thousand) and ¥111 million (\$1,181 thousand) more, respectively, in the "Technical ceramics" segment than the amounts that would have been recorded without the change.

As disclosed in Note 2(g), the Company and its domestic consolidated subsidiaries had depreciated property, plant and equipment, except for buildings, using the declining balance method until the year ended March 31, 2012. From the fiscal year ended March 31, 2013, the Company and its domestic consolidated subsidiaries have changed the depreciation method for all properties to the straight-line method. As a result, for the year ended March 31, 2013, segment income increased by ¥1,929 million (\$20,521 thousand) in the "Automotive components" segment, segment loss decreased by ¥80 million (\$851 thousand) in the "Communication media components" segment and segment income increased by ¥114 million (\$1,213 thousand) in the "Technical ceramics" segment compared with the amounts that would have been recorded without the change.

As disclosed in Note 2(g), from the fiscal year ended March 31, 2013, the Company and its domestic consolidated subsidiaries have changed the useful life of machinery and equipment. As a result, for the year ended March 31, 2013, segment income increased by ¥1,304 million (\$13,872 thousand) in the "Automotive components" segment and segment income increased by ¥122 million (\$1,298 thousand) in the "Technical ceramics" segment compared with the amounts that would have been recorded without the change.

### (c) Enterprise-wide information

Information about geographic areas as of and for the years ended March 31, 2013 and 2012 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Operating revenue - net sales:			
Japan	¥ 56,194	¥ 58,798	\$ 597,809
North America	70,694	83,135	752,064
Europe	80,055	66,046	851,649
Asia	52,974	39,914	563,553
Other area	42,882	36,853	456,191
	¥302,799	¥284,746	\$3,221,266

	Millions of yen		Thousands of U.S. dollars
	2013	2012	2013
Property, plant and equipment:			
Japan	¥80,560	¥71,277	\$ 857,021
Other area	16,514	12,206	175,681
	¥97,074	¥83,483	\$1,032,702

The NGK Spark Plug Group had no single external customer which accounted for more than 10% of net sales for the years ended March 31, 2013 and 2012.

# Independent Auditor's Report



## Independent Auditor's Report

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

We have audited the accompanying consolidated financial statements of NGK SPARK PLUG CO., LTD. and its consolidated subsidiaries (the "NGK Spark Plug Group"), which comprise the consolidated balance sheets as at March 31, 2013 and 2012, and the consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in net assets and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatements, whether due to fraud or error.

### **Auditor's Responsibility**

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 generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the NGK Spark Plug Group as at March 31, 2013 and 2012, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

### **Emphasis of Matter**

Without qualifying our opinion, we draw attention to Note 2(g) of Notes to Consolidated Financial Statements, which describes NGK SPARK PLUG CO., LTD.'s and its domestic consolidated subsidiaries' change in depreciation method for property, plant and equipment from the fiscal year ended March 31, 2013.

### **Convenience Translation**

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2013 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 of Notes to Consolidated Financial Statements.

KPMG AZSA LLC

July 30, 2013  
Nagoya, Japan

# Stock Information

(As of March 31, 2013)

## Common Shares

Authorized: 390,000,000

Issued: 223,544,820

## Stock Listings

Tokyo Stock Exchange, 1st Section

Nagoya Stock Exchange, 1st Section

## Transfer Agent

Mitsubishi UFJ Trust and Banking Corporation

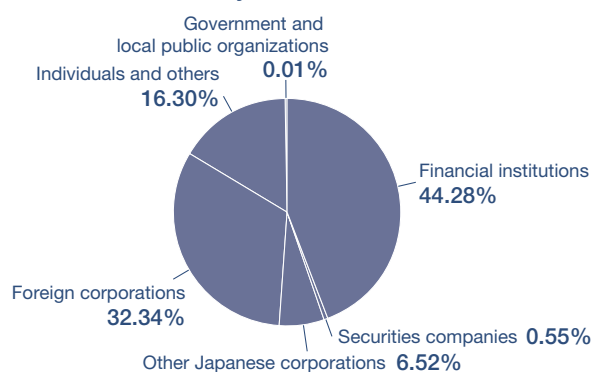
## Independent Auditor

KPMG AZSA LLC

## Number of Shareholders

10,701

## Share Distribution by Owner



## Major Shareholders

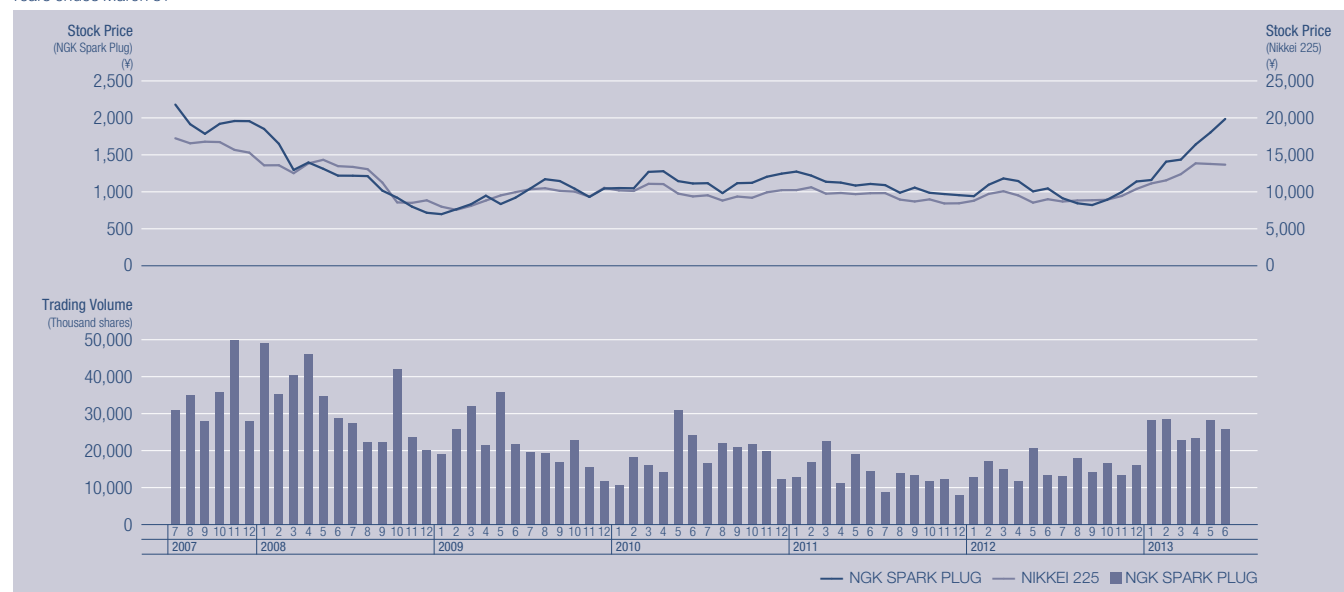
Name	Number of shares held (1,000 shares)	Ownership ratio of total number of shares issued (%)
State Street Bank and Trust Company	16,900	7.56
The Dai-ichi Life Insurance Company, Limited	16,752	7.49
Meiji Yasuda Life Insurance Company	13,794	6.17
The Master Trust Bank of Japan, Ltd. (trust account)	11,918	5.33
Japan Trustee Services Bank, Ltd. (trust account)	10,662	4.77
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	6,541	2.93
National Mutual Insurance Federation of Agricultural Cooperatives	6,138	2.75
The Master Trust Bank of Japan, Ltd. Toyota Motor Account	3,929	1.76
The Nomura Trust and Banking Co., Ltd.	3,807	1.70
Nippon Life Insurance Company	3,563	1.59

Note:

Although the Company held treasury stock of 5,877 thousand shares as of March 31, 2013, the Company is excluded from the above list of major shareholders.

## Stock Price Range and Trading Volume

Years ended March 31



All figures on this page are based on the Japanese "Securities Report."

# Corporate Data

(As of March 31, 2013)

## NGK SPARK PLUG CO., LTD.

### Headquarters

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

### Established

October 1936

### Paid-in Capital

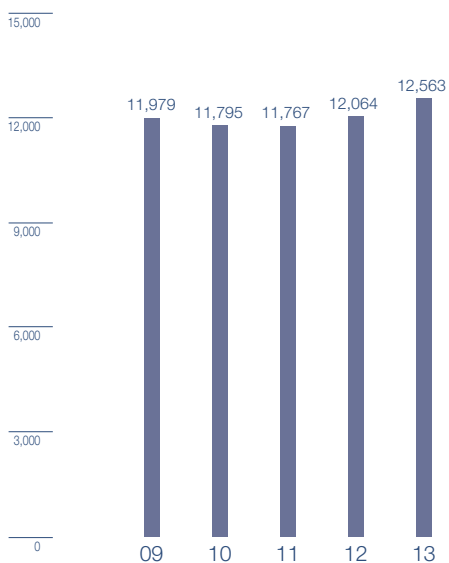
¥47,869 million

### Number of Employees

Consolidated: 12,563

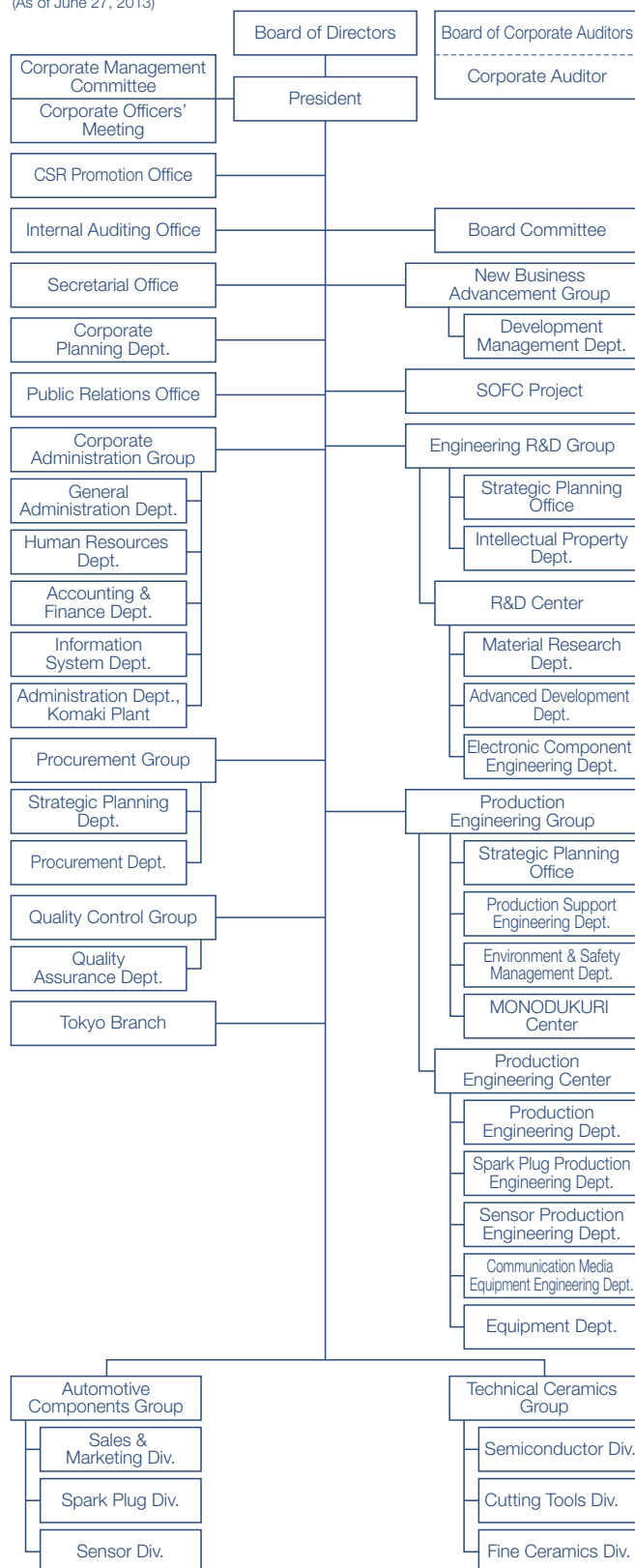
Non-Consolidated: 5,881

### Number of Employees (Consolidated)



## Organization

(As of June 27, 2013)



# Directors, Corporate Officers and Corporate Auditors

(As of June 27, 2013)

Representative Director,  
Chief Executive Officer  
and President Officer



Shinichi  
Odo\*

Representative Director,  
Vice Chief Executive  
and Vice President Officer



Takafumi  
Oshima\*

Representative Director,  
Vice Chief Executive  
and Vice President Officer



Shinji  
Shibagaki\*

Member of the Board  
Senior Executive Officer



Shogo  
Kawajiri



Takeshi  
Nakagawa

Member of the Board  
Executive Officer



Junichiro  
Suzuki



Hideyuki  
Koiso

Member of the Board  
Corporate Officer



Teppei  
Okawa

Member of the Board



Morihiko  
Otaki

\*Representative Director

Standing Corporate  
Auditor



Masami  
Asai



Keiichi  
Matsunari

Corporate  
Auditor



Shigehisa  
Sao



Kenichi  
Masuda

Executive  
Officer



Hitoshi  
Iimi



Takao  
Hamada



Tadao  
Kawai

Corporate  
Officer



Hidemitsu  
Suzuki



Takahiro  
Suzuki



Hisashi  
Nakanishi

Corporate  
Officer



Takeshi  
Kawai



Masahiko  
Okuyama



Yoshitaka  
Narita



Kozo  
Amano



Noboru  
Ishida



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