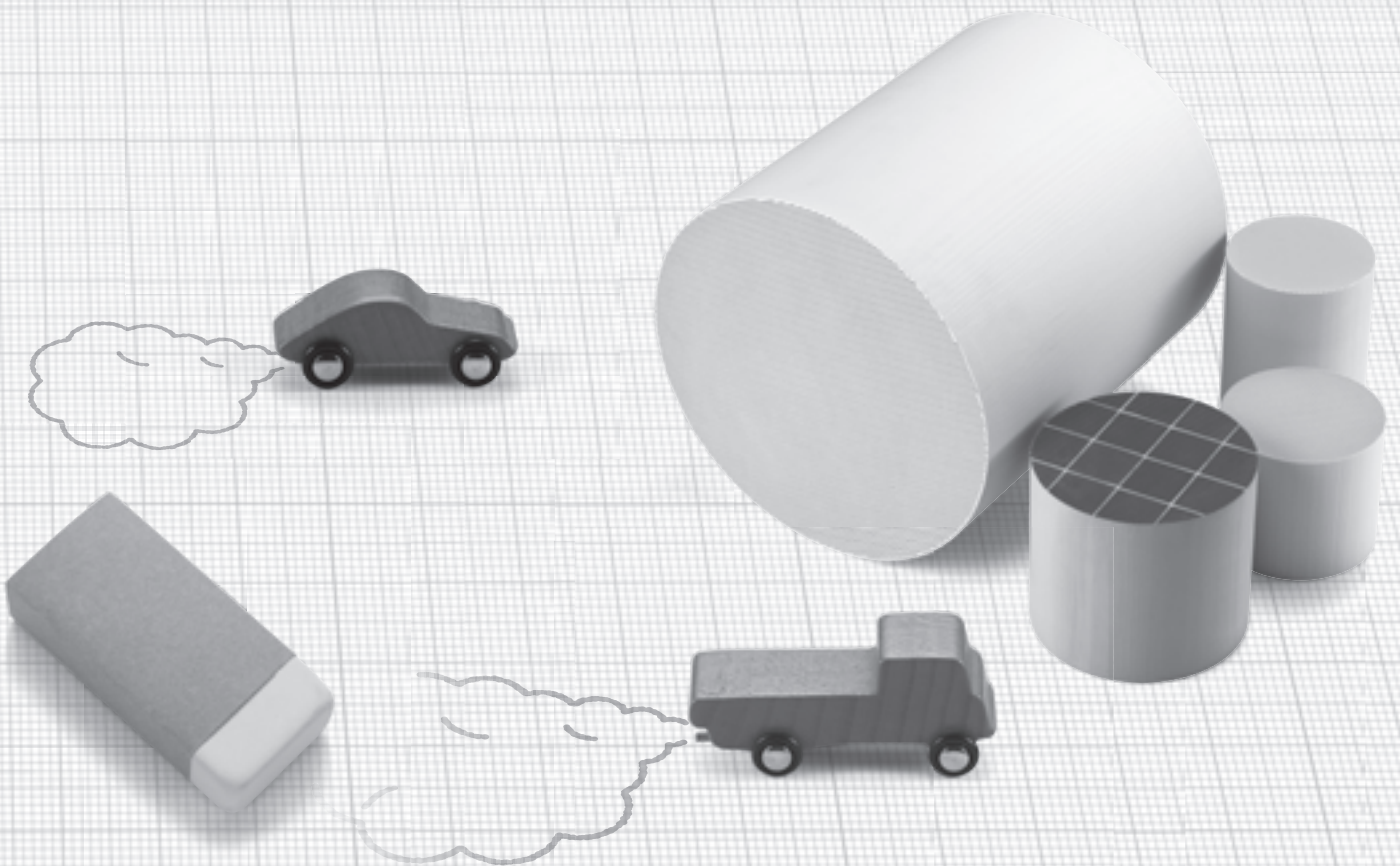


©NGK-kero/dwarf

# **NGK INSULATORS, LTD.** **and Consolidated Subsidiaries**

Consolidated Financial Statements  
for the Year Ended March 31, 2017, and  
Independent Auditor's Report





## **Contents**

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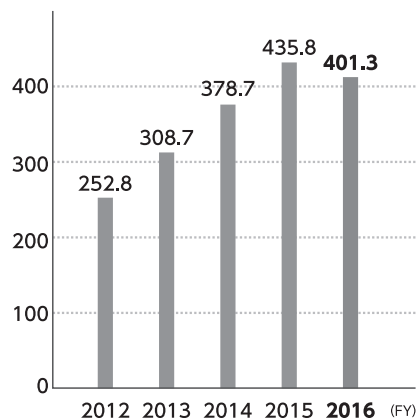
<b>02</b>	<b>Financial Highlights</b>
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# Financial Highlights

The following data includes financial results of consolidated subsidiaries (21 domestic, 37 overseas companies as of March 31, 2017)

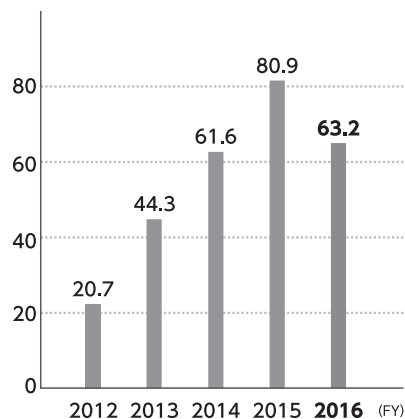
## Net Sales

(Billions of yen)



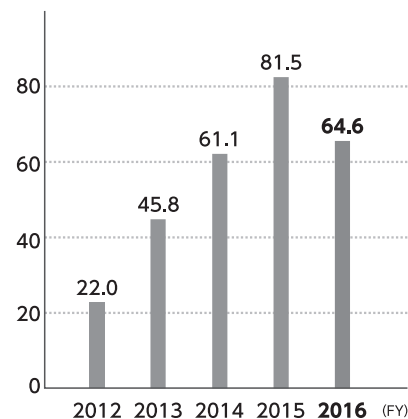
## Operating Income

(Billions of yen)



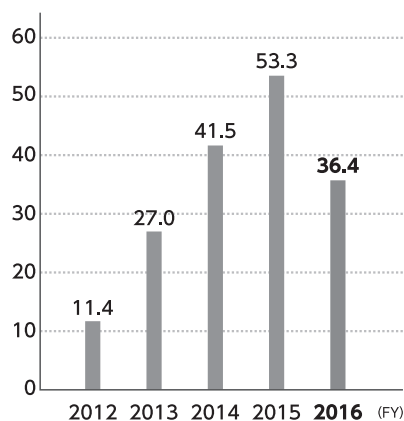
## Ordinary Income

(Billions of yen)



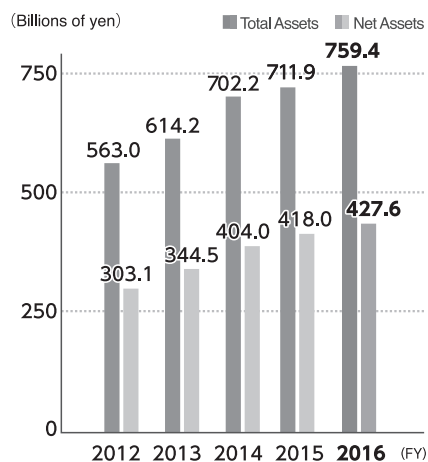
## Net Income

(Billions of yen)



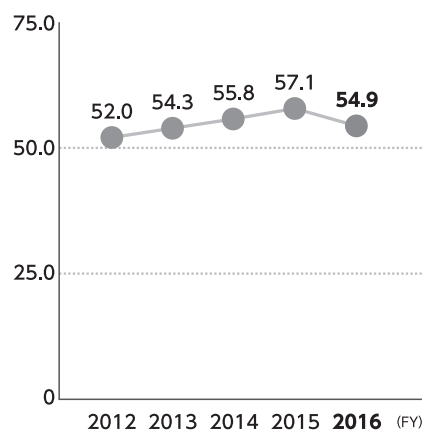
## Total Assets / Net Assets

(Billions of yen)



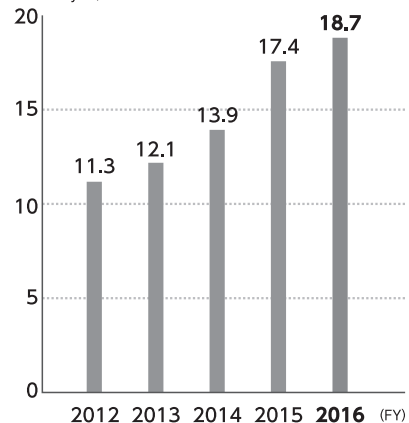
## Equity Ratio

(%)

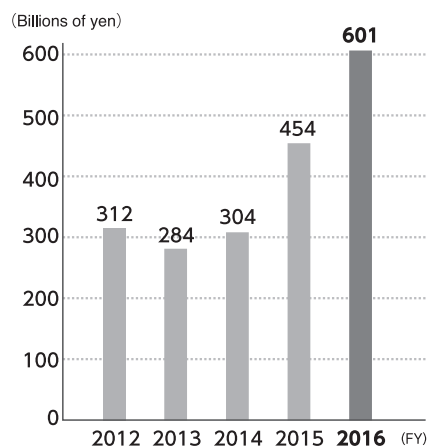


## Research and Development Expenses

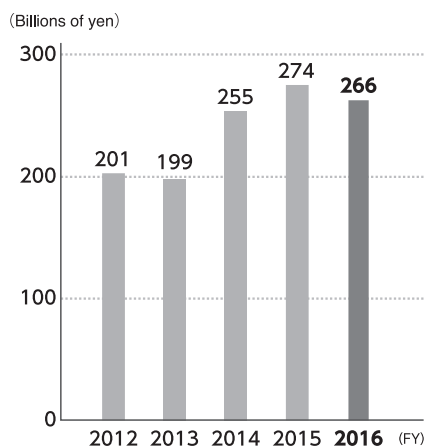
(Billions of yen)



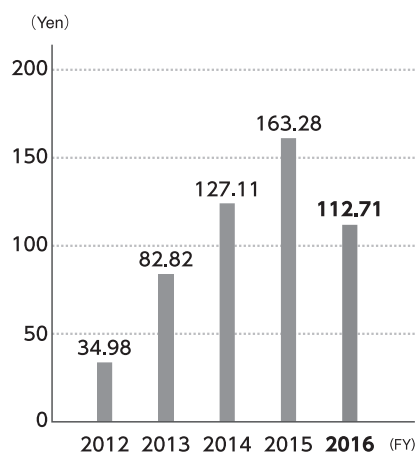
### Capital Expenditures



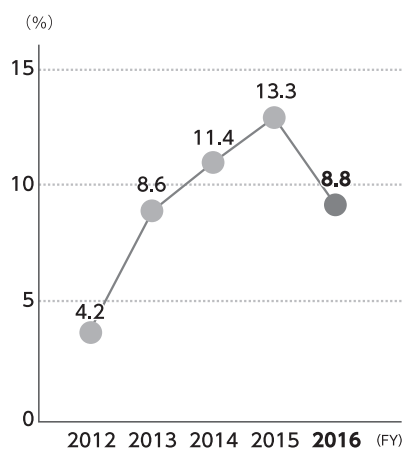
### Depreciation and Amortization



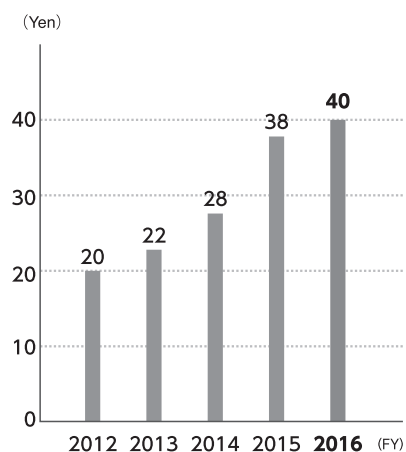
### Net Income per share



### Return on Equity



### Dividends



### Stock Price

FY	2012	2013	2014	2015	2016
Highest(Yen)	1,181	2,230	2,827	3,345	<b>2,578</b>
Lowest(Yen)	752	946	1,864	1,904	<b>1,800</b>

NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED BALANCE SHEET  
MARCH 31, 2017

ASSETS	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2017	2016	2017
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents (Note 13)	¥ 144,693	¥ 136,065	\$ 1,291,902
Time deposits (Note 13)	9,353	12,322	83,509
Marketable securities (Notes 3 and 13)	36,760	19,393	328,214
Notes and accounts receivable:			
Trade notes and accounts (Note 13)	92,182	102,576	823,054
Other	12,652	10,790	112,964
Allowance for doubtful accounts	(868)	(827)	(7,750)
Total	103,966	112,539	928,268
Inventories (Note 4)	119,082	108,945	1,063,232
Deferred tax assets (Note 10)	19,691	16,306	175,813
Prepaid expenses and other current assets	4,719	6,763	42,133
Total current assets	438,264	412,333	3,913,071
<b>PROPERTY, PLANT AND EQUIPMENT (Note 5)</b>			
Land	27,128	22,804	242,214
Buildings and structures	160,751	154,710	1,435,277
Machinery and equipment	406,079	388,804	3,625,706
Construction in progress	32,728	27,237	292,214
Total	626,686	593,555	5,595,411
Accumulated depreciation	(397,579)	(388,561)	(3,549,813)
Net property, plant and equipment	229,107	204,994	2,045,598
<b>INVESTMENTS AND OTHER ASSETS:</b>			
Investment securities (Notes 3 and 13)	53,264	61,260	475,571
Investments in unconsolidated subsidiaries and associated companies	19,263	17,415	171,991
Intangible assets	2,962	3,020	26,446
Net defined benefit asset (Note 7)	6,925	5,252	61,830
Deferred tax assets (Note 10)	6,545	4,353	58,438
Other assets	3,104	3,270	27,716
Total investments and other assets	92,063	94,570	821,992
<b>TOTAL</b>	<b>¥ 759,434</b>	<b>¥ 711,897</b>	<b>\$ 6,780,661</b>

(Continued)

NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED BALANCE SHEET  
MARCH 31, 2017

LIABILITIES AND EQUITY	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2017	2016	2017
<b>CURRENT LIABILITIES:</b>			
Short-term borrowings (Notes 6 and 13)	¥ 6,017	¥ 4,550	\$ 53,723
Current portion of long-term debt (Notes 6 and 13)	6,973	20,243	62,259
Notes and accounts payable:			
Trade notes and accounts (Note 13)	38,147	35,197	340,598
Other	22,586	13,997	201,661
Total	60,733	49,194	542,259
Accrued expenses	16,429	16,308	146,688
Provision for NAS Battery safety measures	3,650	5,406	32,589
Provision for loss related to competition law	9,168	4,308	81,857
Income taxes payable (Note 13)	21,057	7,137	188,009
Other current liabilities	4,413	5,316	39,402
Total current liabilities	128,440	112,462	1,146,786
<b>LONG-TERM LIABILITIES:</b>			
Long-term debt (Notes 6 and 13)	161,160	139,180	1,438,929
Net defined benefit liability (Note 7)	20,927	21,419	186,848
Provision for product warranties	1,654	1,841	14,768
Deferred tax liabilities (Note 10)	15,201	13,767	135,723
Other long-term liabilities	4,459	5,255	39,812
Total long-term liabilities	203,401	181,462	1,816,080
<b>CONTINGENT LIABILITIES (Note 15)</b>			
<b>EQUITY (Note 8):</b>			
Common stock:			
Authorized - 735,030 thousand shares			
Issued - 327,560 thousand shares			
at March 31, 2017 and 2016	69,849	69,849	623,652
Capital surplus	72,055	72,092	643,348
Stock acquisition rights (Note 9)	899	876	8,027
Retained earnings (Note 19)	289,996	266,581	2,589,250
Treasury stock - at cost: 5,915 thousand shares and 981 thousand shares			
at March 31, 2017 and 2016, respectively (Note 8.c)	(12,408)	(1,364)	(110,786)
Accumulated other comprehensive income			
Unrealized gain on available-for-sale securities	23,458	20,833	209,446
Deferred loss on derivatives under hedge accounting	(21)	-	(188)
Foreign currency translation adjustments	(15,474)	(5,888)	(138,159)
Defined retirement benefit plans	(10,714)	(15,359)	(95,661)
Total	417,640	407,620	3,728,929
Noncontrolling interests	9,953	10,353	88,866
Total equity	427,593	417,973	3,817,795
<b>TOTAL</b>	<b>¥ 759,434</b>	<b>¥ 711,897</b>	<b>\$ 6,780,661</b>

See notes to consolidated financial statements.

(Concluded)



**NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES**

**CONSOLIDATED STATEMENT OF INCOME  
YEAR ENDED MARCH 31, 2017**

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2017	2016	2017
NET SALES	¥ 401,267	¥ 435,798	\$ 3,582,741
COST OF SALES (Note 11)	272,435	289,266	2,432,455
Gross profit	128,832	146,532	1,150,286
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (Note 11)	65,619	65,634	585,884
Operating income	63,213	80,898	564,402
OTHER INCOME (EXPENSES):			
Interest and dividends income	1,742	2,146	15,554
Interest expense	(2,052)	(1,968)	(18,321)
Loss on sales of and disposals of property, plant and equipment - net	(202)	(306)	(1,804)
Equity in earnings of unconsolidated subsidiary and associated companies	1,791	1,020	15,991
Foreign exchange loss	(699)	(2,393)	(6,241)
Gain on sales of investment securities - net	5,249	663	46,866
Impairment loss on fixed assets (Note 5)	(4,161)	(4,452)	(37,152)
Provision of reserve for loss related to competition law (Note 15.b)	(6,314)	(7,113)	(56,375)
Loss on abolishment of retirement benefit plan of a subsidiary (Note 7)	(1,774)	-	(15,839)
Other-net	729	2,090	6,508
Other expenses - net	(5,691)	(10,313)	(50,813)
INCOME BEFORE INCOME TAXES	57,522	70,585	513,589
INCOME TAXES (Note 10):			
Current	18,012	15,783	160,821
Prior periods	11,213	-	100,116
Deferred	(8,067)	1,362	(72,027)
Total income taxes	21,158	17,145	188,910
NET INCOME	36,364	53,440	324,679
NET (LOSS) INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS	(15)	124	(134)
NET INCOME ATTRIBUTABLE TO OWNERS OF THE PARENT	¥ 36,379	¥ 53,316	\$ 324,813
	<b>Yen</b>		<b>U.S. Dollars</b>
PER SHARE OF COMMON STOCK (Notes 2.w and 17):			
Basic net income	¥ 112.71	¥ 163.28	\$ 1.006
Diluted net income	112.51	162.97	1.005
Cash dividends applicable to the year	40.00	38.00	0.357

See notes to consolidated financial statements.



NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME  
YEAR ENDED MARCH 31, 2017

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2017	2016	2017
NET INCOME	¥ 36,364	¥ 53,440	\$ 324,679
OTHER COMPREHENSIVE LOSS (Note 16):			
Unrealized gain (loss) on available-for-sale securities	2,646	(5,587)	23,625
Deferred loss on derivatives under hedge accounting	(23)	(7)	(205)
Foreign currency translation adjustments	(9,828)	(14,126)	(87,751)
Share of other comprehensive income (loss) in associated companies	382	(390)	3,411
Defined retirement benefit plans	4,437	(8,422)	39,616
Total other comprehensive loss	(2,386)	(28,532)	(21,304)
COMPREHENSIVE INCOME	¥ 33,978	¥ 24,908	\$ 303,375
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:			
Owners of parent	¥ 34,042	¥ 25,432	\$ 303,946
Noncontrolling interests	(64)	(524)	(571)

See notes to consolidated financial statements.

NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY  
YEAR ENDED MARCH 31, 2017

	Thousands					
	Outstanding Number of Common Stock	Common Stock	Capital Surplus	Stock Acquisition Rights	Retained Earnings	Treasury Stock
Balance at April 1, 2015	326,527	¥ 69,849	¥ 72,099	¥ 887	¥ 224,040	¥ (1,403)
Net income attributable to owners of the parent	-	-	-	-	53,316	-
Cash dividends, ¥33 per share	-	-	-	-	(10,775)	-
Purchase of treasury stock	(22)	-	-	-	-	(63)
Disposal of treasury stock	74	-	(16)	-	-	102
Change in the parent's ownership interest due to transactions with noncontrolling interests	-	-	9	-	-	0
Net change in the year	-	-	-	(11)	-	-
Balance at March 31, 2016	326,579	69,849	72,092	876	266,581	(1,364)
Net income attributable to owners of the parent	-	-	-	-	36,379	-
Cash dividends, ¥40 per share	-	-	-	-	(12,964)	-
Purchase of treasury stock	(5,003)	-	-	-	-	(11,182)
Disposal of treasury stock	69	-	(37)	-	-	138
Change in the parent's ownership interest due to transactions with noncontrolling interests	-	-	-	-	-	-
Net change in the year	-	-	-	23	-	-
Balance at March 31, 2017	321,645	¥ 69,849	¥ 72,055	¥ 899	¥ 289,996	¥ (12,408)

	Common Stock	Capital Surplus	Stock Acquisition Rights	Retained Earnings	Treasury Stock
	Balance at March 31, 2016	\$ 623,652	\$ 643,678	\$ 7,821	\$ 2,380,187
Net income attributable to owners of the parent	-	-	-	324,813	-
Cash dividends, \$0.36 per share	-	-	-	(115,750)	-
Purchase of treasury stock	-	-	-	-	(99,839)
Disposal of treasury stock	-	(330)	-	-	1,232
Change in the parent's ownership interest due to transactions with noncontrolling interests	-	-	-	-	-
Net change in the year	-	-	206	-	-
Balance at March 31, 2017	\$ 623,652	\$ 643,348	\$ 8,027	\$ 2,589,250	\$ (110,786)

See notes to consolidated financial statements.

Millions of Yen

Accumulated Other Comprehensive Income						
Unrealized Gain (Loss) on Available-for-sale Securities	Deferred Loss on Derivatives under Hedge Accounting	Foreign Currency Translation Adjustments	Defined Retirement Benefit Plans	Total	Noncontrolling Interests	Total Equity
¥ 26,394	¥ 7	¥ 7,983	¥ (6,915)	¥ 392,941	¥ 11,060	¥ 404,001
-	-	-	-	53,316	-	53,316
-	-	-	-	(10,775)	-	(10,775)
-	-	-	-	(63)	-	(63)
-	-	-	-	86	-	86
-	-	-	-	9	-	9
(5,561)	(7)	(13,871)	(8,444)	(27,894)	(707)	(28,601)
20,833	-	(5,888)	(15,359)	407,620	10,353	417,973
-	-	-	-	36,379	-	36,379
-	-	-	-	(12,964)	-	(12,964)
-	-	-	-	(11,182)	-	(11,182)
-	-	-	-	101	-	101
-	-	-	-	-	-	-
2,625	(21)	(9,586)	4,645	(2,314)	(400)	(2,714)
¥ 23,458	¥ (21)	¥ (15,474)	¥ (10,714)	¥ 417,640	¥ 9,953	¥ 427,593

Thousands of U.S. Dollars (Note 1)

Accumulated Other Comprehensive Income						
Unrealized Gain (Loss) on Available-for-sale Securities	Deferred Loss on Derivatives under Hedge Accounting	Foreign Currency Translation Adjustments	Defined Retirement Benefit Plans	Total	Noncontrolling Interests	Total Equity
\$ 186,009	-	\$ (52,571)	\$ (137,134)	\$ 3,639,463	\$ 92,438	\$ 3,731,901
-	-	-	-	324,813	-	324,813
-	-	-	-	(115,750)	-	(115,750)
-	-	-	-	(99,839)	-	(99,839)
-	-	-	-	902	-	902
-	-	-	-	-	-	-
23,437	(188)	(85,588)	41,473	(20,660)	(3,572)	(24,232)
\$ 209,446	\$ (188)	\$ (138,159)	\$ (95,661)	\$ 3,728,929	\$ 88,866	\$ 3,817,795

**NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES**

**CONSOLIDATED STATEMENT OF CASH FLOWS  
YEAR ENDED MARCH 31, 2017**

	Millions of Yen		Thousands of
	2017	2016	U.S. Dollars (Note 1) 2017
<b>OPERATING ACTIVITIES:</b>			
Income before income taxes	¥ 57,522	¥ 70,585	\$513,589
Adjustments for:			
Income taxes - paid	(15,235)	(12,861)	(136,027)
Depreciation and amortization	26,615	27,366	237,634
Impairment loss on fixed assets	4,161	4,452	37,152
Decrease of provision for NAS battery safety measures	(1,756)	(1,937)	(15,679)
Increase (decrease) of provision for loss related to competition law	4,860	(4,992)	43,393
Equity in earnings of unconsolidated subsidiary and associated companies	(1,791)	(1,020)	(15,991)
Gain on sales of investment securities - net	(5,249)	(663)	(46,866)
Changes in assets and liabilities:			
Decrease (increase) in notes and accounts receivable - trade	8,623	(16,045)	76,991
Increase in inventories	(12,192)	(1,634)	(108,857)
Increase in other current assets	(2,665)	(360)	(23,795)
Decrease (increase) in net defined benefit assets	2,319	(2,942)	20,705
Increase (decrease) in notes and accounts payable - trade	3,242	(95)	28,946
Increase (decrease) in other current liabilities	9,621	(4,097)	85,902
Other - net	2,097	3,688	18,724
Total adjustments	22,650	(11,140)	202,232
Net cash provided by operating activities	80,172	59,445	715,821
<b>INVESTING ACTIVITIES:</b>			
Purchases of marketable securities	(46,300)	(32,049)	(413,393)
Proceeds from sales and redemption of marketable securities	38,766	32,312	346,125
Purchases of investment securities	(6)	(11,442)	(54)
Proceeds from sales and redemption of investment securities	6,920	10,320	61,786
Purchases of property, plant and equipment	(59,361)	(42,694)	(530,009)
Decrease (increase) in time deposits	2,786	(1,282)	24,875
Decrease (increase) in restricted deposits	2,142	(2,376)	19,125
Other - net	(1,400)	(562)	(12,500)
Net cash used in investing activities	(56,453)	(47,773)	(504,045)
<b>FINANCING ACTIVITIES:</b>			
Increase in short-term borrowings - net	1,603	528	14,313
Proceeds from long-term debt	30,122	16,826	268,946
Repayments of long-term debt	(19,239)	(6,691)	(171,777)
Purchase of treasury stock	(11,182)	(63)	(99,839)
Cash dividends	(12,964)	(10,776)	(115,750)
Other-net	(1,353)	(197)	(12,081)
Net cash used in financing activities	(13,013)	(373)	(116,188)
<b>FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS</b>			
	(2,078)	(3,851)	(18,552)
<b>NET INCREASE IN CASH AND CASH EQUIVALENTS</b>	8,628	7,448	77,036
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR</b>	136,065	128,617	1,214,866
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	¥ 144,693	¥ 136,065	\$1,291,902

See notes to consolidated financial statements.

# NGK INSULATORS, LTD. AND CONSOLIDATED SUBSIDIARIES

## Notes to Consolidated Financial Statements Year Ended March 31, 2017

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### 1. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS

The accompanying consolidated financial statements have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Act and its related accounting regulations and in accordance with accounting principles generally accepted in Japan ("Japanese GAAP"), which are different in certain respects as to the application and disclosure requirements of International Financial Reporting Standards.

In preparing these consolidated financial statements, certain reclassifications and rearrangements have been made to the consolidated financial statements issued domestically in order to present them in a form which is more familiar to readers outside Japan. In addition, certain reclassifications have been made in the 2016 consolidated financial statements to conform to the classifications used in 2017.

The consolidated financial statements are stated in Japanese yen, the currency of the country in which NGK INSULATORS, Ltd. (the "Company") is incorporated and operates. The translations of Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan and have been made at the rate of ¥112 to \$1, the approximate rate of exchange at March 31, 2017. Such translations should not be construed as representations that the Japanese yen amounts could be converted into U.S. dollars at that or any other rate.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

*a. Consolidation*—The consolidated financial statements as of March 31, 2017, include the accounts of the Company and its 58 significant (59 in 2016) subsidiaries (together, the "Group").

Under the control and influence concepts, those companies in which the Company, directly or indirectly, is able to exercise control over operations are fully consolidated, and those companies over which the Group has the ability to exercise significant influence are accounted for by the equity method.

Investments in one unconsolidated subsidiary and one associated company are accounted for by the equity method.

Investments in the remaining unconsolidated subsidiaries and associated company 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 be material.

The excess of the cost of acquisition over the fair value of the net assets of an acquired subsidiary at the date of acquisition is amortized over a period of five years.

All significant intercompany balances and transactions have been eliminated in consolidation. All material unrealized profit included in assets resulting from transactions within the Group is also eliminated. The fiscal years of subsidiaries are not necessarily the same as that of the Company. Accounts of ten foreign consolidated subsidiaries in China and Mexico, etc. have different fiscal years. Those subsidiaries provisionally closed at March 31 for the consolidation.

- b. *Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements***— Under Accounting Standards Board of Japan ("ASBJ") Practical Issues Task Force ("PITF") No. 18, 'Practical Solution on Unification of Accounting Policies Applied to Foreign Subsidiaries for the Consolidated Financial Statements', the accounting policies and procedures applied to a parent company and its subsidiaries for similar transactions and events under similar circumstances should in principle be unified for the preparation of the consolidated financial statements. However, financial statements prepared by foreign subsidiaries in accordance with either International Financial Reporting Standards or generally accepted accounting principles in the United States of America (Financial Accounting Standards Board Accounting Standards Codification—"FASB ASC") tentatively may be used for the consolidation process, except for the following items that should be adjusted in the consolidation process so that net income is accounted for in accordance with Japanese GAAP, unless they are not material: (a) amortization of goodwill; (b) scheduled amortization of actuarial gain or loss of pensions that has been recorded in equity through other comprehensive income; (c) expensing capitalized development costs of R&D; and (d) cancellation of the fair value model of accounting for property, plant and equipment and investment properties and incorporation of the cost model of accounting.
- c. *Unification of Accounting Policies Applied to Foreign Associated Companies for the Equity Method***—ASBJ Statement No. 16, "Accounting Standard for Equity Method of Accounting for Investments," requires adjustments to be made to conform the associate's accounting policies for similar transactions and events under similar circumstances to those of the parent company when the associate's financial statements are used in applying the equity method, unless it is impracticable to determine such adjustments. In addition, financial statements prepared by foreign associated companies in accordance with either International Financial Reporting Standards or generally accepted accounting principles in the United States of America tentatively may be used in applying the equity method if the following items are adjusted so that net income is accounted for in accordance with Japanese GAAP, unless they are not material: (a) amortization of goodwill; (b) scheduled amortization of actuarial gain or loss of pensions that has been recorded in equity through other comprehensive income; (c) expensing capitalized development costs of R&D; and (d) cancellation of the fair value model of accounting for property, plant and equipment and investment properties and incorporation of the cost model of accounting.

*d. Business Combinations*—Business combinations are accounted for using the purchase method. Acquisition-related costs, such as advisory fees or professional fees, are accounted for as expenses in the periods in which the costs are incurred. If the initial accounting for a business combination is incomplete by the end of the reporting period in which the business combination occurs, an acquirer shall report in its financial statements provisional amounts for the items for which the accounting is incomplete. During the measurement period, which shall not exceed one year from the acquisition, the acquirer shall retrospectively adjust the provisional amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date and that would have affected the measurement of the amounts recognized as of that date. Such adjustments shall be recognized as if the accounting for the business combination had been completed at the acquisition date. A parent's ownership interest in a subsidiary might change if the parent purchases or sells ownership interests in its subsidiary. The carrying amount of noncontrolling interest is adjusted to reflect the change in the parent's ownership interest in its subsidiary while the parent retains its controlling interest in its subsidiary. Any difference between the fair value of the consideration received or paid and the amount by which the noncontrolling interest is adjusted is accounted for as capital surplus as long as the parent retains control over its subsidiary.

*e. Cash Equivalents*—Cash equivalents are short-term investments that are readily convertible into cash and that are exposed to insignificant risk of changes in value.

Cash equivalents include time deposits, certificates of deposit, and investment trusts that represent short-term investments, all of which mature or become due within three months of the date of acquisition.

*f. Inventories*—Inventories are stated at the lower of cost, determined principally by the average method for finished products, work in process, and raw materials, or net selling value (see Note 4). Write-downs of inventories in the amounts of ¥1,545 million (\$13,795 thousand) and ¥214 million for the years ended March 31, 2017 and 2016, respectively, were included in cost of sales. Costs of contracts in progress are stated at cost, determined by the specific identification method.

*g. Allowance for Doubtful Accounts*—To provide for the loss from doubtful accounts, the allowance for doubtful accounts is calculated using the historical rate of actual losses for normal receivables and the estimated nonrecoverable amount for specific doubtful receivables after considering the recoverability of each account.

*h. Marketable and Investment Securities*—Marketable and investment securities are classified and accounted for, depending on management's intent, as follows: (1) held-to-maturity debt securities, for which there is the positive intent and ability to hold to maturity, are reported at amortized cost; and (2) available-for-sale securities, which are not classified as held-to-maturity debt securities, are reported at fair value, with unrealized gains and losses, net of applicable taxes, reported in a separate component of equity.

Nonmarketable available-for-sale securities are stated at cost, determined by the moving-average method. For other-than-temporary declines in fair value, investment securities are reduced to net realizable value by a charge to income.



- i. Property, Plant and Equipment*—Property, plant, and equipment are stated at cost. Depreciation of property, plant and equipment of the Company and its consolidated subsidiaries is computed by the straight-line method.

The range of useful lives is principally from 15 to 50 years for buildings and structures and from 3 to 12 years for machinery and equipment.

- j. Long-Lived Assets*—The Group reviews its long-lived assets for impairment whenever events or changes in circumstance indicate the carrying amount of an asset or asset group may not be recoverable. An impairment loss is recognized if the carrying amount of an asset or asset group exceeds the sum of the undiscounted future cash flows expected to result from the continued use and eventual disposition of the asset or asset group. The impairment loss would be measured as the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of the discounted cash flows from the continued use and eventual disposition of the asset or the net selling price at disposition.

- k. Retirement and Pension Plans*—Net defined benefit liability (asset) is accounted for based on the projected benefit obligations and plan assets at the balance sheet date. The projected benefit obligations are attributed to periods on a benefit-formula basis. Actuarial gains and losses and past service costs that are yet to be recognized in profit or loss are recognized within equity (accumulated other comprehensive income) after adjusting for tax effects. Actuarial gains and losses are amortized and charged to expense on a straight-line basis over 10 years within the expected average remaining service period of the employees from the consolidated fiscal year following the year when they occur. Past service costs are amortized and charged to expense on a straight-line basis, mainly over 10 years, within the expected average remaining service period of the employees.

In some consolidated subsidiaries in the United States, the costs of postretirement benefits other than pension plans are allocated to each period based on the estimated service period of employees, and are included in net defined benefit liability because they are similar to retirement benefits.

Certain domestic consolidated subsidiaries apply the simplified method to state the liability based on the amount that would be paid if employees retired at the consolidated balance sheet date.

- l. Stock Options*— The cost of employee stock options is measured based on the fair value at the date of grant and recognized as compensation expenses over the vesting period as consideration for receiving goods or services. In the consolidated balance sheet, the stock options are presented as stock acquisition rights as a separate component of equity until exercised.

- m. Research and Development Costs*—Research and development costs are charged to income as incurred.
- n. Provision for Product Warranties Costs*—The Company and some consolidated subsidiaries estimate and accrue the costs of warranty repair for products sold in reserve for future expenses.
- o. Provision for NAS Battery Safety Measures*—In September 2011, the Company-manufactured NAS® (sodium-sulfur) batteries used for storing electricity caught fire. The Company, in connection with this incident, reserved an allowance as "Provision for NAS Battery safety measures" for anticipated future expenses related to safety measures necessary to expand NAS battery business to the extent that such amount can be reasonably estimated.
- p. Provision for Loss Related to Competition Law*—The Company estimated and recorded an allowance for estimated losses related to competition law.
- q. Revenue Recognition*—The Group recognizes revenue mainly upon the delivery of products, based on the contract terms and other relevant factors.
- r. Construction Contracts*—Construction revenue and construction costs are recognized by the percentage-of-completion method if the outcome of a construction contract can be estimated reliably. When total construction revenue, total construction costs and the stage of completion of the contract at the balance sheet date can be reliably measured, the outcome of a construction contract is deemed to be estimated reliably. If the outcome of a construction contract cannot be reliably estimated, the completed-contract method should be applied. When it is probable that the total construction costs will exceed total construction revenue, an estimated loss on the contract should be immediately recognized by providing for a loss on such construction contracts.
- s. Income Taxes*—The provision for current income taxes is computed based on the pretax income included in the consolidated statement of income. The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Deferred taxes are measured by applying currently enacted income tax rates to the temporary differences.

The Company applied ASBJ Guidance No. 26, 'Guidance on Recoverability of Deferred Tax Assets,' effective April 1, 2016.

- t. Foreign Currency Transactions*—All short-term and long-term monetary receivables and payables denominated in foreign currencies are translated into Japanese yen at the exchange rates at the balance sheet date. The foreign exchange gains and losses from translation are recognized in the consolidated statement of income to the extent that they are not hedged by forward exchange contracts.

- u. Foreign Currency Financial Statements*—The balance sheet accounts of the consolidated foreign subsidiaries are translated into Japanese yen at the current exchange rate as of the balance sheet date except for equity, which is translated at the historical rate. Differences arising from such translation are shown as "Foreign currency translation adjustments" under accumulated other comprehensive income in a separate component of equity. Revenue and expense accounts of consolidated foreign subsidiaries are translated into yen at the average exchange rate.
- v. Derivatives and Hedging Activities*—The Group uses derivative financial instruments to manage its exposures to fluctuations in foreign exchange and interest rates. Foreign exchange forward contracts, interest rate and currency swaps, and interest rate swaps are utilized by the Group to reduce foreign currency exchange and interest rate risks. The Group does not enter into derivatives for trading or speculative purposes.

Derivative financial instruments are classified and accounted for as follows: (1) all derivatives are recognized as either assets or liabilities and measured at fair value, and gains or losses on derivative transactions are recognized in the consolidated statement of income; and (2) for derivatives used for hedging purposes, if such derivatives qualify for hedge accounting because of high correlation and effectiveness between the hedging instruments and the hedged items, gains or losses on derivatives are deferred until maturity of the hedged transactions.

Foreign currency forward contracts employed to hedge foreign exchange exposures for export sales and import purchases are measured at fair value and the unrealized gains/losses are recognized in income. Forward contracts applied for forecasted (or committed) transactions are also measured at fair value but the unrealized gains/losses are deferred until the underlying transactions are completed.

Receivables or payables denominated in foreign currencies for which foreign exchange forward contracts are used to hedge the foreign currency fluctuations are translated at the contracted rate if the forward contracts qualify for hedge accounting.

Long-term debt denominated in foreign currencies for which currency and interest rate swaps are used to hedge the foreign currency and interest rate fluctuations is also translated at the contracted rate if the forward contracts qualify for hedge accounting.

Interest rate swaps which qualify for hedge accounting and meet specific matching criteria are not remeasured at market value, but the differential paid or received under the swap agreements is recognized and included in interest expense.

- w. **Per Share Information**—Basic net income per share is computed by dividing net income attributable to common shareholders by the weighted-average number of common shares outstanding for the period, retroactively adjusted for stock splits.

Diluted net income per share reflects the potential dilution that could occur if securities were exercised or converted into common stock. Diluted net income per share of common stock assumes full exercise of outstanding stock acquisition rights.

Cash dividends per share presented in the accompanying consolidated statement of income are dividends applicable to the respective fiscal years, including dividends to be paid after the end of the year.

- x. **Change in presentation**—Prior to April 1, 2016, "Gain on sales of investment securities" and "Increase in other current assets" were included in the other-net among the operating activity section of the consolidated statement of cash flows. Since during the year ended March 31, 2017, the amount increased significantly, such amount is disclosed separately in the operating activity section of the consolidated statement of cash flows for the year ended March 31, 2017. The amount of ¥(1,023) million included in other-net for the year ended March 31, 2016 was reclassified to "Gain on sales of investment securities-net" in the amount of ¥(663) million and "Increase in other current assets" in the amount of ¥(360) million.

Prior to April 1, 2016, "Proceeds from sales of property, plant and equipment" was disclosed separately in the investing activity section of the consolidated statement of cash flows. Since during the year ended March 31, 2017, the amount decreased significantly, such amount is included in the other-net among the investing activity section of the consolidated statement of cash flows for the year ended March 31, 2017. The amount of ¥166 million stated as "Proceeds from sales of property, plant and equipment" for the year ended March 31, 2016 was reclassified to the other-net among the investing activity section.

Prior to April 1, 2016, "Purchase of treasury stock" was included in the other-net among the financing activity section of the consolidated statement of cash flows. Since during the year ended March 31, 2017, the amount increased significantly, such amount is disclosed separately in the financing activity section of the consolidated statement of cash flows for the year ended March 31, 2017. The amount of ¥(63) million included in other-net for the year ended March 31, 2016 was reclassified to "Purchase of treasury stock".

### 3. MARKETABLE AND INVESTMENT SECURITIES

Marketable and investment securities as of March 31, 2017 and 2016, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Current:			
Investment trusts and other	¥ 13,201	¥ 11,845	\$ 117,866
Debt securities	23,559	7,548	210,348
Total	¥ 36,760	¥ 19,393	\$ 328,214
Noncurrent:			
Equity securities and other	¥ 52,069	¥ 48,794	\$ 464,901
Debt securities	1,195	12,466	10,670
Total	¥ 53,264	¥ 61,260	\$ 475,571

The costs and aggregate fair values of marketable and investment securities at March 31, 2017 and 2016, were as follows:

March 31, 2017	Millions of Yen			Fair Value
	Cost	Unrealized Gains	Unrealized Losses	
Securities classified as:				
Available-for-sale:				
Equity securities	¥ 17,752	¥ 32,413	¥ 188	¥ 49,977
Investment trusts and other	12,579	667	45	13,201
Held-to-maturity:				
Debt securities	24,754	415	3	25,166

March 31, 2016	Millions of Yen			Fair Value
	Cost	Unrealized Gains	Unrealized Losses	
Securities classified as:				
Available-for-sale:				
Equity securities	¥ 18,417	¥ 29,353	¥ 1,068	¥ 46,702
Investment trusts and other	11,447	546	148	11,845
Held-to-maturity:				
Debt securities	20,014	200	1	20,213

March 31, 2017	Thousands of U.S. Dollars			Fair Value
	Cost	Unrealized Gains	Unrealized Losses	
Securities classified as:				
Available-for-sale:				
Equity securities	\$ 158,500	\$ 289,402	\$ 1,679	\$ 446,223
Investment trusts and other	112,313	5,955	402	117,866
Held-to-maturity:				
Debt securities	221,018	3,705	27	224,696

Proceeds from sales of available-for-sale securities (including marketable securities and investment securities) for the years ended March 31, 2017 and 2016, were ¥6,464 million (\$57,714 thousand) and ¥1,486 million, respectively. Realized gains on these sales, computed on the moving-average cost basis, were ¥5,249 million (\$ 46,866 thousand) and ¥747 million for the years ended March 31, 2017 and 2016, respectively. Realized losses on these sales, computed on the moving-average cost basis, were ¥2 million (\$ 18 thousand) for the year ended March 31, 2017. There was no realized losses for the year ended March 31, 2016.

#### 4. INVENTORIES

Inventories at March 31, 2017 and 2016, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Finished products	¥ 46,762	¥ 46,265	\$ 417,518
Work in process	13,170	11,872	117,589
Raw materials and supplies	58,562	50,471	522,875
Cost of contracts in progress	588	337	5,250
Total	¥ 119,082	¥108,945	\$ 1,063,232

#### 5. LONG-LIVED ASSETS

The Group reviewed its long-lived assets for impairment as of March 31, 2017. As a result, the Group recognized an impairment loss of ¥4,161 million (\$37,152 thousand) as other expense mainly in the following groups which deteriorated in profitability due to changes in the market and business environment, and the carrying amounts of the relevant assets were written down to the recoverable amount for the year ended March 31, 2017. The recoverable amounts of those assets were measured at their net selling values, based on appraisal values assessed by a third party.

Groups	Asset category	Location	Millions of Yen	Thousands of U.S. Dollars
			2017	2017
Insulator business	Buildings and structures, Machinery and equipment and other	the United States	¥ 1,744	\$ 15,572
NAS battery business	Machinery and equipment, Construction in progress and other	Kasugai-shi, Aichi-ken and other	1,162	10,375
Idle assets	Machinery and equipment, Construction in progress and other	Tsuru-shi, Yamanashi-ken	1,158	10,339
Soshin Electric group business	Buildings and structures, Machinery and equipment, Land and other	Miyazaki-shi, Miyazaki-ken and other	97	866

The Group-recognized impairment losses for the year ended March 31, 2017 were as follows:

	<b>Millions of Yen</b>	<b>Thousands of U.S. Dollars</b>
	<b>2017</b>	<b>2017</b>
Buildings and structures	¥ 466	\$ 4,161
Machinery and equipment	1,657	14,795
Construction in progress	1,842	16,446
Land	188	1,679
Other	8	71
Total	<u>¥ 4,161</u>	<u>\$ 37,152</u>

The Group reviewed its long-lived assets for impairment as of March 31, 2016. As a result, the Group recognized an impairment loss of ¥4,552 million as other expense mainly in the following groups which deteriorated in profitability due to changes in the market and business environment, and the carrying amounts of the relevant assets were written down to the recoverable amount for the year ended March 31, 2016. The recoverable amounts of those assets were measured at their net selling values, based on appraisal values assessed by a third party.

<b>Groups</b>	<b>Asset category</b>	<b>Location</b>	<b>Millions of Yen</b>
			<b>2016</b>
NAS battery business	Machinery and equipment	Kasugai-shi, Aichi-ken and other	¥ 2,660
Industrial process apparatuses business	Buildings and structures, Machinery and equipment and other	Handa-shi, Aichi-ken and other	1,115
Soshin Electric group business	Buildings and structures, Machinery and equipment and other	Miyazaki-shi, Miyazaki-ken and other	658

The Group-recognized impairment losses for the year ended March 31, 2016 were as follows:

	<b>Millions of Yen</b>
	<b>2016</b>
Buildings and structures	¥ 426
Machinery and equipment	3,670
Construction in progress	176
Other	161
Total	<u>¥ 4,433</u>



## 6. SHORT-TERM BORROWINGS AND LONG-TERM DEBT

Short-term borrowings at March 31, 2017 and 2016, consisted of notes to banks. The weighted-average interest rates on short-term borrowings as of March 31, 2017 and 2016, were 2.5% and 2.3%, respectively.

Long-term debt at March 31, 2017 and 2016, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Borrowings from banks and other financial institutions due serially through 2036, with weighted-average interest rates of 1.1% (2017) and 1.3% (2016)	¥ 168,133	¥ 159,423	\$ 1,501,188
Total	168,133	159,423	1,501,188
Less: portion due within one year	(6,973)	(20,243)	(62,259)
Long-term debt, less current portion	¥ 161,160	¥ 139,180	\$ 1,438,929

Annual maturities of long-term debt at March 31, 2017, were as follows:

Year Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2018	¥6,973	\$62,259
2019	10,757	96,045
2020	29,122	260,018
2021	7,553	67,438
2022	16,317	145,688
2023 and thereafter	97,411	869,740
Total	¥168,133	\$1,501,188

## 7. RETIREMENT AND PENSION PLANS

The Company and certain consolidated subsidiaries have severance payment plans for employees.

The Company and certain domestic subsidiaries have unfunded lump-sum payment plans, defined benefit pension plans, smaller enterprise retirement allowance mutual aid plans, and specific retirement allowance mutual aid plans.

Furthermore, additional retirement benefits that are not included in net defined benefit liability are paid in certain cases.

Some of the domestic subsidiaries participate in multiemployer contributory funded plans, and the plans are accounted for as if the plans were defined contribution plans in the case that the plan assets attributable to the contributions by the subsidiaries cannot be rationally determined. In accordance with the Defined Benefit Pension Plan Law enacted in April 2002, those domestic subsidiaries applied for an exemption from the obligation to pay benefits for future employee services related to the substitutional portion which would result in the transfer of the pension obligations and related assets to the government upon approval. Those domestic subsidiaries obtained approval for an exemption from the future obligation by the Ministry of Health Labor and Welfare on October 1, 2014.

Certain U.S. subsidiaries have defined benefit plans and defined contribution plans. The simplified calculation method was applied to measure the liability and the cost of defined benefit plans and lump-sum payment plans in immaterial domestic subsidiaries.

### a. Defined Benefit Pension Plans

- (1) The changes in defined benefit obligation for the years ended March 31, 2017 and 2016 (except for the plans to which the simplified method was applied), were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Balance at beginning of year	¥ 97,514	¥ 86,545	\$ 870,661
Current service cost	3,292	2,787	29,393
Interest cost	920	1,514	8,214
Actuarial (gains) losses	(343)	12,368	(3,063)
Benefits paid	(4,774)	(4,910)	(42,625)
Past service cost	(1,779)	(5)	(15,884)
Decrease associated with abolishment of retirement benefit plans	(2,630)	-	(23,482)
Others	(148)	(785)	(1,321)
Balance at end of year	¥ 92,052	¥ 97,514	\$ 821,893

Note: " Decrease associated with abolishment of retirement benefit plans " is due to the partial abolishment of retirement benefit plan of the Company's subsidiary in the U.S.

- (2) The changes in plan assets for the years ended March 31, 2017 and 2016 (except for the plans to which the simplified method was applied), were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Balance at beginning of year	¥ 83,233	¥ 82,811	\$ 743,152
Expected return on plan assets	1,631	1,680	14,563
Actuarial losses	(541)	(2,032)	(4,830)
Contributions from the employer	2,000	5,132	17,857
Benefits paid	(3,522)	(3,967)	(31,447)
Decrease associated with abolishment of retirement benefit plans	(2,672)	-	(23,857)
Others	(106)	(391)	(947)
Balance at end of year	¥ 80,023	¥ 83,233	\$ 714,491

Note: " Decrease associated with abolishment of retirement benefit plans " is due to the partial abolishment of retirement benefit plan of the Company's subsidiary in the U.S.

- (3) The changes in net defined benefit liability, where the simplified method was applied to measure the liability, for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Balance at beginning of year	¥ 1,886	¥ 2,013	\$ 16,839
Pension costs	261	240	2,330
Benefits paid	(93)	(287)	(830)
Contributions to pension plans	(81)	(80)	(723)
Balance at end of year	¥ 1,973	¥ 1,886	\$ 17,616

- (4) Reconciliation between the asset and the liability recorded in the consolidated balance sheet and the balances of defined benefit obligation and plan assets as of March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Funded defined benefit obligation	¥ 83,777	¥ 89,468	\$ 748,009
Plan assets	(80,932)	(84,108)	(722,607)
	2,845	5,360	25,402
Unfunded defined benefit obligation	11,157	10,807	99,616
Net liability arising from defined benefit obligation	¥ 14,002	¥ 16,167	\$ 125,018

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Net defined benefit liability	¥ 20,927	¥ 21,419	\$ 186,848
Net defined benefit asset	(6,925)	(5,252)	(61,830)
Net liability arising from defined benefit obligation	¥ 14,002	¥ 16,167	\$ 125,018

- (5) The components of net periodic benefit costs for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Service cost	¥ 3,292	¥ 2,787	\$ 29,393
Interest cost	920	1,514	8,214
Expected return on plan assets	(1,631)	(1,680)	(14,563)
Recognized actuarial losses	3,520	1,359	31,429
Amortization of past service cost	(173)	(351)	(1,544)
Benefit costs measured by the simplified method	261	240	2,330
Net periodic benefit costs	¥ 6,189	¥ 3,869	\$ 55,259

Note: Other than above, the Company recognized "Loss on abolishment of retirement benefit plan of subsidiaries and associates" totaling ¥1,774 million (\$15,839 thousand) under other expenses for the year ended March 31, 2017. This loss relates to the partial abolishment of retirement benefit plan of the Company's consolidated subsidiary in the U.S.

- (6) Amounts recognized in other comprehensive income (before income tax effect) in respect of defined retirement benefit plans for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Actuarial losses (gains)	¥ 5,176	¥ (12,771)	\$ 46,215
Prior service cost	1,607	(341)	14,348
Net periodic benefit costs	¥ 6,783	¥ (13,112)	\$ 60,563

- (7) Amounts recognized in accumulated other comprehensive income (before income tax effect) in respect of defined retirement benefit plans as of March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Unrecognized actuarial gains	¥ (16,455)	¥ (21,630)	\$ (146,920)
Unrecognized past service cost	2,035	428	18,170
Total	¥ (14,420)	¥ (21,202)	\$ (128,750)

- (8) Plan assets

a. Components of plan assets

Plan assets as of March 31, 2017 and 2016, consisted of the following:

	2017	2016
Assets in an insurer's general account	40 %	39 %
Equity investments	16 %	22 %
Debt investments	32 %	30 %
Cash and cash equivalents	1 %	1 %
Others	11 %	8 %
Total	100 %	100 %

b. Method of determining the expected rate of return on plan assets

The expected rate of return on plan assets is determined considering the long-term rates of return which are expected currently and in the future from the various components of the plan assets.

(9) Assumptions used for the years ended March 31, 2017 and 2016, were set forth as follows:

	<u>2017</u>	<u>2016</u>
Discount rate	Primarily 0.6%	Primarily 0.6%
Expected rate of return on plan assets	Primarily 1.5%	Primarily 1.5%
Expected rate of future salary increase	Primarily 3.4% — 4.7%	Primarily 2.0% — 6.3%

***b. Funded Status of the Multiemployer Contributory Funded Pension Plans***

Some subsidiaries participate in a multiemployer plan where the amount of plan assets corresponding to the contributions made by the subsidiaries cannot be reasonably calculated. Therefore, it is accounted for using the same method as a defined contribution plan.

The contributions to such multiemployer plan, which are accounted for using the same method as a defined contribution plan, were ¥105 million (\$938 thousand) and ¥107 million for the years ended March 31, 2017 and 2016, respectively.

(1) The funded status of the multiemployer plan as of March 31, 2017 and 2016, was as follows:

	<u>Millions of Yen</u>		<u>Thousands of U.S. Dollars</u>
	<u>2017</u>	<u>2016</u>	<u>2017</u>
Plan assets	¥ 122,898	¥317,424	\$ 1,097,304
Sum of actuarial liabilities of pension plan and minimum actuarial reserve	(152,504)	(302,958)	(1,361,643)
Net balance	<u>¥ (29,606)</u>	<u>¥ 14,466</u>	<u>\$ (264,339)</u>

The net balance above is mainly a result of the following:

	<u>Millions of Yen</u>		<u>Thousands of U.S. Dollars</u>
	<u>2017</u>	<u>2016</u>	<u>2017</u>
Prior service cost (Accumulated deficit)	¥ 21,959	¥ 18,844	\$ 196,063
Retained earnings	(112,803)	8,979	(1,007,170)
General reserve	105,156	24,331	938,893

Prior service cost under the plan is amortized on a straight-line basis over 20 years.

(2) The contribution ratio of the Group in the multiemployer plan for the years ended March 31, 2017 and 2016 were 2.0% and 1.9% respectively.

***c. Defined Contribution Pension Plans***

The Group's contributions to defined contribution pension plan funds for the years ended March 31, 2017 and 2016 were ¥218 million (\$1,946 thousand) and ¥219 million, respectively.

## 8. EQUITY

Japanese companies are subject to the Companies Act of Japan (the "Companies Act"). The significant provisions in the Companies Act that affect financial and accounting matters are summarized below:

### *a. Dividends*

Under the Companies Act, companies can pay dividends at any time during the fiscal year in addition to the year-end dividend upon resolution at the shareholders' meeting. Additionally, for companies that meet certain criteria including (1) having a Board of Directors, (2) having independent auditors, (3) having an Audit & Supervisory Board, and (4) the term of service of the directors being prescribed as one year rather than the normal two-year term by its articles of incorporation, the Board of Directors may declare dividends (except for dividends-in-kind) at any time during the fiscal year if the company has prescribed so in its articles of incorporation. However, the Company does not meet all the above criteria.

Semiannual interim dividends may also be paid once a year upon resolution by the Board of Directors if the articles of incorporation of the company so stipulate. The Companies Act provides certain limitations on the amounts available for dividends or the purchase of treasury stock. The limitation is defined as the amount available for distribution to the shareholders, but the amount of net assets after dividends must be maintained at no less than ¥3 million.

### *b. Increases/Decreases and Transfer of Common Stock, Reserve and Surplus*

The Companies Act requires that an amount equal to 10% of dividends must be appropriated as a legal reserve (a component of retained earnings) or as additional paid-in capital (a component of capital surplus), depending on the equity account charged upon the payment of such dividends, until the aggregate amount of legal reserve and additional paid-in capital equals 25% of the common stock. Under the Companies Act, the total amount of additional paid-in capital and legal reserve may be reversed without limitation. The Companies Act also provides that common stock, legal reserve, additional paid-in capital, other capital surplus and retained earnings can be transferred among the accounts within equity under certain conditions upon resolution of the shareholders.

### *c. Treasury Stock and Treasury Stock Acquisition Rights*

The Companies Act also provides for companies to purchase treasury stock and dispose of such treasury stock by resolution of the Board of Directors. The amount of treasury stock purchased cannot exceed the amount available for distribution to the shareholders which is determined by a specific formula. Under the Companies Act, stock acquisition rights are presented as a separate component of equity. The Companies Act also provides that companies can purchase both treasury stock acquisition rights and treasury stock. Such treasury stock acquisition rights are presented as a separate component of equity or deducted directly from stock acquisition rights.

During the year ended March 31, 2017, the Company acquired 5,000,000 shares of treasury stock based on the resolution at the meeting of the board of directors held on April 28, 2016.



## 9. STOCK OPTIONS

The stock options outstanding as of March 31, 2017 were as follows:

<b>Stock Option Scheme</b>	<b>Persons Originally Granted</b>	<b>Number of Options Originally Granted</b>	<b>Date of Grant</b>	<b>Exercise Price</b>	<b>Exercise Period</b>
2005 Stock Option Scheme	12 directors 2 full-time audit and supervisory board members 10 officers	Common shares 180,000 shares	August 5, 2005	¥1 (\$0.01)	From August 5, 2005 to June 30, 2035
2006 Stock Option Scheme (2-1)	12 directors 2 full-time audit and supervisory board members	Common shares 113,000 shares	August 11, 2006	¥1 (\$0.01)	From August 12, 2006 to June 30, 2036
2006 Stock Option Scheme (2-2)	10 officers	Common shares 41,000 shares	August 11, 2006	¥1 (\$0.01)	From August 12, 2006 to June 30, 2036
2007 Stock Option Scheme	12 directors 10 officers	Common shares 62,000 shares	August 30, 2007	¥1 (\$0.01)	From August 31, 2007 to June 30, 2037
2008 Stock Option Scheme	11 directors 9 officers	Common shares 57,000 shares	August 13, 2008	¥1 (\$0.01)	From August 14, 2008 to June 30, 2038
2009 Stock Option Scheme	12 directors 10 officers	Common shares 62,000 shares	August 17, 2009	¥1 (\$ 0.01)	From August 18, 2009 to June 30, 2039
2010 Stock Option Scheme	12 directors 11 officers	Common shares 64,000 shares	August 16, 2010	¥1 (\$0.01)	From August 17, 2010 to June 30, 2040
2011 Stock Option Scheme	11 directors 11 officers	Common shares 62,000 shares	August 15, 2011	¥1 (\$0.01)	From August 16, 2011 to June 30, 2041

<b>Stock Option Scheme</b>	<b>Persons Originally Granted</b>	<b>Number of Options Originally Granted</b>	<b>Date of Grant</b>	<b>Exercise price</b>	<b>Exercise Period</b>
2012 Stock Option Scheme	10 directors 14 officers	Common shares 66,000 shares	August 15, 2012	¥1  (\$0.01)	From August 16, 2012 to June 30, 2042
2013 Stock Option Scheme	9 directors 16 officers	Common shares 61,000 Shares	August 16, 2013	¥1  (\$0.01)	From August 17, 2013 to June 30, 2043
2014 Stock Option Scheme	10 directors 13 officers	Common shares 57,000 Shares	August 19, 2014	¥1  (\$0.01)	From August 20, 2014 to June 30, 2044
2015 Stock Option Scheme	10 directors 10 officers	Common shares 52,000 Shares	August 18, 2015	¥1  (\$0.01)	From August 19, 2015 to June 30, 2045
2016 Stock Option Scheme	10 directors 13 officers	Common shares 60,000 Shares	August 16, 2016	¥1  (\$0.01)	From August 17, 2016 to June 30, 2046

The stock option activity is as follows:

	<b>2005</b>	<b>2006</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
	<b>Stock</b>	<b>Stock</b>	<b>Stock</b>	<b>Stock</b>	<b>Stock</b>	<b>Stock</b>
	<b>Option</b>	<b>Option</b>	<b>Option</b>	<b>Option</b>	<b>Option</b>	<b>Option</b>
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
		<b>(2-1)</b>	<b>(2-2)</b>			
			(Shares)			
<u>For the year ended March 31, 2016</u>						
<u>Non-vested</u>						
April 1, 2015						
— Outstanding	-	-	-	-	-	-
Granted	-	-	-	-	-	-
Canceled	-	-	-	-	-	-
Vested	-	-	-	-	-	-
March 31, 2016						
— Outstanding	-	-	-	-	-	-
<u>Vested</u>						
April 1, 2015						
— Outstanding	91,000	59,000	24,000	38,000	50,000	59,000
Vested	-	-	-	-	-	-
Exercised	21,000	5,000	7,000	2,000	10,000	13,000
Canceled	-	-	-	6,000	6,000	8,000
March 31, 2016						
— Outstanding	70,000	54,000	17,000	30,000	34,000	38,000
<u>For the year ended March 31, 2017</u>						
<u>Non-vested</u>						
March 31, 2016						
— Outstanding	-	-	-	-	-	-
Granted	-	-	-	-	-	-
Canceled	-	-	-	-	-	-
Vested	-	-	-	-	-	-
March 31, 2017						
— Outstanding	-	-	-	-	-	-
<u>Vested</u>						
March 31, 2016						
— Outstanding	70,000	54,000	17,000	30,000	34,000	38,000
Vested	-	-	-	-	-	-
Exercised	4,000	-	9,000	6,000	3,000	4,000
Canceled	-	-	-	-	-	-
March 31, 2017						
— Outstanding	66,000	54,000	8,000	24,000	31,000	34,000
Exercise price	¥1	¥1	¥1	¥1	¥1	¥1
	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)
Average stock price at exercise	¥2,403	N/A	¥2,214	¥2,183	¥2,067	¥2,167
	(\$21.46)		(\$19.77)	(\$19.49)	(\$18.46)	(\$19.35)
Fair value price at grant date	-	¥1,506	¥1,506	¥3,658	¥1,434	¥2,072
		(\$13.45)	(\$13.45)	(\$32.66)	(\$12.80)	(\$18.50)

<b>2010 Stock Option</b>	<b>2011 Stock Option</b>	<b>2012 Stock Option</b>	<b>2013 Stock Option</b>	<b>2014 Stock Option</b>	<b>2015 Stock Option</b>	<b>2016 Stock Option</b>
	(Shares)				(Shares)	
-	-	-	-	-	-	-
-	-	-	-	-	52,000	-
-	-	-	-	-	-	-
-	-	-	-	-	52,000	-
-	-	-	-	-	-	-
61,000	62,000	66,000	61,000	57,000	-	-
-	-	-	-	-	52,000	-
10,000	2,000	2,000	2,000	-	-	-
4,000	10,000	2,000	2,000	2,000	-	-
47,000	50,000	62,000	57,000	55,000	52,000	-
-	-	-	-	-	-	-
-	-	-	-	-	-	60,000
-	-	-	-	-	-	-
-	-	-	-	-	-	60,000
-	-	-	-	-	-	-
47,000	50,000	62,000	57,000	55,000	52,000	-
-	-	-	-	-	-	60,000
8,000	7,000	14,000	11,000	3,000	-	-
-	-	-	-	-	-	-
39,000	43,000	48,000	46,000	52,000	52,000	60,000
¥1	¥1	¥1	¥1	¥1	¥1	¥1
(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)
¥2,376	¥2,268	¥2,384	¥2,358	¥2,055	N/A	N/A
(\$21.21)	(\$20.25)	(\$21.29)	(\$21.05)	(\$18.35)		
¥1,289	¥1,100	¥923	¥1,276	¥2,510	¥2,850	¥2,060
(\$11.51)	(\$9.82)	(\$8.24)	(\$11.39)	(\$22.41)	(\$25.45)	(\$18.39)

The Assumptions Used to Measure the Fair Value of the 2016 Stock Option

Estimate method:	Black-Scholes option-pricing model
Volatility of stock price:	37.60%
Estimated remaining outstanding period:	Four-and-a-half years
Estimated dividend:	¥38 per share
Risk-free interest rate:	Δ0.169%

**10. INCOME TAXES**

The Company and its domestic subsidiaries are subject to Japanese national and local income taxes which, in the aggregate, resulted in normal effective statutory tax rates of approximately 30.7% and 32.9% for the years ended March 31, 2017 and 2016, respectively.

The tax effects of significant temporary differences and tax loss carryforwards which resulted in deferred tax assets and liabilities at March 31, 2017 and 2016 were as follows:

	Millions of Yen		Thousands of U.S. Dollars	
	2017	2016	2017	
Deferred tax assets:				
Inventories	¥ 9,714	¥ 9,239	\$ 86,732	
Accounts payable and accrued expenses	3,121	3,124	27,866	
Enterprise taxes payable	465	683	4,152	
Property, plant and equipment	8,418	7,530	75,161	
Pension and severance cost	6,345	6,506	56,652	
Tax loss carryforwards	3,076	3,090	27,464	
Investment securities	1,668	1,969	14,893	
Tax deduction of foreign subsidiaries	3,808	2,449	34,000	
Provision for NAS Battery safety measures	1,115	1,657	9,955	
Provision for loss related to competition law	2,795	1,313	24,955	
Provision for product warranties	520	686	4,643	
Other	3,521	3,631	31,438	
Total	44,566	41,877	397,911	
Less: valuation allowance	(9,678)	(12,478)	(86,410)	
Offset with deferred tax liabilities	(8,652)	(8,740)	(77,250)	
Net deferred tax assets	¥ 26,236	¥ 20,659	\$ 234,251	
Deferred tax liabilities:				
Unrealized gain on available-for-sale securities	¥ 9,115	¥ 7,668	\$ 81,384	
Deferred gains on sales of property	988	1,029	8,821	
Undistributed earnings of foreign subsidiaries	6,413	6,404	57,259	
Fixed asset	3,391	4,085	30,277	
Net defined benefit asset	1,778	1,176	15,875	
Securities contributed to retirement benefit trust	1,415	1,414	12,634	
Other	753	822	6,723	
Total	23,853	22,598	212,973	
Offset with deferred tax assets	(8,652)	(8,740)	(77,250)	
Net deferred tax liabilities	¥ 15,201	¥ 13,858	\$ 135,723	

A reconciliation between the normal effective statutory tax rates and the actual effective tax rates reflected in the accompanying consolidated statement of income for the year ended March 31, 2017, with the corresponding figures for 2016 is as follows:

	<u>2017</u>	<u>2016</u>
Normal effective statutory tax rate	30.7 %	32.9 %
Expenses not deductible for income tax purposes	1.4	3.4
Income excluded from income tax such as dividends received	(0.3)	(0.5)
Decrease in valuation allowance	(7.2)	(2.3)
Effect of tax rate reduction	-	0.8
Lower income tax rates applicable to income in certain foreign countries	(1.3)	(2.5)
Tax credit of foreign subsidiaries	(4.4)	(4.3)
Tax credit of research and development costs	(2.4)	(2.3)
Tax incentive for salary growth	(1.1)	(0.6)
Equity in earnings of unconsolidated subsidiaries and associated companies	(1.0)	(0.5)
Transfer pricing adjustment	22.3	-
Other - net	0.1	0.2
Actual effective tax rate	<u>36.8 %</u>	<u>24.3 %</u>

Notes: Action filed for the revocation of correction and correction for the subsequent fiscal years based on transfer pricing taxation

With respect to transactions between the Company and its Polish subsidiary from the year ended March 31, 2007 through the year ended March 31, 2010, the Company received a correction based on transfer pricing taxation issued by the Nagoya Regional Taxation Bureau in March 2012. While the Company made a payment of approximately ¥6.2 billion in tax penalties including local taxes, it filed a compliant. The Company later requested the Nagoya National Tax Tribunal to carry out an administrative review, and on June 24, 2016, received a written verdict, which partially rescinded the correction. However, it went only so far as to refund approximately ¥0.1 billion of corporation taxes and local taxes, etc. Believing that cancellation should be made in the full amount, the Company filed an action for revocation of the correction with the Tokyo District Court on December 20, 2016.

While the Company believes that it could still take a considerable amount of time before judgment is passed on the claim, on June 23, 2017 the Company received a correction notice based on transfer pricing taxation for the year ended March 31, 2011 through the year ended March 31, 2015. Accordingly, based on the premise that the Company would be subject to the said correction for the year ended March 31, 2016 and the year ended March 31, 2017 as well, ¥8.5 billion (\$76 million) in tax penalties for the years ended March 31, 2011 through March 31, 2015, and estimated tax amounts for the year ended March 31, 2016 and the year ended March 31, 2017 were added and factored into the financial statements for the year ended March 31, 2017.

The Company's view is that the transactions with the above-mentioned overseas subsidiary were conducted under fair and appropriate terms in accordance with laws and regulations, and that the Company and its overseas subsidiaries have appropriately made tax payments in accordance with the tax systems of each country. In response to the contents of the recent indication, the Company plans to pursue revocation of correction in its entirety and take the required measures in accordance with laws and regulations in a manner similar to the correction based on the previous investigation.

## 11. RESEARCH AND DEVELOPMENT COSTS

Research and development costs charged to income were ¥18,654 million (\$166,554 thousand) and ¥17,410 million for the years ended March 31, 2017 and 2016, respectively, which included consigned research costs of ¥1,109 million (\$9,902 thousand) and ¥1,374 million for the years ended March 31, 2017 and 2016, respectively.

## 12. LEASES

The minimum rental commitments under noncancelable operating leases at March 31, 2017, were as follows:

	<u>Millions of Yen</u>	<u>Thousands of U.S. Dollars</u>
Due within one year	¥ 352	\$ 3,143
Due after one year	1,014	9,054
Total	<u>¥ 1,366</u>	<u>\$ 12,197</u>



### 13. FINANCIAL INSTRUMENTS AND RELATED DISCLOSURES

#### (1) Group policy for financial instruments

The Group raises funds through borrowings from banks or other financial institutions. Temporary excess funds are invested mainly in low-risk financial assets. It is the Group's policy to use derivatives not for speculation, but for hedging the risks from operating receivables, payables, and borrowings.

#### (2) Nature and extent of risks arising from financial instruments and risk management for financial instruments

The credit risks from receivables, such as trade notes and trade accounts, are managed by each business unit according to the characteristics of the customers. Although receivables in foreign currencies are exposed to the market risk of fluctuation in foreign currency exchange rates, a certain percentage of the position, net of payables in foreign currencies, is hedged by using forward foreign currency contracts.

Marketable and investment securities, which consist mainly of held-to-maturity bonds and the capital stocks of customers or suppliers, are exposed to market risk. The risk is insignificant with respect to the held-to-maturity bonds because investments in bonds are limited to highly rated bonds. To manage the risk, the market price and the financial position of the issuers are reviewed constantly. Moreover, with respect to those other than held-to-maturity, the portfolio is constantly reviewed considering market circumstances and relationships with the issuers.

Payment terms of almost all trade payables, including notes and accounts, are less than four months.

The borrowings from banks and other financial institutions are principally raised for capital investment, and their maximum maturities do not exceed 19 years and 6 months after the balance sheet date.

Derivatives consist of forward currency contracts, which are for hedging currency risks from the trade receivables and payables denominated in foreign currencies, currency and interest rate swaps, which are for hedging foreign exchange risks from the borrowings denominated in foreign currencies, and interest rate swaps, which are for reducing cash outflow from interest payments of borrowings. The Company's management believes that the credit risks from those transactions are not significant because the transactions are entered into only with highly rated financial institutions. Derivative transactions are strictly managed complying with internal policies for approval and reporting. For more details about hedge accounting, including hedging instruments, hedged items, hedge policies, and hedge effectiveness, please see Note 2.v.

#### (3) Supplemental remarks on fair values of financial instruments

The contract or notional amounts of derivatives that are shown in Note 14 do not represent the amounts exchanged by the parties and do not measure the Group's exposure to credit or market risk.

## (a) Fair values of financial instruments

March 31, 2017	Millions of yen		
	Carrying amount	Fair value	Unrealized gain/loss
Cash and cash equivalents	¥ 144,693	¥ 144,693	-
Time deposits	9,353	9,353	-
Notes and accounts receivable:			
Trade notes and accounts	92,182	92,180	¥ (2)
Marketable and investment securities	106,607	110,086	3,479
Short-term borrowings	(6,017)	(6,017)	-
Notes and accounts payable:			
Trade notes and accounts	(38,147)	(38,147)	-
Income taxes payable	(21,057)	(21,057)	-
Long-term debt, including current portion	(168,133)	(174,001)	(5,868)
Derivatives	80	80	-

March 31, 2016	Millions of yen		
	Carrying amount	Fair value	Unrealized gain/loss
Cash and cash equivalents	¥ 136,065	¥ 136,065	-
Time deposits	12,322	12,322	-
Notes and accounts receivable:			
Trade notes and accounts	102,576	102,570	¥ (6)
Marketable and investment securities	95,591	99,817	4,226
Short-term borrowings	(4,550)	(4,550)	-
Notes and accounts payable:			
Trade notes and accounts	(35,197)	(35,197)	-
Income taxes payable	(7,137)	(7,137)	-
Long-term debt, including current portion	(159,423)	(167,316)	(7,893)
Derivatives	448	448	-

March 31, 2017	Thousands of U.S. Dollars		
	Carrying amount	Fair value	Unrealized gain/loss
Cash and cash equivalents	\$ 1,291,902	\$ 1,291,902	-
Time deposits	83,509	83,509	-
Notes and accounts receivable:			
Trade notes and accounts	823,054	823,036	\$ (18)
Marketable and investment securities	951,848	982,911	31,063
Short-term borrowings	(53,723)	(53,723)	-
Notes and accounts payable:			
Trade notes and accounts	(340,598)	(340,598)	-
Income taxes payable	(188,009)	(188,009)	-
Long-term debt, including current portion	(1,501,188)	(1,553,581)	(52,393)
Derivatives	714	714	-

Cash and cash equivalents and time deposits

The carrying values of cash and cash equivalents and time deposits approximate fair value because of their short maturities.

Notes and accounts receivable

The fair values of the majority of receivables are measured at the carrying amount because of their short maturities while those of some receivables are measured at the amount to be received at maturity discounted at the Group's assumed discount rate determined considering credit risks.

Marketable and investment securities

The fair values of the majority of marketable and investment securities are measured at the quoted market price. The carrying amount of some securities represents the fair value because the fair value approximates such carrying amount. The fair value information for the marketable and investment securities by classification is included in Note 3.

Notes and accounts payables, short-term borrowings, and income taxes payable

The fair values of these financial instruments approximate the carrying amount because of their short maturities.

Long-term debt, including current portion

The fair values of long-term debt, including the current portion, are determined by discounting the cash flows related to the debt at the Group's assumed corporate borrowing rate.

Some of the long-term debt with floating interest rates and hedged with interest rate swaps and interest rate and currency swaps are accounted for together with the hedging swaps, and the fair values of such debt are measured by discounting the total cash flows from the payables and hedging swaps at the Group's assumed corporate borrowing rate.

Derivatives

The fair value information for derivatives is included in Note 14.

(b) Financial instruments whose fair values cannot be reliably determined

	Millions of Yen		Thousands of
	2017	2016	U.S. Dollars
			2017
Investments in equity instruments that do not have a quoted market price in an active market			
Stock of associated companies	¥ 589	¥ 386	\$ 5,259
Other	2,091	2,091	18,670

(4) Maturity analysis for financial assets and securities with contractual maturities

<b>Millions of Yen</b>				
<b>March 31, 2017</b>	<b>Due in one year or less</b>	<b>Due after one year through five years</b>	<b>Due after five years through 10 years</b>	<b>Due after 10 years</b>
Cash and cash equivalents	¥ 144,693	-	-	-
Notes and accounts receivable:				
Trade notes and accounts	92,164	¥ 18	-	-
Held-to-maturity securities				
Debt securities	23,559	1,195	-	-
Available-for-sale securities				
Investment trusts and other	9,300	-	-	-
<b>Total</b>	<b>¥ 269,716</b>	<b>¥ 1,213</b>	<b>-</b>	<b>-</b>

<b>Thousands of U.S. Dollars</b>				
<b>March 31, 2017</b>	<b>Due in one year or less</b>	<b>Due after one year through five years</b>	<b>Due after five years through 10 years</b>	<b>Due after 10 years</b>
Cash and cash equivalents	\$ 1,291,902	-	-	-
Notes and accounts receivable:				
Trade notes and accounts	822,893	\$ 161	-	-
Held-to-maturity securities				
Debt securities	210,348	10,670	-	-
Available-for-sale securities				
Investment trusts and other	83,036	-	-	-
<b>Total</b>	<b>\$ 2,408,179</b>	<b>\$ 10,831</b>	<b>-</b>	<b>-</b>

Please see Note 6 for annual maturities of long-term debt.

#### 14. DERIVATIVES

The Group enters into derivative financial instruments ("derivatives"), including foreign exchange forward contracts, interest rate and currency swaps, and interest rate swap contracts. The foreign exchange forward contracts are entered into in order to hedge foreign exchange risk associated with certain assets and liabilities denominated in foreign currencies. The interest rate and currency swaps are entered into as a means of managing interest rate risk and foreign exchange risk for loans denominated in foreign currencies. The interest rate swap contracts are entered into as a means of managing the interest rate risk for loans from financial institutions. The Group does not hold or issue derivatives for trading or speculative purposes.

Because the counterparties to these derivatives are limited to major international financial institutions, the Group does not anticipate any losses arising from credit risk.

Derivative transactions entered into by the Group have been made in accordance with internal policies that require approval and reporting of all derivative transactions.

Derivative transactions to which hedge accounting is not applied at March 31, 2017 and 2016, were as follows:

Millions of Yen				
March 31, 2017	Contract Amount	Contract Amount Due After One Year	Fair Value	Unrealized Gain/(Loss)
Foreign currency forward contracts:				
Selling U.S.\$	¥ 18,273	-	¥ 72	¥ 72
Selling Euro	5,975	-	(13)	(13)
Buying U.S.\$	163	-	(0)	(0)
Buying Euro	21	-	(2)	(2)
Buying Japanese yen	25	-	(1)	(1)
Total	¥ 24,457	-	¥ 56	¥ 56

Millions of Yen				
March 31, 2016	Contract Amount	Contract Amount Due After One Year	Fair Value	Unrealized Gain/(Loss)
Foreign currency forward contracts:				
Selling U.S.\$	¥ 8,788	-	¥ 374	¥ 374
Selling Euro	6,069	-	84	84
Selling Swiss franc	26	-	0	0
Buying U.S.\$	205	-	(10)	(10)
Buying Euro	12	-	1	1
Buying Japanese yen	9	-	(0)	(0)
Total	¥ 15,109	-	¥ 449	¥ 449

Thousands of U.S. Dollars				
March 31, 2017	Contract Amount	Contract Amount Due After One Year	Fair Value	Unrealized Gain/(Loss)
Foreign currency forward contracts:				
Selling U.S.\$	\$ 163,152	-	\$ 643	\$ 643
Selling Euro	53,348	-	(116)	(116)
Buying U.S.\$	1,455	-	(0)	(0)
Buying Euro	188	-	(18)	(18)
Buying Japanese yen	223	-	(9)	(9)
Total	\$ 218,366	-	\$ 500	\$ 500

The fair value of derivative transactions is measured at the quoted price obtained from the financial institutions.

Derivative transactions to which hedge accounting is applied at March 31, 2017 and 2016, were as follows:

		Millions of Yen		
March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Interest rate swaps: (Fixed rate payment, floating rate receipt)	Long-term debt	¥ 8,652	¥ 8,652	¥(15)
Interest rate swaps: (Fixed rate payment, floating rate receipt) (※)	Long-term debt	25,000	25,000	-
Total		¥ 33,652	¥ 33,652	¥(15)

		Millions of Yen		
March 31, 2016	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Interest rate swaps: (Fixed rate payment, floating rate receipt) (※)	Long-term debt (including current portion)	¥ 35,231	¥ 15,000	-

		Thousands of U.S. Dollars		
March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Interest rate swaps: (Fixed rate payment, floating rate receipt)	Long-term debt	\$ 77,250	\$ 77,250	\$(134)
Interest rate swaps: (Fixed rate payment, floating rate receipt) (※)	Long-term debt	223,214	223,214	-
Total		\$300,464	\$300,464	\$ (134)

(※) The above interest rate swaps that qualify for hedge accounting and meet specific matching criteria are not premeasured at market value, but the differential paid or received under the swap agreements is recognized and included in interest expense or income. In addition, the fair value of such interest rate swaps is included in that of hedged items (i.e., long-term debt) in Note 13.

		Millions of Yen		
March 31, 2016	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Interest rate and currency swaps:				
(Fixed rate payment, floating rate receipt)	Long-term debt			
(Japanese yen payment, U.S.\$ receipt)				
(※)		¥ 10,000	¥ 10,000	-

(※) The above interest rate and currency swaps that qualify for hedge accounting and meet specific matching criteria are not premeasured at market value, but the differential paid or received under the swap agreements are recognized and included in interest expense or income. In addition, the fair value of such interest rate swaps is included in that of hedged items (i.e., long-term debt) in Note 13.

There were no interest rate and currency swaps to which hedge accounting was applied at March 31, 2017.

		Millions of Yen		
March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Currency swaps:				
(Japanese yen payment, U.S.\$ receipt) (※)	Long-term debt	¥ 6,500	¥ 6,500	-

		Thousands of U.S. Dollars		
March 31, 2017	Hedged Item	Contract Amount	Contract Amount Due After One Year	Fair Value
Currency swaps:				
(Japanese yen payment, U.S.\$ receipt) (※)	Long-term debt	\$ 58,036	\$ 58,036	-

(※) The above currency swaps that qualify for hedge accounting are not remeasured at market value, but the fair value of the swap is included in that of hedged items (i.e., long-term debt) in Note 13.

There were no foreign currency forward contracts to which hedge accounting was applied at March 31, 2016.

The fair value of derivative transactions is measured at the quoted price obtained from the financial institution.

The contract or notional amounts of derivatives which are shown in the above table do not represent the amounts exchanged by the parties and do not measure the Group's exposure to credit or market risk.

Forward exchange contracted amounts, which are assigned to associated assets or liabilities and are reflected in the balance sheet at year-end, are not subject to the disclosure of market value information.

## 15. GUARANTEES OBLIGATION AND OTHER

### a. *Guarantee obligations*

At March 31, 2017, the Group had guarantee obligations as follows:

	<b>Millions of Yen</b>	<b>Thousands of U.S. Dollars</b>
Guarantees for bank borrowings of employees	¥ 15	\$ 134
Guarantees for bank borrowings of a business-related company	180	1,607

### b. *Contingent liability*

The Group is subject to an international investigation on the situation of competition. Since the receiving of a subpoena by a U.S. subsidiary of the Company from the U.S. Department of Justice (DOJ) in 2011, the Company has cooperated in the investigation concerning ceramic substrates for catalytic converters including establishing the Independent Committee in 2012. In September, 2015, the Company entered into a Plea Agreement with DOJ, agreeing to pay a fine of US\$65.3 million based on charges that it violated U.S. laws including the antitrust law in connection with some transactions for ceramic substrates for catalytic converters, and paid the total amount in November 2015. The Company has entered into negotiations for compensation for damages with the relevant customers. In addition to some customers requiring monetary compensation, civil lawsuits (class action) have also been filed.

In consideration of such progresses, the Group made an estimate of potential losses, and recognized the estimated amount as of the end of the year ended March 31, 2017, as “provision for loss related to competition law,” however, additional losses may arise with the emergence of new facts. Overall details of the investigation and negotiations are not disclosed because they may put the Group at a disadvantage.



## 16. OTHER COMPREHENSIVE LOSS

The components of other comprehensive loss for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2017	2016	2017
Unrealized gain (loss) on available-for-sale securities:			
Gains (losses) arising during the year	¥ 9,316	¥ (8,141)	\$ 83,178
Reclassification adjustments to profit or loss	(5,160)	(751)	(46,071)
Amount before income tax effect	4,156	(8,892)	37,107
Income tax effect	(1,510)	3,305	(13,482)
Total	¥ 2,646	¥ (5,587)	\$ 23,625
Deferred loss on derivatives under hedge accounting:			
Losses arising during the year	¥ (15)	-	\$ (134)
Reclassification adjustments to profit or loss	-	¥ (11)	-
Amount before income tax effect	(15)	(11)	(134)
Income tax effect	(8)	4	(71)
Total	¥ (23)	¥ (7)	\$ (205)
Foreign currency translation adjustments:			
Adjustments arising during the year	¥ (9,828)	¥ (14,459)	\$ (87,751)
Reclassification adjustments to profit or loss	-	333	-
Total	¥ (9,828)	¥ (14,126)	\$ (87,751)
Share of other comprehensive income in associates—			
Gains (losses) arising during the year	¥ 382	¥ (390)	\$ 3,411
Defined retirement benefit plans:			
Gains (losses) arising during the year	¥ 1,662	¥ (14,120)	\$ 14,839
Reclassification adjustments to profit or loss	5,121	1,008	45,724
Amount before income tax effect	6,783	(13,112)	60,563
Income tax effect	(2,346)	4,690	(20,947)
Total	¥ 4,437	¥ (8,422)	\$ 39,616
Total other comprehensive loss	¥ (2,386)	¥ (28,532)	\$ (21,304)

## 17. NET INCOME PER SHARE

Reconciliation of the differences between basic and diluted net income per share ("EPS") for the years ended March 31, 2017 and 2016, were as follows:

	Millions of Yen	Thousands of Shares	Yen	U.S. Dollars
<u>Year Ended March 31, 2017</u>	Net Income Attributable to Owners of the Parent	Weighted-Average Shares	EPS	
Basic EPS—Net income available to common shareholders	¥ 36,379	322,761	¥112.71	\$1.006
Effect of dilutive securities:				
Stock options	-	572		
Diluted EPS—Net income for computation	¥ 36,379	323,333	¥112.51	\$1.005
<u>Year Ended March 31, 2016</u>				
Basic EPS—Net income available to common shareholders	¥ 53,316	326,540	¥163.28	
Effect of dilutive securities:				
Stock options	-	608		
Diluted EPS—Net income for computation	¥ 53,316	327,148	¥162.97	

## 18. RELATED-PARTY DISCLOSURES

The Company had the following transactions with related parties for the years ended March 31, 2017 and 2016:

For the year ended March 31, 2017

Disclosure is omitted because the amount is insignificant.

For the year ended March 31, 2016

Category	Company Name/Name	Address	Capital	Content of business/Occupation	Ratio of voting rights	Relationship	Summary of transactions	Amount	Account items	Balance at the end of fiscal year
Executive	Hiroyuki Kamano	-	-	Outside Director	-	-	Payment of consideration and expenses relating to the charge of chairman of an independent committee	¥21 million	Other accounts payable	¥0 million
Executive	Setsuo Tanaka	-	-	Outside Audit & Supervisory Board Member	-	-	Payment of consideration and expenses relating to the charge of a member of an independent committee	¥9 million	Other accounts payable	¥0 million
Notes	1. The above "Amount" does not include consumption tax; the balance includes consumption tax. 2. Transaction terms and policy for determining transaction terms Transactions stated above were determined through negotiations with reference to the prevailing market price.									

## 19. SUBSEQUENT EVENTS

### *Appropriations of Retained Earnings*

The following appropriation of retained earnings at March 31, 2017, was approved at the Company's shareholders' meeting held on June 29, 2017:

	Millions of Yen	Thousands of U.S. Dollars
Year-end cash dividends, ¥20 (\$0.18) per share	¥6,433	\$57,438

## 20. SEGMENT INFORMATION

Under ASBJ Statement No. 17, "Accounting Standard for Segment Information Disclosures" and ASBJ Guidance No. 20, "Guidance on Accounting Standard for Segment Information Disclosures," an entity is required to report financial and descriptive information about its reportable segments. Reportable segments are operating segments or aggregations of operating segments that meet specified criteria. Operating segments are components of an entity about which separate financial information is available and such information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. Generally, segment information is required to be reported on the same basis as is used internally for evaluating operating segment performance and deciding how to allocate resources to operating segments.

### (1) *Description of Reportable Segments*

The Group's reportable segments are components of the Group about which separate financial information is available that is evaluated regularly by the Company's management in deciding how to allocate resources and in assessing performance. The Group develops and conducts its operations under three business groups: Power Business Group, Ceramics Products Business Group, and Electronics Business Group, while planning a comprehensive strategy for domestic and overseas markets. Consequently, the Group defines those three business groups as its reportable segments.

Business segment	Main products
Power	Insulators, hardware for insulator assemblies, current limiting arching horns, bushing shells, fuse cut-outs, APM, line arresters, and NAS ® (sodium sulfur) batteries
Ceramics products	Automotive ceramics for exhaust gas purification, corrosion-resistant ceramic apparatuses for chemical industries, gas analyzers, industrial heating systems, refractory products, and radioactive waste treatment systems
Electronics	Ceramic component for semiconductor manufacturing equipment, ceramic components for electronics, beryllium copper products, and molds

### (2) *Methods of Measurement for the Amounts of Sales, Profit (Loss), Assets, Liabilities and Other Items for Each Reportable Segment*

The accounting policies of each reportable segment are consistent with those disclosed in Note 2, "SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES."

(3) Information about Sales, Profit (Loss), Assets, Liabilities and Other Items

Millions of Yen						
2017						
Reportable segment						
	Power	Ceramics	Electronics	Total	Reconciliations	Consolidated
Sales						
Sales to customers	¥ 52,800	¥ 244,960	¥ 103,507	¥ 401,267	-	¥ 401,267
Intersegment sales or transfers	26	262	-	288	¥ (288)	-
Total	¥ 52,826	¥ 245,222	¥ 103,507	¥ 401,555	¥ (288)	¥ 401,267
Segment (loss) profit	¥ (6,622)	¥ 64,635	¥ 5,250	¥ 63,263	¥ (50)	¥ 63,213
Segment assets	86,145	362,735	105,414	554,294	¥ 205,140	759,434
Other:						
Depreciation and amortization	2,554	18,004	6,057	26,615	-	26,615
Impairment losses on assets	2,906	-	1,255	4,161	-	4,161
Increase in property, plant, and equipment and intangible assets	4,294	44,741	9,389	58,424	1,677	60,101

Millions of Yen						
2016						
Reportable segment						
	Power	Ceramics	Electronics	Total	Reconciliations	Consolidated
Sales						
Sales to customers	¥ 83,505	¥ 250,862	¥ 101,431	¥ 435,798	-	¥ 435,798
Intersegment sales or transfers	42	262	-	304	¥ (304)	-
Total	¥ 83,547	¥ 251,124	¥ 101,431	¥ 436,102	¥ (304)	¥ 435,798
Segment profit	¥ 2,577	¥ 70,651	¥ 7,670	¥ 80,898	-	¥ 80,898
Segment assets	96,877	324,124	104,203	525,204	¥ 186,693	711,897
Other:						
Depreciation and amortization	3,341	18,610	5,415	27,366	-	27,366
Impairment losses on assets	2,660	1,115	658	4,433	19	4,452
Increase in property, plant, and equipment and intangible assets	3,350	26,525	12,793	42,668	2,769	45,437

Thousands of U.S. Dollars						
2017						
Reportable segment						
	Power	Ceramics	Electronics	Total	Reconciliations	Consolidated
Sales	\$471,429	\$2,187,142	\$924,170	\$3,582,741	-	\$3,582,741
Sales to customers						
Intersegment sales or transfers	232	2,340	-	2,572	\$ (2,572)	-
Total	<u>\$471,661</u>	<u>\$2,189,482</u>	<u>\$924,170</u>	<u>\$3,585,313</u>	<u>\$ (2,572)</u>	<u>\$3,582,741</u>
Segment (loss) profit	\$(59,125)	\$577,098	\$46,875	\$564,848	\$ (446)	\$564,402
Segment assets	769,152	3,238,706	941,196	4,949,054	1,831,607	6,780,661
Other:						
Depreciation and amortization	22,804	160,750	54,080	237,634	-	237,634
Impairment losses on assets	25,947	-	11,205	37,152	-	37,152
Increase in property, plant, and equipment and intangible assets	38,339	399,473	83,831	521,643	14,973	536,616

Notes:

1. Reconciliation of segment profit is the adjustment of intersegment transactions.
2. The amount of general corporate assets included in the reconciliation of segment assets was ¥241,063 million (\$2,152,348 thousand) and ¥228,415 million at March 31, 2017 and 2016, respectively, mainly consisting of surplus funds (cash and marketable securities), long-term investment funds (investment securities), and the assets of administrative departments.
3. The increase in property, plant, and equipment and intangible assets in reconciliations relates to the increase in corporate departments.

## Information about Geographical Areas

### (1) Sales

Millions of Yen								
2017								
Japan	North America		Europe		Asia		Other Areas	Total
	USA	Others	Germany	Others	China	Others		
¥113,131	¥86,418	¥6,610	¥41,149	¥46,121	¥44,901	¥51,417	¥11,520	¥401,267

Millions of Yen								
2016								
Japan	North America		Europe		Asia		Other Areas	Total
	USA	Others	Germany	Others	China	Others		
¥126,712	¥87,960	¥6,440	¥46,569	¥52,385	¥34,091	¥58,104	¥23,537	¥435,798

Thousands of U.S. Dollars								
2017								
Japan	North America		Europe		Asia		Other Areas	Total
	USA	Others	Germany	Others	China	Others		
\$1,010,098	\$771,589	\$59,018	\$367,402	\$411,795	\$400,902	\$459,080	\$102,857	\$3,582,741

Sales are attributed to countries based on the location of the customers.

#### Notes:

Prior to April 1 2016, the China segment was included in the Asia section under sales. During the year ended March 31, 2017, the materiality of the amount increased and such amount is disclosed separately in the Asia section. The segment information for the year ended March 31, 2016 is also disclosed using the new operating segments.

(2) Property, plant, and equipment

Millions of Yen								
2017								
Japan	North America			Europe		Asia	Other Areas	Total
	USA	Mexico	Others	Poland	Others			
¥104,712	¥17,021	¥21,613	¥1	¥50,379	¥2,970	¥31,777	¥634	¥229,107

Millions of Yen								
2016								
Japan	North America			Europe		Asia	Other Areas	Total
	USA	Mexico	Others	Poland	Others			
¥91,397	¥20,742	¥24,125	¥10	¥38,216	¥3,442	¥26,610	¥452	¥204,994

Thousands of U.S. Dollars								
2017								
Japan	North America			Europe		Asia	Other Areas	Total
	USA	Mexico	Others	Poland	Others			
\$934,928	\$151,973	\$192,973	\$9	\$449,813	\$26,518	\$283,723	\$5,661	\$2,045,598

\* \* \* \* \*







# Subsidiaries and Affiliated Companies

As of March 31, 2017

## JAPAN

	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■ENERGY SUPPORT CORPORATION	100	Power distribution equipment
■AKECHI INSULATORS, LTD.	100	Electrical insulators
■IKEBUKURO HORO KOGYO CO., LTD.	78.9	Glass-lined reactors & tanks for chemical processing industries
■NGK CHEM-TECH, LTD.	100	Chemical equipment and maintenance
■NGK FILTECH, LTD.	100	Membrane separation systems
■NGK ADREC CO., LTD.	100	Refractories/kiln furniture
■NGK KILNTECH CORPORATION	100	Thermal process engineering & products
■NGK OKHOTSK, LTD.	100	Jig for ceramics production
■NGK METEX CORPORATION	100	Beryllium copper wrought products
■NGK FINE MOLDS, LTD.	100	Molds
■NGK CERAMIC DEVICE CO., LTD.	100	Ceramic electronic components
■SOSHIN ELECTRIC CO., LTD.	40.6	Electronic components and devices
■NGK ELECTRONICS DEVICES, INC.	100	Ceramic packages for semiconductors and ceramic electronic components
●METAWATER CO., LTD.	28.9	Environmental protection systems
●NGK LIFE CO., LTD.	100	Insurance agency service and golf cours management

### Other Group Companies

■KANSAI ENERGYS CORPORATION	■KYUSUJU ENERGYS CORPORATION	■HOKURIKU ENERGYS CORPORATION	■TOKAI ENERGYS CORPORATION
■ENERGYS SANGYO CORPORATION	■SOSHIN DEVICE CO., LTD.	■RISSHIN ELECTRONICS CO., LTD.	■SOSHIN POWERTECH CO., LTD.
NGK SPORTS PLANNING CO., LTD.	NGK YU-SERVICE CO., LTD.	NGK TECHNICA, LTD.	NGK BUILDING SERVICE, LTD.
NGK LOGISTICS, LTD.			

## NORTH AMERICA

	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■NGK NORTH AMERICA, INC.	100	Holding company
■LOCKE INSULATORS, INC.	100	Electrical insulators
■NGK-LOCKE, INC.	100	Electrical insulators
■NGK-LOCKE POLYMER INSULATORS, INC.	100	Electrical polymer insulators
■NGK INSULATORS OF CANADA, LTD.	100	Electrical insulators and ceramic products
■NGK CERAMICS USA, INC.	100	Automotive ceramics
■NGK AUTOMOTIVE CERAMICS USA, INC.	100	Automotive ceramics
■NGK CERAMICS MEXICO, S. DE R.L. DE C.V.	95	Automotive ceramics
■NGK METALS CORPORATION	100	Beryllium copper products
■NGK ELECTRONICS USA, INC.	100	Ceramics for semiconductor manufacturing equipment
■FM INDUSTRIES, INC.	100	Modules for semiconductor production equipment

## EUROPE AND AFRICA

	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■NGK CERAMICS EUROPE S.A.	100	Automotive ceramics
■NGK EUROPE GMBH	100	Ceramic products
■NGK CERAMICS POLSKA SP. Z O.O.	95	Automotive ceramics
■NGK CERAMICS SOUTH AFRICA (PTY) LTD.	100	Automotive ceramics
■NGK BERYLCO FRANCE	100	Beryllium copper products
■NGK BERYLCO U.K. LTD.	100	Beryllium copper products
■NGK DEUTSCHE BERYLCO GMBH	100	Beryllium copper products

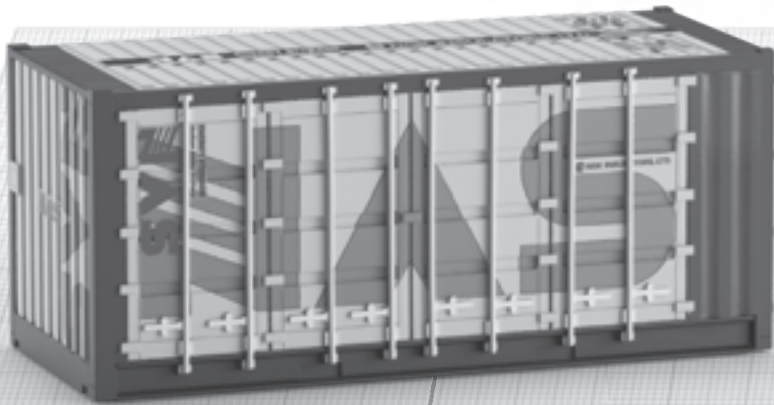
## ASIA PACIFIC

	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■NGK INSULATORS TANGSHAN CO., LTD.	100	Electrical insulators
■NGK STANGER PTY. LTD.	100	Power distribution equipment
■NGK INSULATORS (CHINA) INVESTMENT CO., LTD.	100	Electrical insulators and beryllium copper products
■P.T. NGK CERAMICS INDONESIA	97.8	Automotive ceramics
■SIAM NGK TECHNOCERA CO., LTD.	100	Refractories/kiln furniture
■NGK CERAMICS (THAILAND) CO., LTD.	95	Automotive ceramics
■NGK CERAMICS SUZHOU CO., LTD.	100	Automotive ceramics
■NGK TECHNOCERA SUZHOU CO., LTD.	100	Thermal process engineering & products, refractories/kiln furniture

### Other Group Companies

■ENERGY ELECTRIC (SHANGHAI) CORPORATION	■SOSHIN ELECTRONICS OF AMERICA INC	NGK AUTOMOTIVE CERAMICS KOREA CO., LTD.
■NGK MATERIAL USA, INC.	■SOSHIN ELECTRONICS (HK) LIMITED	NGK TECHNOLOGIES INDIA PVT. LTD.
■NGK AUTOMOTIVE CERAMICS MEXICO, S. DE R.L. DE C.V.	■SOSHIN ELECTRONICS (SZ) LIMITED	NGK ITALY S.R.L.
■NGK ELECTRONICS DEVICES (M) SDN. BHD.	■SOSHIN ELECTRONICS (M) SDN. BHD.	TAIWAN SOSHIN ELECTRIC CO., LTD.
■NGK GLOBETRONICS TECHNOLOGY SDN. BHD.	■NGK INSULATORS SUZHOU CO., LTD.	SOSHIN ELECTRONICS EUROPE GMBH
■NGK ELECTRONICS DEVICES SUZHOU CO., LTD.		NGK ELECTRONICS DEVICES ASIA SDN. BHD.
		NGK ENERGYS MYANMAR CO., LTD.

- Consolidated companies
- Affiliated companies accounted for by the equity method



← Renewable energy

