NGK INSULATORS, LTD.

NGK INSULATORS, LTD.
and Consolidated Subsidiaries

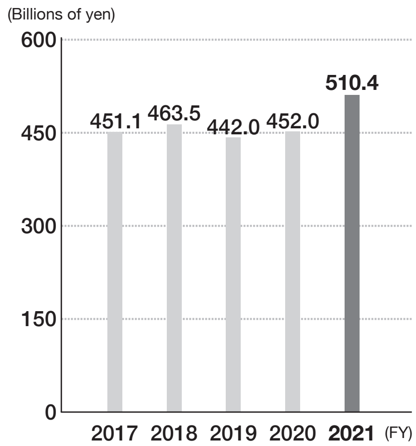
Consolidated Financial Statements
for the Year Ended March 31, 2022, and
Independent Auditor's Report

Contents

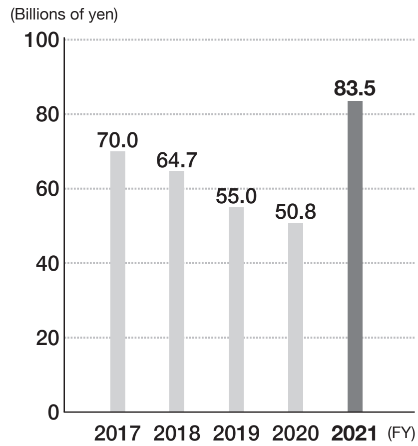
Financial Highlights

The following data includes financial results of consolidated subsidiaries (17 domestic, 30 overseas companies as of March 31, 2022)

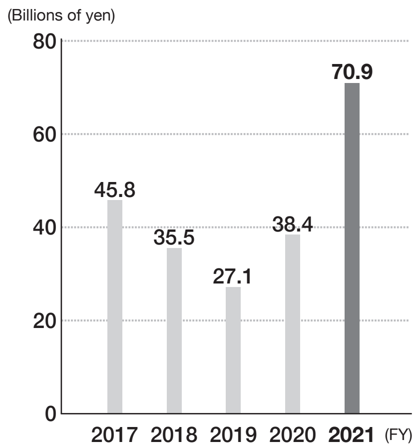
Net Sales



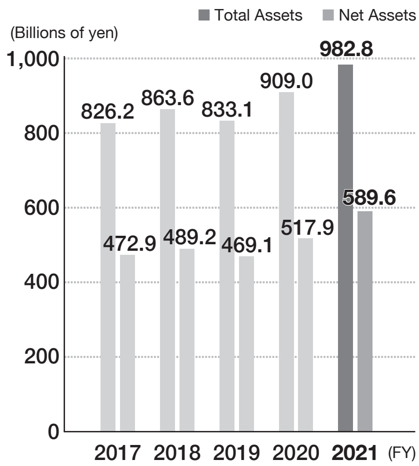
Operating Income



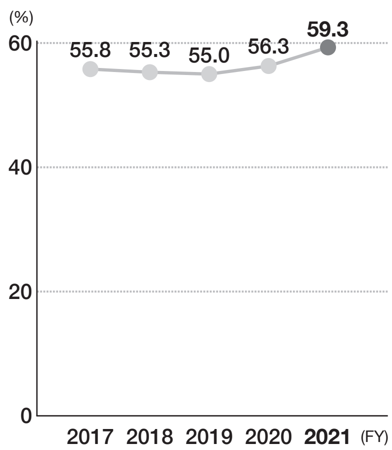
Net Income



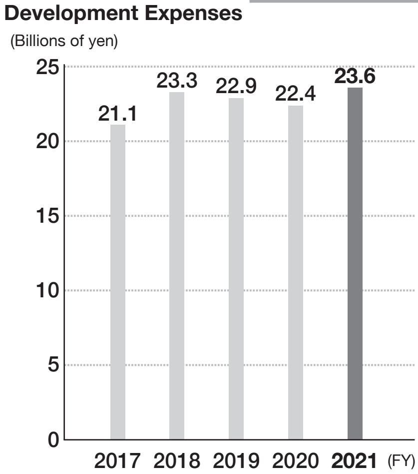
Total Assets/Net Assets



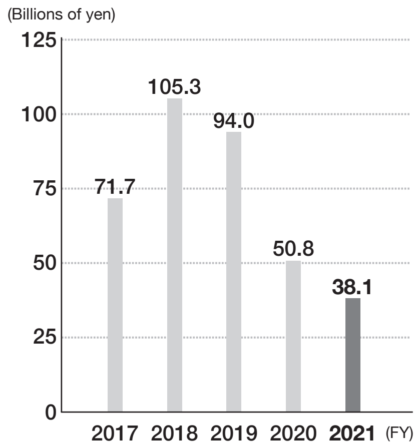
Equity Ratio



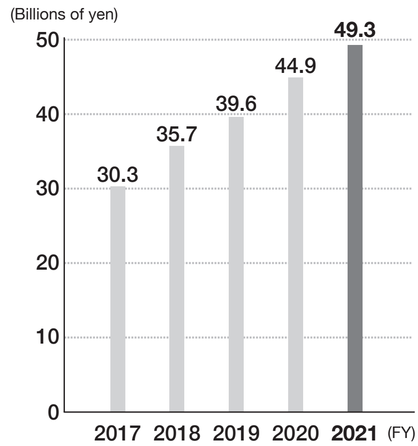
Research and Development Expenses



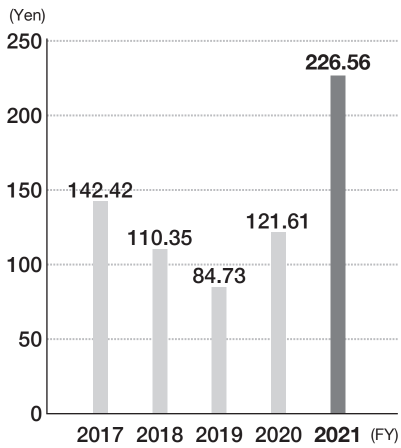
Capital Expenditures



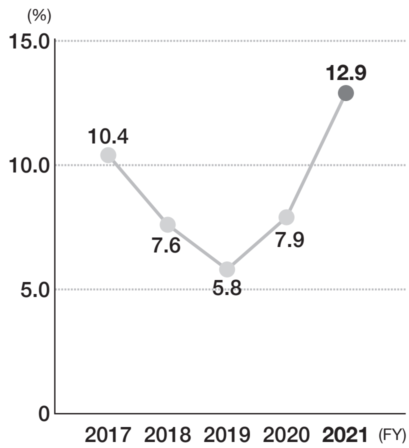
Depreciation and Amortization



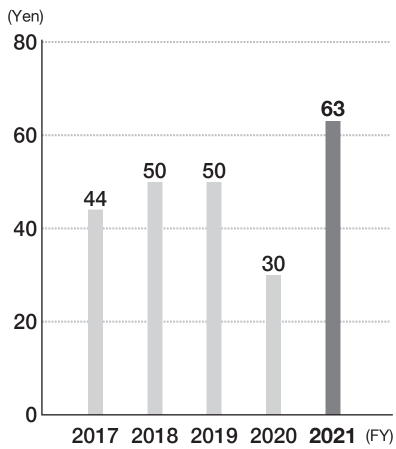
Net Income per Share



Return on Equity



Dividends



Stock Price

FY	2017	2018	2019	2020	2021
Highest (Yen)	2,563	2,131	1,994	2,153	**2,106**
Lowest (Yen)	1,768	1,400	1,168	1,171	**1,539**

Consolidated Balance Sheet

NGK INSULATORS, LTD. and Consolidated Subsidiaries

March 31, 2022

ASSETS	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2022	2021	2022
CURRENT ASSETS:			
Cash and cash equivalents (Note 16)	¥ 154,855	¥ 146,031	$ 1,269,303
Time deposits (Note 16)	7,143	228	58,550
Marketable securities (Notes 5 and 16)	23,643	20,103	193,797
Notes and accounts receivable:			
Trade notes and accounts (Notes 13 and 16)	122,213	114,497	1,001,742
Other	15,788	15,130	129,412
Allowance for doubtful accounts	(153)	(131)	(1,253)
Total	137,848	129,496	1,129,901
Inventories (Note 6)	188,337	150,472	1,543,744
Prepaid expenses and other current assets	15,568	11,610	127,608
Total current assets	527,394	457,940	4,322,903
PROPERTY, PLANT AND EQUIPMENT (Note 7):			
Land	29,263	28,695	239,862
Buildings and structures	241,492	228,177	1,979,444
Machinery and equipment	623,389	576,876	5,109,744
Construction in progress	30,947	28,028	253,667
Other	3,641	3,408	29,845
Total	928,732	865,184	7,612,562
Accumulated depreciation	(553,420)	(492,973)	(4,536,233)
Net property, plant and equipment	375,312	372,211	3,076,329
INVESTMENTS AND OTHER ASSETS:			
Investment securities (Notes 5 and 16)	41,072	44,670	336,657
Investments in unconsolidated subsidiaries and associated companies	17,981	16,491	147,381
Intangible assets	6,197	5,065	50,792
Net defined benefit assets (Notes 3.a and 9)	6,692	4,815	54,855
Deferred tax assets (Notes 3.b and 12)	5,891	5,473	48,286
Other assets	2,294	2,302	18,805
Total investments and other assets	80,127	78,816	656,776
TOTAL	¥ 982,833	¥ 908,967	$ 8,056,008

(Continued)

LIABILITIES AND EQUITY	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2022	2021	2022
CURRENT LIABILITIES:			
Short-term borrowings (Note 8)	¥ 6,199	¥ 18,046	$ 50,808
Current portion of long-term debt (Notes 8 and 16)	32,263	21,927	264,454
Notes and accounts payable:			
Trade notes and accounts	43,806	42,241	359,064
Other	16,769	15,410	137,448
Total	60,575	57,651	496,512
Accrued expenses	24,270	20,732	198,936
Provision for NAS Battery safety measures	973	1,465	7,975
Income taxes payable (Note 12)	19,831	9,098	162,546
Other current liabilities	7,679	7,074	62,952
Total current liabilities	151,790	135,993	1,244,183
LONG-TERM LIABILITIES:			
Long-term debt (Notes 8 and 16)	213,889	224,271	1,753,188
Net defined benefit liability (Notes 3.a and 9)	21,421	21,758	175,581
Provision for product warranties	630	591	5,164
Deferred tax liabilities (Notes 3.b and 12)	1,085	1,402	8,896
Other long-term liabilities	4,424	7,060	36,258
Total long-term liabilities	241,449	255,082	1,979,087
CONTINGENT LIABILITIES (Note 18)			
EQUITY (Note 10):			
Common stock:			
Authorized — 735,030 thousand shares			
Issued — 317,212 thousand shares and 322,212 thousand shares at March 31, 2022 and 2021	69,849	69,849	572,534
Capital surplus	70,199	70,199	575,405
Stock acquisition rights (Note 11)	941	872	7,715
Retained earnings (Note 20)	416,205	372,641	3,411,518
Treasury stock — at cost: 5,571 thousand shares and 5,639 thousand shares at March 31, 2022 and 2021, respectively (Note 10.c)	(10,945)	(11,206)	(89,712)
Accumulated other comprehensive income:			
Unrealized gain on available-for-sale securities	17,061	19,258	139,842
Deferred loss on derivatives under hedge accounting	(200)	(186)	(1,637)
Foreign currency translation adjustments	21,621	(4,919)	177,218
Defined retirement benefit plans	(643)	(3,633)	(5,269)
Total	584,088	512,875	4,787,614
Noncontrolling interests	5,506	5,017	45,124
Total equity	589,594	517,892	4,832,738
TOTAL	¥ 982,833	¥ 908,967	$ 8,056,008

See notes to consolidated financial statements.

(Concluded)

Consolidated Statement of Income

NGK INSULATORS, LTD. and Consolidated Subsidiaries

Year ended March 31, 2022

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2022	2021	2022
NET SALES (Note 13)	¥ 510,439	¥ 452,044	$ 4,183,927
COST OF SALES (Note 14)	347,748	329,062	2,850,394
Gross profit	162,691	122,982	1,333,533
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (Note 14)	79,163	72,158	648,879
Operating income	83,528	50,824	684,654
OTHER INCOME (EXPENSES):			
Interest and dividends income	1,441	1,380	11,812
Interest expense	(3,591)	(3,438)	(29,434)
Loss on sales of and disposals of property, plant and equipment — net	(327)	(119)	(2,681)
Equity in earnings of unconsolidated subsidiary and associated company	1,667	1,622	13,662
Reversal of provision for product warranties	–	234	–
Foreign exchange gain	1,453	1,781	11,911
Loss on valuation of derivatives	(837)	(928)	(6,865)
Gain on sales of investment securities — net	1,161	620	9,518
Impairment loss on long-lived assets (Note 7)	(1,160)	(2,267)	(9,508)
Subsidies for employment adjustment	63	1,014	513
Subsidy income	4,896	1,880	40,134
Interest on tax refund (Note 12)	1,196	–	9,804
Other — net	1,329	518	10,897
Other income — net	7,291	2,297	59,763
INCOME BEFORE INCOME TAXES	90,819	53,121	744,417
INCOME TAXES (Notes 3.b and 12):			
Current	25,552	11,090	209,440
Refund	(5,759)	–	(47,202)
Deferred	(6)	3,375	(49)
Total income taxes	19,787	14,465	162,189
NET INCOME	71,032	38,656	582,228
NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS	180	160	1,479
NET INCOME ATTRIBUTABLE TO OWNERS OF THE PARENT	¥ 70,852	¥ 38,496	$ 580,749
	Yen		U.S. Dollars
PER SHARE OF COMMON STOCK (Notes 2.v and 20):			
Basic net income	¥ 226.56	¥ 121.61	$ 1.857
Diluted net income	226.17	121.42	1.854
Cash dividends applicable to the year	63.00	30.00	0.516

See notes to consolidated financial statements.

Consolidated Statement of Comprehensive Income

NGK INSULATORS, LTD. and Consolidated Subsidiaries
Year ended March 31, 2022

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2022	2021	2022
NET INCOME	¥ 71,032	¥ 38,656	$ 582,228
OTHER COMPREHENSIVE INCOME (LOSS) (Note 19):			
Unrealized (loss) gain on available-for-sale securities	(2,196)	7,918	(17,999)
Deferred (loss) gain on derivatives under hedge accounting	(5)	276	(39)
Foreign currency translation adjustments	26,626	16,985	218,240
Share of other comprehensive income (loss) in associated companies	261	(186)	2,143
Defined retirement benefit plans	2,967	1,915	24,317
Total other comprehensive income	27,653	26,908	226,662
COMPREHENSIVE INCOME	¥ 98,685	¥ 65,564	$ 808,890
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:			
Owners of the parent	¥ 98,169	¥ 64,937	$ 804,675
Noncontrolling interests	516	627	4,215

See notes to consolidated financial statements.

Consolidated Statement of Changes in Equity

NGK INSULATORS, LTD. and Consolidated Subsidiaries

Year ended March 31, 2022

	Thousands					
	Outstanding Number of Common Stock	Common Stock	Capital Surplus	Stock Acquisition Rights	Retained Earnings	Treasury Stock
Balance at March 31, 2020	316,544	¥ 69,849	¥ 70,199	¥ 829	¥ 345,689	¥ (11,264)
Net income attributable to owners of the parent	–	–	–	–	38,496	–
Cash dividends, ¥35 per share	–	–	–	–	(11,079)	–
Purchase of treasury stock	(2)	–	–	–	–	(3)
Disposal of treasury stock	31	–	(25)	–	–	61
Transfer of loss on disposal of treasury shares	–	–	25	–	(25)	–
Change in scope of consolidation	–	–	–	–	(440)	–
Net change in the year	–	–	–	43	–	–
Balance at March 31, 2021	316,573	69,849	70,199	872	372,641	(11,206)
Cumulative effects of accounting change	–	–	–	–	(1,778)	–
Net income attributable to owners of the parent	–	–	–	–	70,852	–
Cash dividends, ¥50 per share	–	–	–	–	(15,680)	–
Purchase of treasury stock	(5,000)	–	–	–	–	(9,701)
Disposal of treasury stock	68	–	(7)	–	–	139
Cancellation of treasury stock	–	–	(9,823)	–	–	9,823
Transfer from retained earnings to capital surplus	–	–	9,830	–	(9,830)	–
Net change in the year	–	–	–	69	–	–
Balance at March 31, 2022	311,641	¥ 69,849	¥ 70,199	¥ 941	¥ 416,205	¥ (10,945)

	Common Stock	Capital Surplus	Stock Acquisition Rights	Retained Earnings	Treasury Stock
Balance at March 31, 2021	$ 572,534	$ 575,405	$ 7,149	$ 3,054,430	$ (91,851)
Cumulative effects of accounting change	–	–	–	(14,564)	–
Net income attributable to owners of the parent	–	–	–	580,749	–
Cash dividends, $0.41 per share	–	–	–	(128,522)	–
Purchase of treasury stock	–	–	–	–	(79,512)
Disposal of treasury stock	–	(55)	–	–	1,131
Cancellation of treasury stock	–	(80,520)	–	–	80,520
Transfer from retained earnings to capital surplus	–	80,575	–	(80,575)	–
Net change in the year	–	–	566	–	–
Balance at March 31, 2022	$ 572,534	$ 575,405	$ 7,715	$ 3,411,518	$ (89,712)

See notes to consolidated financial statements.

Millions of Yen

Accumulated Other Comprehensive Income						
Unrealized Gain 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
¥ 11,337	¥ (462)	¥ (21,390)	¥ (5,406)	¥ 459,381	¥ 9,738	¥ 469,119
–	–	–	–	38,496	–	38,496
–	–	–	–	(11,079)	–	(11,079)
–	–	–	–	(3)	–	(3)
–	–	–	–	36	–	36
–	–	–	–	-	–	-
–	–	–	–	(440)	–	(440)
7,921	276	16,471	1,773	26,484	(4,721)	21,763
19,258	(186)	(4,919)	(3,633)	512,875	5,017	517,892
–	–	–	–	(1,778)	–	(1,778)
–	–	–	–	70,852	–	70,852
–	–	–	–	(15,680)	–	(15,680)
–	–	–	–	(9,701)	–	(9,701)
–	–	–	–	132	–	132
–	–	–	–	–	–	–
–	–	–	–	–	–	–
(2,197)	(14)	26,540	2,990	27,388	489	27,877
¥ 17,061	¥ (200)	¥ 21,621	¥ (643)	¥ 584,088	¥ 5,506	¥ 589,594

Thousands of U.S. Dollars (Note 1)

Accumulated Other Comprehensive Income						
Unrealized Gain 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
$ 157,850	$ (1,526)	$ (40,318)	$ (29,775)	$ 4,203,898	$ 41,124	$ 4,245,022
–	–	–	–	(14,564)	–	(14,564)
–	–	–	–	580,749	–	580,749
–	–	–	–	(128,522)	–	(128,522)
–	–	–	–	(79,512)	–	(79,512)
–	–	–	–	1,076	–	1,076
–	–	–	–	–	–	–
–	–	–	–	–	–	–
(18,008)	(111)	217,536	24,506	224,489	4,000	228,489
$ 139,842	$ (1,637)	$ 177,218	$ (5,269)	$ 4,787,614	$ 45,124	$ 4,832,738

Consolidated Statement of Cash Flows

NGK INSULATORS, LTD. and Consolidated Subsidiaries

Year ended March 31, 2022

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2022	2021	2022
OPERATING ACTIVITIES:			
Income before income taxes	¥ 90,819	¥ 53,121	$ 744,417
Adjustments for:			
Income taxes — paid	(12,921)	(13,347)	(105,908)
Income taxes — refund	4,580	–	37,544
Depreciation and amortization	49,271	44,943	403,858
Impairment loss on fixed assets	1,160	2,267	9,508
Equity in earnings of unconsolidated subsidiary and associated company	(1,667)	(1,622)	(13,662)
Gain on sales of investment securities — net	(1,161)	(620)	(9,518)
Changes in assets and liabilities:			
Increase in notes and accounts receivable — trade	(1,652)	(12,637)	(13,539)
(Increase) decrease in inventories	(27,900)	10,426	(228,692)
(Increase) decrease in other current assets	(117)	1,688	(961)
Increase (decrease) in notes and accounts payable — trade	331	(2,375)	2,711
(Decrease) increase in other current liabilities	(4,022)	3,199	(32,971)
Other — net	(1,890)	599	(15,485)
Total adjustments	4,012	32,521	32,885
Net cash provided by operating activities	94,831	85,642	777,302
INVESTING ACTIVITIES:			
Purchases of marketable securities	(54,700)	(41,399)	(448,357)
Proceeds from sales and redemption of marketable securities	51,231	36,672	419,928
Proceeds from sales and redemption of investment securities	1,841	2,910	15,087
Purchases of property, plant and equipment	(35,226)	(50,840)	(288,741)
Purchase of intangible assets	(2,202)	(2,503)	(18,052)
(Increase) decrease in time deposits	(6,810)	1,720	(55,822)
Proceeds from sale of shares of subsidiaries resulting in change in scope of consolidation	–	706	–
Other — net	(426)	1,009	(3,481)
Net cash used in investing activities	(46,292)	(51,725)	(379,438)
FINANCING ACTIVITIES:			
(Decrease) increase in short-term borrowings — net	(12,017)	11,264	(98,498)
Proceeds from long-term debt	15,000	22,184	122,951
Repayments of long-term debt	(22,007)	(9,417)	(180,382)
Purchase of treasury stock	(9,701)	(3)	(79,512)
Cash dividends	(15,680)	(11,079)	(128,522)
Other — net	(858)	(698)	(7,048)
Net cash (used in) provided by financing activities	(45,263)	12,251	(371,011)
FOREIGN CURRENCY TRANSLATION ADJUSTMENTS ON CASH AND CASH EQUIVALENTS	5,548	5,172	45,471
NET INCREASE IN CASH AND CASH EQUIVALENTS	8,824	51,340	72,324
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	146,031	94,691	1,196,979
CASH AND CASH EQUIVALENTS, END OF YEAR	¥ 154,855	¥ 146,031	$ 1,269,303

Additional Information

Cash proceeds and the breakdown of assets and liabilities of 8 subsidiaries excluded from consolidation as of the date of exclusion, as a result of sale of its shares, were as follows:

	2022	2021
Current assets	¥ –	¥ 7,114
Fixed assets	–	5,719
Current liabilities	–	(1,521)
Long-term liabilities	–	(2,413)
Noncontrolling interests	–	(5,275)
Other	–	(472)
Loss on sale of shares	–	(594)
Sale price of shares	–	2,558
Cash and cash equivalents	–	(1,852)
Net Proceeds from sale of shares	¥ –	¥ 706

See notes to consolidated financial statements.

Notes to Consolidated Financial Statements

NGK INSULATORS, LTD. and Consolidated Subsidiaries
Year ended March 31, 2022

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 ("IFRS").

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 2021 consolidated financial statements to conform to the classifications used in 2022.

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 ¥122 to $1, the approximate rate of exchange at March 31, 2022. 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, 2022 include the accounts of the Company and its 45 (45 in 2021) significant 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.

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. Eight foreign consolidated subsidiaries in China and Mexico, etc. have different fiscal years. Those subsidiaries prepared provisional financial information 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 ("IFRS") or generally accepted accounting principles in the United States of America ("US GAAP") 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; (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; and (e) recording a gain or loss through profit or loss on the sale of an investment in an equity instrument for the difference between the acquisition cost and selling price, and recording impairment loss through profit or loss for other-than-temporary declines in the fair value of an investment in an equity instrument, where a foreign subsidiary elects to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument.

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 IFRS or US GAAP 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; (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; and (e) recording a gain or loss through profit or loss on the sale of an investment in an equity instrument for the difference between the acquisition cost and selling price, and recording impairment loss through profit or loss for other-than-temporary declines in the fair value of an investment in an equity instrument, where a foreign associate elects to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument.

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 6). Write-downs of inventories in the amounts of ¥304 million ($2,491 thousand) and ¥216 million for the years ended March 31, 2022 and 2021, 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 a 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 equity 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 10 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.

Intangible assets are amortized by the straight-line method.

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.

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, 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 certain 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, 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 the NAS battery business, to the extent that such amount can be reasonably estimated.

p. Revenue Recognition—

(i) Main performance obligations of major businesses. The Group applies its unique ceramic technology to manufacture and sell a variety of products that support the foundation of society and contribute to environmental conservation. The main performance obligations by business segment are as follows.

(Energy Infrastructure business)

The Group manufactures and sells products and provides services related to insulators, hardware for insulator assemblies, current limiting arching horn, bushing shells, fuse cut-outs, APM, line arrester, as well as manufactures and sells and provides services related to energy storage-related products, primarily NAS® (Sodium/Sulfur Batteries) batteries for electric power storage.

(Ceramics business)

The Group manufactures and sells automotive ceramics for exhaust gas purification and sensor.

(Electronics business)

The Group manufactures and sells ceramic components for electronics, mainly electronic industrial products, as well as metal-related products, mainly beryllium copper products and metal molds.

(Process Technology business)

The Group manufactures and sells components for semiconductor manufacturing equipment, as well as manufactures and sells products and provides services related to industrial equipment, primarily corrosion-resistant ceramic apparatuses for chemical industries, gas analyzer, industrial heating systems, refractory products and radioactive waste treatment systems.

(ii) Normal point in time at which performance obligations are satisfied (normal point in time at which revenue is recognized)

Except for a and b below, the Group recognizes domestic sales revenue based on the judgment that the Group has the right to receive consideration for the provided assets, etc., which is mainly at the time when the product arrives at the customer or when the customer's acceptance inspection is completed. For export sales, the revenue is recognized mainly at the time when the risk is determined to have been transferred to the customer based on the trade conditions specified by Incoterms, etc., and that legal ownership, physical possession, material risks, etc. are transferred to the customer and hence the control over the assets has been transferred to the customer.

a. Service contract

The Group recognizes revenue over a certain period of time as it fulfills its performance obligations to transfer products or services to customers for service contracts concluded primarily in the energy infrastructure business and process technology business. Progress in meeting performance obligations is measured based on the ratio of costs incurred by the end of each reporting period to the total expected costs. In addition, the Group recognizes revenue on a cost recovery basis if it is not possible to reasonably estimate the progress in meeting performance obligations, but it is expected to recover costs incurred in meeting the performance obligations. For service contracts for which it is expected to completely fulfill performance obligations within a very short period of time from the transaction start date, the Group applies alternative treatment and does not recognize revenue over a certain period of time, and does so when the performance obligations are fully met.

b. Sale of products accompanied by the provision of services

With respect to the sales of products mainly in the energy infrastructure business and process technology business, even if the provision of services such as installation work and commissioning related to the sales of the products is concluded as a separate contract, the Group recognizes revenue based on the judgment that the sales of the products and the service provision contract attached thereto are considered as a single performance obligation, and the control over the assets, etc. has been transferred to the customer at the time of completing provision of the services.

q. ***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.

r. ***Leases—***Foreign consolidated subsidiaries, which apply IFRS, recognize all leases as both assets and liabilities on their balance sheets in principle. Effective April 1, 2019, these subsidiaries adopted IFRS16, Leases.

s. ***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.

t. ***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.

u. ***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.

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.

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 and the differential paid or received under the swap agreements is recognized and included in interest expense when currency and interest swaps meet the above criteria.

v. 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.

w. New Accounting Pronouncements

Leases—The Financial Accounting Standards Board issued Topic 842, Leases. The standard requires lessees to recognize all leases as both assets and liabilities on their balance sheets in principle. There are no significant changes in the accounting standards for lessors. Topic 842 is in effect for annual reporting periods beginning on or after April 1, 2022. The effects of applying Topic 842 are insignificant.

Fair value measurement—On June 17, 2021 the ASBJ issued ASBJ Guidance No. 31, "Implementation Guidance on Accounting Standard for Fair Value Measurement," This is established for handling of calculation of fair value of investment trusts and notes on the same, and handling of notes on fair value of investments in partnerships, etc. in which the amount equivalent to equity interests is recorded as net amount on the balance sheet are stipulated. The Group expects to apply the Guidance for annual periods beginning on or after April 1, 2022, and is evaluating the effects of applying the Guidance.

3. SIGNIFICANT ACCOUNTING ESTIMATES

a. Retirement and Pension Plans

(1) Carrying amounts

	Millions of Yen	Thousands of U.S. Dollars
	2022	**2022**
Net defined benefit assets	¥ 6,692	$ 54,855
Net defined benefit liability	21,421	175,581

(2) Information on the significant accounting estimate

The Group accounts for net defined benefit liability (assets) by deducting the amount of plan assets from the projected benefit obligations ("PBO"). PBO is calculated by discounting projected contribution based on certain assumptions, such as turnover rate, mortality rate and salary increase rate. Plan assets are measured at fair value at the end of fiscal year. Significant assumptions in PBO, plan assets and pension cost are discount rate and expected rate of return. Discount rate is based on a net yield of high-grade long-term bond. Expected rate of return is based on components of plan assets, result of return and change in interest market. Variety of the actuarial premise such as drastic fluctuation in interest market and unforeseen change in management environment may affect the amount of profit and loss.

b. ***Deferred Tax Accounting***

(1) Carrying amounts

	Millions of Yen	Thousands of U.S. Dollars
	2022	2022
Deferred tax assets	¥ 5,891	$ 48,286
Deferred tax liabilities	1,085	8,896

(2) Information on the significant accounting estimate

The Group accounts for deferred tax assets (liabilities) based on the temporary difference between the carrying amount of assets or liabilities in the consolidated balance sheet and their tax base, and tax loss carryforward. Deferred tax assets are recorded when the future taxable profit is sufficient enough to utilize the future deductible temporary differences and tax loss carryforward. Deferred tax liabilities are recognized for all future taxable temporary differences. Deferred tax assets (liabilities) for the current period are measured at the tax rates that are expected to apply to the period when the assets are realized or the liabilities are settled, based on tax laws and tax rates that have been enacted or substantively enacted by the end of the reporting period. The Group compares the deductible temporary differences with future taxable profit estimated based on business plan authorized by management, taxable income in prior years and tax planning opportunities available. Variety of the factors such as both unforeseen change in management environment and tax reform, which the Group considered in evaluating the recoverability of deferred tax assets, may provoke additional impact to taxable profit or the temporary difference, consequently it affects the profit and loss.

Accounting estimates relating to effect of the spread of COVID-19

The accounting estimates such as impairment of long-lived assets and the recoverability of deferred tax assets are based on available information to the Group at the time of reporting the consolidated financial statements. Although the continued impact of the COVID-19 pandemic and the timing of when the pandemic will subside remain uncertain, the Group determined that the effect of the pandemic is insignificant as of the issuance date of the consolidated financial statements. Since there are many uncertainties related to the effect of the spread of COVID-19, it may affect the consolidated financial position and performance of the Group depending on when the COVID-19 pandemic will subside.

4. ACCOUNTING CHANGE

(Application of Accounting Standards for Revenue Recognition)

Effective April 1, 2021, the Company adopted ASBJ Statement No. 29, “Accounting Standard for Revenue Recognition,” and ASBJ Guidance No. 30, “Implementation Guidance on Accounting Standard for Revenue Recognition,” issued on March 31, 2020 (“ASBJ Statement No. 29”) and recognizes revenue at the amount expected to be received in exchange for promised goods or services when control of the goods or services is transferred to customers. The main changes are as follows.

(1) Combination of contracts and identification of performance obligations

Previously, in some cases, the Company recognized revenues from sales of products upon their arrival or upon the completion of customer acceptance, and revenues from services such as installation and test runs upon the completion of the Company’s work for such services. However, the Company changed the method to recognize revenues upon the completion of services, with sales of products and provision of accompanying services as a single performance obligation.

(2) Performance obligations satisfied over time
With respect to construction contracts, the Company previously used the percentage-of-completion method when the outcome of the construction activity was deemed certain; however, when the control of the goods or services is transferred to the customer over a certain period of time, the Company now recognizes revenues over a certain period of time as it satisfies the performance obligation to transfer the goods or services to the customer. Progress in satisfying performance obligations is measured based on the ratio of construction costs incurred by the end of each reporting period to the total estimated construction costs. In cases where it is not possible to reasonably estimate the progress of the satisfaction of performance obligations, but the recovery of costs incurred is expected, the Company recognizes revenues on a cost recovery basis. For construction contracts with a very short period from the transaction start date to the time when the performance obligation is expected to be fully satisfied, the Company applies alternative treatment and recognizes revenues when the obligation is fully satisfied instead of recognizing revenues over a certain period of time.

For application of the Revenue Recognition Accounting Standards, the Company follows the transitional treatment prescribed in the provisions of Paragraph 84 of the Standards, adds/deducts the cumulative effect of retroactive application of the new accounting policy prior to the beginning of the first quarter consolidated accounting period to/from retained earnings at the beginning of the first quarter consolidated accounting period, and applies the new accounting policy from the beginning balance of the period. As a result, the effect on the consolidated financial statements is immaterial.

(Application of Accounting Standard for Fair Value Measurement)
Effective April 1, 2021, the Group applied ASBJ Statement No. 30, “Accounting Standard for Fair Value Measurement” and ASBJ Guidance No. 31, “Implementation Guidance on Accounting Standard for Fair Value Measurement,” and revised related ASBJ Statements and ASBJ Guidance. In accordance with the transitional treatment as provided in the Paragraph 19 of the Accounting Standard for Fair Value Measurement and the Paragraph 44-2 of ASBJ Statement No. 10, July 4, 2019, “Accounting Standard for Financial Instruments,” the Group applied the new accounting standards prospectively. There was no effect on the consolidated financial statements for the year ended March 31, 2022.

In accordance with the transitional treatment as provided in the Paragraph 7-4 of the Implementation Guidance on Accounting Standard for Fair Value Measurement, financial instruments categorized by fair value hierarchy at March 31, 2021 is not presented in Note 16.

5. MARKETABLE INVESTMENT SECURITIES

Marketable and investment securities as of March 31, 2022 and 2021, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Current:			
Investment trusts and other	¥ 13,643	¥ 11,103	$ 111,830
Debt securities	10,000	9,000	81,967
Total	¥ 23,643	¥ 20,103	$ 193,797
Noncurrent:			
Equity securities and other	¥ 41,072	¥ 44,070	$ 336,657
Debt securities	–	600	–
Total	¥ 41,072	¥ 44,670	$ 336,657

The costs and aggregate fair values of marketable and investment securities at March 31, 2022 and 2021, were as follows:

	Millions of Yen			
March 31, 2022	**Cost**	**Unrealized Gains**	**Unrealized Losses**	**Fair Value**
Securities classified as:				
Available-for-sale:				
Equity securities	¥ 15,222	¥ 23,832	¥ 442	¥ 38,612
Debt securities	–	–	–	–
Investment trusts and other	13,206	452	15	13,643
Held-to-maturity:				
Debt securities	10,000	–	0	10,000

	Millions of Yen			
March 31, 2021	**Cost**	**Unrealized Gains**	**Unrealized Losses**	**Fair Value**
Securities classified as:				
Available-for-sale:				
Equity securities	¥ 15,285	¥ 27,705	¥ 948	¥ 42,042
Debt securities	600	-	–	600
Investment trusts and other	10,752	378	27	11,103
Held-to-maturity:				
Debt securities	9,000	0	1	8,999

	Thousands of U.S. Dollars			
March 31, 2022	**Cost**	**Unrealized Gains**	**Unrealized Losses**	**Fair Value**
Securities classified as:				
Available-for-sale:				
Equity securities	$ 124,776	$ 195,339	$ 3,627	$ 316,488
Debt securities	–	–	–	–
Investment trusts and other	108,248	3,710	128	111,830
Held-to-maturity:				
Debt securities	81,967	–	1	81,966

Proceeds from sales of available-for-sale securities (including marketable securities and investment securities) for the years ended March 31, 2022 and 2021, were ¥1,455 million ($11,925 thousand) and ¥5,705 million, respectively. Realized gains on these sales, computed on the moving-average cost basis, were ¥1,165 million ($9,549 thousand) and ¥1,624 million for the years ended March 31, 2022 and 2021, respectively. Realized losses on these sales, computed on the moving-average cost basis, were ¥23 million ($189 thousand) and ¥321 million for the years ended March 31, 2022 and 2021, respectively.

6. INVENTORIES

Inventories at March 31, 2022 and 2021, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Finished products	¥ 83,310	¥ 60,301	$ 682,857
Work in process	22,337	19,207	183,093
Raw materials and supplies	82,008	70,101	672,200
Cost of contracts in progress	682	863	5,594
Total	¥ 188,337	¥ 150,472	$ 1,543,744

7. LONG-LIVED ASSETS

The Group reviewed its long-lived assets for impairment as of March 31, 2022. As a result, the Group recognized an impairment loss of ¥1,160 million ($9,508 thousand) as other expense mainly in the following group which included idle assets. The carrying amounts of the relevant assets were written down to their memorandum value for the year ended March 31, 2022.

Groups	Asset Category	Location	Millions of Yen	Thousands of U.S. Dollars
			2022	2022
Ceramics business	Machinery, equipment and vehicles	China	¥1,034	$8,476

The Group recognized impairment losses for the year ended March 31, 2022, as follows:

	Millions of Yen	Thousands of U.S. Dollars
	2022	2022
Buildings and structures	¥ 8	$ 70
Machinery and equipment	1,076	8,818
Construction in progress	38	308
Other	38	312
Total	¥ 1,160	$ 9,508

The Group reviewed its long-lived assets for impairment as of March 31, 2021. As a result, the Group recognized an impairment loss of ¥2,267 million ($20,422 thousand) as other expense mainly in the following groups which deteriorated in profitability or in the groups, which included idle assets. The carrying amounts of the relevant assets were written down to their recoverable value for the year ended March 31, 2021. The recoverable values of those assets were measured at their net selling values or the values in use, whichever were higher.

Groups	Asset Category	Location	Millions of Yen
			2021
Insulator business (Partial withdrawal of business)	Buildings and structures, Machinery and equipment and other	Japan	¥ 666
Package business	Buildings and structures, Machinery and equipment, Construction in progress and other	Japan and Malaysia	1,243

The Group recognized impairment losses for the year ended March 31, 2021 as follows:

	Millions of Yen
	2021
Buildings and structures	¥ 584
Machinery and equipment	547
Construction in progress	673
Land	236
Other	227
Total	¥ 2,267

8. SHORT-TERM BORROWINGS AND LONG-TERM DEBT

Short-term borrowings at March 31, 2022 and 2021, consisted of notes to banks. The weighted-average interest rates on short-term borrowings as of March 31, 2022 and 2021, were 1.3% and 0.8%, respectively.

Long-term debt at March 31, 2022 and 2021, consisted of the following:

	Millions of Yen		Thousands of U.S. Dollars
	2022	**2021**	**2022**
Borrowings from banks and other financial institutions due serially through 2036, with weighted-average interest rates of 1.6% (2022) and 1.4% (2021)	¥ 211,152	¥ 221,198	$ 1,730,757
Unsecured 0.657% yen bonds due July 27, 2032	10,000	10,000	81,967
Unsecured 0.860% yen bonds due July 26, 2038	15,000	15,000	122,951
Unsecured 0.180% yen bonds due December 21, 2028	10,000	–	81,967
Total	246,152	246,198	2,017,642
Less: portion due within one year	(32,263)	(21,927)	(264,454)
Long-term debt, less current portion	¥ 213,889	¥ 224,271	$ 1,753,188

Annual maturities of long-term debt at March 31, 2022, were as follows:

Year Ending March 31	Millions of Yen	Thousands of U.S. Dollars
2023	¥ 32,263	$ 264,454
2024	33,957	278,335
2025	37,990	311,391
2026	22,009	180,400
2028 and thereafter	86,631	710,092
Total	¥ 246,152	$ 2,017,642

9. 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, and other.

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

Certain subsidiaries have defined contribution plans such as smaller enterprise retirement allowance mutual aid plans.
The simplified calculation method was applied to measure the liability and the cost of defined benefit plans and lump-sum payment plans for insignificant domestic subsidiaries.

a. Defined Benefit Pension Plans

(1) The changes in defined benefit obligation for the years ended March 31, 2022 and 2021 (except for the plans to which the simplified method was applied), were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Balance at beginning of year	¥ 90,003	¥ 90,592	$ 737,731
Current service cost	3,736	3,650	30,622
Interest cost	640	634	5,245
Actuarial losses	(1,148)	2,262	(9,413)
Benefits paid	(3,214)	(3,444)	(26,348)
Past service cost	(2,063)	–	(16,908)
Decrease resulting from exclusion of subsidiaries from consolidation	–	(3,956)	–
Others	315	265	2,584
Balance at end of year	¥ 88,269	¥ 90,003	$ 723,513

(2) The changes in plan assets for the years ended March 31, 2022 and 2021 (except for the plans to which the simplified method was applied), were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Balance at beginning of year	¥ 75,166	¥ 78,080	$ 616,115
Expected return on plan assets	742	858	6,081
Actuarial losses	(145)	3,223	(1,185)
Contributions from the employer	2,686	2,615	22,019
Benefits paid	(2,753)	(3,003)	(22,569)
Decrease resulting from exclusion of subsidiaries from consolidation	–	(6,680)	–
Others	27	73	221
Balance at end of year	¥ 75,723	¥ 75,166	$ 620,682

(3) The changes in net defined benefit liability, where the simplified method was applied to measure the liability, for the years ended March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Balance at beginning of year	¥ 2,106	¥ 2,112	$ 17,265
Pension costs	354	312	2,898
Benefits paid	(204)	(157)	(1,675)
Contributions to pension plans	(73)	(87)	(593)
Decrease resulting from exclusion of subsidiaries from consolidation	–	(74)	–
Balance at end of year	¥ 2,183	¥ 2,106	$ 17,895

(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, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Funded defined benefit obligation	¥ 71,114	¥ 72,651	$ 582,907
Plan assets	(76,623)	(76,083)	(628,061)
	(5,509)	(3,432)	(45,154)
Unfunded defined benefit obligation	20,238	20,375	165,880
Net liability arising from defined benefit obligation	¥ 14,729	¥ 16,943	$ 120,726

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Net defined benefit liability	¥ 21,421	¥ 21,758	$ 175,581
Net defined benefit asset	(6,692)	(4,815)	(54,855)
Net liability arising from defined benefit obligation	¥ 14,729	¥ 16,943	$ 120,726

(5) The components of net periodic benefit costs for the years ended March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Service cost	¥ 3,736	¥ 3,650	$ 30,622
Interest cost	640	634	5,245
Expected return on plan assets	(742)	(858)	(6,081)
Recognized actuarial losses	1,263	1,670	10,360
Amortization of past service cost	(211)	(225)	(1,733)
Benefit costs measured by the simplified method	354	312	2,898
Net periodic benefit costs	¥ 5,040	¥ 5,183	$ 41,311

(6) Amounts recognized in other comprehensive income (before income tax effect) in respect of defined retirement benefit plans for the years ended March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Actuarial losses	¥ 2,323	¥ 2,954	$ 19,036
Prior service cost	1,851	(225)	15,175
Total	¥ 4,174	¥ 2,729	$ 34,211

(7) Amounts recognized in accumulated other comprehensive income (before income tax effect) in respect of defined retirement benefit plans as of March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Unrecognized actuarial gains	¥ (3,786)	¥ (6,109)	$ (31,033)
Unrecognized past service cost	3,060	1,209	25,083
Total	¥ (726)	¥ (4,900)	$ (5,950)

(8) Plan assets

a. Components of plan assets

Plan assets as of March 31, 2022 and 2021, consisted of the following:

	2022	2021
Assets in an insurer's general account	42 %	43 %
Equity investments	12	14
Debt investments	31	32
Cash and cash equivalents	0	0
Others	15	11
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 that are expected currently and in the future from the various components of the plan assets.

(9) Assumptions used for the years ended March 31, 2022 and 2021, were set forth as follows:

	2022	2021
Discount rate	Primarily 0.6%	Primarily 0.6%
Expected rate of return on plan assets	Primarily 1.0%	Primarily 1.0%
Expected rate of future salary increase	Primarily 3.0%－4.6%	Primarily 3.3%－4.9%

b. Defined Contribution Pension Plans

The Group's contributions to defined contribution pension plan funds for the years ended March 31, 2022 and 2021, were ¥470 million ($3,855 thousand) and ¥417 million, respectively.

10. 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.

11. STOCK OPTIONS

The stock options outstanding as of March 31, 2022 were as follows:

Stock Option Scheme	Persons Originally Granted	Number of Options Originally Granted	Date of Grant	Exercise Price	Exercise Period
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 (2-2)	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
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

Stock Option Scheme	Persons Originally Granted	Number of Options Originally Granted	Date of Grant	Exercise Price	Exercise Period
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
2017 Stock Option Scheme	10 directors 12 officers	Common shares 58,000 Shares	August 16, 2017	¥1 ($0.01)	From August 17, 2017 to June 30, 2047
2018 Stock Option Scheme	9 directors 13 officers	Common shares 55,000 Shares	July 12, 2018	¥1 ($0.01)	From July 13, 2018 to June 30, 2048
2019 Stock Option Scheme	9 directors 15 officers	Common shares 61,000 Shares	July 9, 2019	¥1 ($0.01)	From July 10, 2019 to June 30, 2049
2020 Stock Option Scheme	10 directors 15 officers	Common shares 64,000 Shares	July 15, 2020	¥1 ($0.01)	From July 16, 2020 to June 30, 2050
2021 Stock Option Scheme	6 directors 21 officers	Common shares 116,000 Shares	July 14, 2021	¥1 ($0.01)	From July 15, 2021 to June 30, 2051

The stock option activity is as follows:

	2005 Stock Option	2006 Stock Option (2-2)	2007 Stock Option	2008 Stock Option	2009 Stock Option
			(Shares)		
For the year ended March 31, 2021					
Non-vested					
April 1, 2020 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2021 —Outstanding	–	–	–	–	–
Vested					
April 1, 2020 —Outstanding	12,000	4,000	8,000	10,000	10,000
Vested	–	–	–	–	–
Exercised	8,000	–	–	–	–
Canceled	–	–	–	–	–
March 31, 2021 —Outstanding	4,000	4,000	8,000	10,000	10,000
For the year ended March 31, 2022					
Non-vested					
March 31, 2021 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2022 —Outstanding	–	–	–	–	–
Vested					
March 31, 2021 —Outstanding	4,000	4,000	8,000	10,000	10,000
Vested	–	–	–	–	–
Exercised	4,000	4,000	4,000	4,000	4,000
Canceled	–	–	–	–	–
March 31, 2022 —Outstanding	–	–	4,000	6,000	6,000
Exercise price	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)
Average stock price at exercise	¥1,878 ($15.39)	¥1,787 ($14.65)	¥1,835 ($15.04)	¥1,835 ($15.04)	¥1,835 ($15.04)
Fair value price at grant date	–	¥1,506 ($12.34)	¥3,658 ($29.98)	¥1,434 ($11.75)	¥2,072 ($16.98)

	2010 Stock Option	2011 Stock Option	2012 Stock Option	2013 Stock Option	2014 Stock Option
			(Shares)		
For the year ended March 31, 2021					
Non-vested					
April 1, 2020 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2021 —Outstanding	–	–	–	–	–
Vested					
April 1, 2020 —Outstanding	18,000	19,000	24,000	30,000	43,000
Vested	–	–	–	–	–
Exercised	3,000	2,000	3,000	4,000	6,000
Canceled	–	–	–	–	–
March 31, 2021 —Outstanding	15,000	17,000	21,000	26,000	37,000
For the year ended March 31, 2022					
Non-vested					
March 31, 2021 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2022 —Outstanding	–	–	–	–	–
Vested					
March 31, 2021 —Outstanding	15,000	17,000	21,000	26,000	37,000
Vested	–	–	–	–	–
Exercised	4,000	3,000	5,000	6,000	10,000
Canceled	–	–	–	–	–
March 31, 2022 —Outstanding	11,000	14,000	16,000	20,000	27,000
Exercise price	¥1	¥1	¥1	¥1	¥1
	($0.01)	($0.01)	($0.01)	($0.01)	($0.01)
Average stock price at exercise	¥1,875	¥1,620	¥1,680	¥1,729	¥1,936
	($15.37)	($13.28)	($13.77)	($14.17)	($15.87)
Fair value price at grant date	¥1,289	¥1,100	¥923	¥1,276	¥2,510
	($10.57)	($9.02)	($7.57)	($10.46)	($20.57)

	2015 Stock Option	2016 Stock Option	2017 Stock Option	2018 Stock Option	2019 Stock Option
			(Shares)		
For the year ended March 31, 2021					
Non-vested					
April 1, 2020 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2021 —Outstanding	–	–	–	–	–
Vested					
April 1, 2020 —Outstanding	46,000	58,000	58,000	55,000	61,000
Vested	–	–	–	–	–
Exercised	–	–	–	–	–
Canceled	–	–	–	–	–
March 31, 2021 —Outstanding	46,000	58,000	58,000	55,000	61,000
For the year ended March 31, 2022					
Non-vested					
March 31, 2021 —Outstanding	–	–	–	–	–
Granted	–	–	–	–	–
Canceled	–	–	–	–	–
Vested	–	–	–	–	–
March 31, 2022 —Outstanding	–	–	–	–	–
Vested					
March 31, 2021 —Outstanding	46,000	58,000	58,000	55,000	61,000
Vested	–	–	–	–	–
Exercised	8,000	8,000	6,000	–	–
Canceled	–	–	–	–	–
March 31, 2022 —Outstanding	38,000	50,000	52,000	55,000	61,000
Exercise price	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)	¥1 ($0.01)
Average stock price at exercise	¥1,924 ($15.77)	¥1,765 ($14.47)	¥1,804 ($14.79)	–	–
Fair value price at grant date	¥2,850 ($23.36)	¥2,060 ($16.89)	¥1,897 ($15.55)	¥1,725 ($14.14)	¥1,362 ($11.16)

	2020 Stock Option	2021 Stock Option
		(Shares)
For the year ended March 31, 2021		
Non-vested		
April 1, 2020 —Outstanding	–	
Granted	64,000	
Canceled	–	
Vested	64,000	
March 31, 2021 —Outstanding	–	
Vested		
April 1, 2020 —Outstanding	–	
Vested	64,000	
Exercised	–	
Canceled	–	
March 31, 2021 —Outstanding	64,000	
For the year ended March 31, 2022		
Non-vested		
March 31, 2021 —Outstanding	–	–
Granted	–	116,000
Canceled	–	–
Vested	–	116,000
March 31, 2022 —Outstanding	–	–
Vested		
March 31, 2021 —Outstanding	64,000	–
Vested	–	116,000
Exercised	-	–
Canceled	–	–
March 31, 2022 —Outstanding	64,000	116,000
Exercise price	¥1 ($0.01)	¥1 ($0.01)
Average stock price at exercise	–	–
Fair value price at grant date	¥1,246 ($10.21)	¥1,727 ($14.16)

The Assumptions Used to Measure the Fair Value of the 2021 Stock Option

Estimate method:	Black-Scholes option-pricing model
Volatility of stock price:	27.55%
Estimated remaining outstanding period:	Four and a half years
Estimated dividend:	¥30 per share
Risk-free interest rate:	(0.140%)

12. INCOME TAXES

The Company and its domestic subsidiaries are subject to Japanese national and local income taxes which, in the aggregate, resulted in a normal effective statutory tax rate of approximately 30.6% for the years ended March 31, 2022 and 2021.

The tax effects of significant temporary differences and tax loss carryforwards which resulted in deferred tax assets and liabilities at March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	**2021**	**2022**
Deferred tax assets:			
Inventories	¥ 9,389	¥ 6,304	$ 76,959
Accounts payable and accrued expenses	3,833	2,897	31,416
Enterprise taxes payable	1,075	406	8,815
Property, plant and equipment	11,662	12,195	95,593
Pension and severance cost	6,402	6,304	52,477
Tax loss carryforwards	8,912	8,780	73,048
Investment securities	1,383	1,373	11,338
Tax deduction of foreign subsidiaries	–	949	–
Provision for NAS Battery safety measures	297	448	2,438
Provision for product warranties	295	235	2,415
Other	3,813	4,350	31,250
Total	47,061	44,241	385,749
Less: valuation allowance (Note)	(17,602)	(17,963)	(144,284)
Deferred tax assets	¥ 29,459	¥ 26,278	$ 241,465
Deferred tax liabilities:			
Unrealized gain on available-for-sale securities	¥ 6,763	¥ 7,836	$ 55,431
Deferred gains on sales of property	1,261	1,185	10,337
Undistributed earnings of foreign subsidiaries	8,657	7,269	70,962
Fixed asset	4,236	2,935	34,725
Net defined benefit asset	2,034	1,461	16,674
Securities contributed to retirement benefit trust	1,082	1,082	8,872
Other	620	439	5,074
Deferred tax liabilities	24,653	22,207	202,075
Net deferred tax liabilities	¥ 4,806	¥ 4,071	$ 39,390

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, 2022, with the corresponding figures for 2021, is as follows:

	2022	2021
Normal effective statutory tax rate	30.6 %	30.6 %
Expenses not deductible for income tax purposes	1.9	1.0
Income excluded from income tax, such as dividends received	(0.1)	(0.9)
Change in valuation allowance	(0.8)	(2.1)
Undistributed earnings of foreign subsidiaries	1.7	2.4
Lower income tax rates applicable to income in certain foreign countries	(2.2)	(2.3)
Tax credit of foreign subsidiaries	(0.2)	(0.3)
Tax credit of research and development costs	(2.0)	(2.5)
Equity in earnings of unconsolidated subsidiaries and associated companies	(0.6)	(0.9)
Sales of shares of subsidiaries and associates	0.0	0.2
Effect of excluding subsidiaries from consolidation	–	1.2
Expire of tax loss carryforward	–	0.1
Transfer pricing adjustment	(6.4)	-
Other — net	(0.1)	0.7
Actual effective tax rate	21.8 %	27.2 %

Note:
Regarding filing action for the revocation of correction based on transfer pricing taxation
The Company paid approximately ¥6.2 billion in back taxes, including local taxes. Approximately ¥0.1 billion was refunded as decision of a request for examination with the Nagoya National Tax Tribunal. In March 2012, the Company received the correction. based on transfer pricing taxation from the Nagoya Regional Taxation Bureau with respect to transactions with its subsidiary in Poland that took place during the period from the fiscal year ended March 31, 2007 to the fiscal year ended March 31, 2010. The Company filed an action with the Tokyo District Court in December 2016 for revocation of the correction. After the subsequent proceedings, in November 2020, the Tokyo District Court rendered a judgment that granted most of the Company's claims and revoked the correction with respect to a total of approximately ¥5.8 billion in corporate and local taxes, etc. (hereinafter referred to as the "First Instance Judgment"). Dissatisfied with the First Instance Judgment described above, the national government filed an appeal with the Tokyo High Court in December 2020. In response, the Company filed an incidental appeal with respect to the portions of the First Instance Judgment that did not grant its claims in December of the same year. After the subsequent proceedings, the Tokyo High Court rendered a judgment in March 2022 that approved the judgment of the Tokyo District Court, granted most of the Company's claims, and rejected the appeal filed by the national government and the incidental appeal filed by the Company. The Company considered all factors involved including the fact that most of the Company's claims were granted by the court and did not file either a final appeal or a petition for acceptance of final appeal. At the same time, the national government had not filed a final appeal or a petition for acceptance of final appeal by the designated deadlines; therefore, the judgment by the Tokyo District Court became final. Accordingly, with regard to the amount paid in the past including income taxes and local taxes, the Company recorded in the current fiscal year the tax refund of approximately ¥5.8 billion to income taxes-refund as well as interest on tax refund of approximately ¥1.2 billion to other income.

Following the correction abovementioned, also with regard to the transactions between the Company and its subsidiary in Poland from the fiscal year ended March 31, 2011 through the fiscal year ended March 31, 2015, the Company received a correction based on transfer pricing taxation from the Nagoya Regional Taxation Bureau in June 2017, and the Company made payment of approximately ¥8.5 billion in tax penalties, including local taxes. A request for re-examination was submitted to the Nagoya National Tax Tribunal in July 2018 as a request for cancellation of the correction, and the Company received a written verdict that partially rescinded the correction in July 2019. However, it went only so far as to refund approximately ¥0.4 billion of corporate taxes and local taxes, etc. at this stage. Because the Company takes the position that the entire amount should be rescinded, it filed an action with the Tokyo District Court for the revocation of correction in December 2019.

In light of the above, the Company estimated tax amounts for the said period based on the premise that it would be subject to the said correction for fiscal years subsequent to March 31, 2016 and recognized the amounts in the financial statements.

13. REVENUE

(1) Disaggregation of Revenue

Revenues from contracts with customers on a disaggregated basis for the year ended March 31, 2022, were as follows:

	Millions of Yen				
	2022				
	Reportable Segment				
	Energy Infrastructure	Ceramics	Electronics	Process Technology	Total
Products and services:					
Insulators	¥ 39,280	–	–	–	¥ 39,280
Energy storage	1,315	–	–	–	1,315
Automotive ceramics for exhaust gas purification	–	¥ 228,938	–	–	228,938
Sensors	–	63,732	–	–	63,732
Metal related	–	–	¥ 23,885	–	23,885
Electronics components	–	–	29,522	–	29,522
Components for semiconductor manufacturing equipment	–	–	–	¥ 96,904	96,904
Industrial processes	–	–	–	26,863	26,863
Total	¥ 40,595	¥ 292,670	¥ 53,407	¥ 123,767	¥ 510,439
Geographical areas:					
Japan	¥ 29,742	¥ 27,610	¥ 25,603	¥ 41,901	¥ 124,856
North America	5,238	51,077	4,805	49,824	110,944
Europe	451	105,378	2,906	96	108,831
Asia	2,695	100,546	20,023	31,828	155,092
Other	2,469	8,059	70	118	10,716
Total	¥ 40,595	¥ 292,670	¥ 53,407	¥ 123,767	¥ 510,439
Timing of revenue recognition:					
Goods and services transferred at a point in time	¥ 40,297	¥ 292,670	¥ 53,407	¥ 111,187	¥ 497,561
Goods and services transferred over time	298	–	–	12,580	12,878
Total	¥ 40,595	¥ 292,670	¥ 53,407	¥ 123,767	¥ 510,439

	Thousands of U.S. Dollars				
	2022				
	Reportable Segment				
	Energy Infrastructure	Ceramics	Electronics	Process Technology	Total
Products and services:					
Insulators	$ 321,967	–	–	–	$ 321,967
Energy storage	10,778	–	–	–	10,778
Automotive ceramics for exhaust gas purification	–	$ 1,876,542	–	–	1,876,542
Sensors	–	522,395	–	–	522,395
Metal related	–	–	$ 195,782	–	195,782
Electronics components	–	–	241,978	–	241,978
Components for semiconductor manufacturing equipment	–	–	–	$ 794,299	794,299
Industrial processes	–	–	–	220,186	220,186
Total	$ 332,745	$ 2,398,937	$ 437,760	$ 1,014,485	$ 4,183,927
Geographical areas:					
Japan	$ 243,787	$ 226,311	$ 209,865	$ 343,446	$ 1,023,409
North America	42,938	418,667	39,385	408,392	909,382
Europe	3,695	863,757	23,819	786	892,057
Asia	22,092	824,146	164,119	260,885	1,271,242
Other	20,233	66,056	572	976	87,837
Total	$ 332,745	$ 2,398,937	$ 437,760	$ 1,014,485	$ 4,183,927
Timing of revenue recognition:					
Goods and services transferred at a point in time	$ 330,299	$ 2,398,937	$ 437,760	$ 911,372	$ 4,078,368
Goods and services transferred over time	2,446	–	–	103,113	105,559
Total	$ 332,745	$ 2,398,937	$ 437,760	$ 1,014,485	$ 4,183,927

(2) Basic Information to Understand Revenues from Contracts with Customers

a. Information on contracts with customers and performance obligations
The Group has transactions with product warranty obligations to repair or replace products that have failed due to defects, etc. developed after delivery without charge. The warranty obligations provide customers with a guarantee that the product, etc. will function as intended in accordance with the specifications set forth in contracts with customers. Therefore, the Group estimates the costs of repair or replacement as necessary as provision for product warranties.

The Group receives consideration approximately three months after the product is delivered to or accepted by the customer. For certain performance obligations that fall under the category of service contracts, the Group receives consideration in stages according to the initial payment or the progress in meeting performance obligations.

Since contracts the Group concludes do not include any significant financial elements, the Group does not make any adjustments equivalent to interest rates.

b. Information on the calculation of the transaction prices
As certain contracts of the Group include transactions with the following variable consideration, the Group reflects them in the transaction prices.
(i) Provisional unit price
Until the formal transaction unit price is settled, the Group has performance obligations to conduct transactions at the provisional unit price based on the agreement with the customer. With respect to the performance obligations carried out at the provisional unit price, the Group estimates the transaction unit price expected to be settled and recognizes revenue.
(ii) Rebate
Based on contracts with customers, the Group offers volume rebates, etc. that provide discounts when customers purchase a certain amount within a certain period of time. For volume rebates, etc. the Group recognizes revenue at a value that reflects a discount in accordance with a target quantity that is estimated to be highly likely to be achieved.

c. Information on the time of fulfillment of the performance obligations
For transactions applicable to service contracts of the Group, as the Group has the enforceable right to receive consideration for assets that cannot be converted to other uses and for the portion of the obligations that have been fulfilled, the Group judges that the performance obligations are to be fulfilled over a certain period of time, estimates the progress of fulfillment of the performance obligations, and recognizes revenue based on the progress.

As the progress of cost accrual for such service contracts is similar to the fulfillment of the Group's performance obligations, the Group recognizes revenue over a certain period of time based on inputs built on cost accrual.

Progress is measured for each performance obligation based on the ratio of costs incurred by the balance sheet date to the estimated total costs. If progress cannot be reasonably estimated, the Group recognizes revenue in the same amount as the portion of costs incurred that is expected to be recovered (revenue recognition on a cost recovery basis).

(3) Contract Balances

Receivables from contract with customers, contract assets and contract liabilities at the beginning and end of the year are as follows:

	Millions of Yen	Thousands of U.S. Dollars
	2022	2022
Receivables from contracts with customers:		
Balance at beginning of year	¥ 103,868	$ 851,377
Balance at end of year	122,213	1,001,742
Contract assets:		
Balance at beginning of year	17,008	139,406
Balance at end of year	9,573	78,469
Contract liabilities:		
Balance at beginning of year	2,796	22,920
Balance at end of year	1,829	14,990

(4) Transaction Prices Allocated to Remaining Performance Obligations

Unsatisfied (or partially unsatisfied) performance obligations were 19,977 million yen at the end of the consolidated fiscal year. Approximately 45% of the performance obligations are recognized as revenue within one year after the balance sheet date, approximately 35% within one to three years after the balance sheet date, and approximately 20% over three years after the balance sheet date. In addition, the Group applies a practical expedient to the notes on the transaction value allocated to the remaining performance obligations, and excludes contracts with an initial expected term of one year or less in the notes.

14. RESEARCH AND DEVELOPMENT COSTS

Research and development costs charged to income were ¥23,552 million ($193,047 thousand) and ¥22,449 million for the years ended March 31, 2022 and 2021, respectively, which included consigned research costs of ¥805 million ($6,596 thousand) and ¥783 million for the years ended March 31, 2022 and 2021, respectively.

15. LEASES

The minimum rental commitments under noncancelable operating leases at March 31, 2022, were as follows:

	Millions of Yen	Thousands of U.S. Dollars
Due within one year	¥ 129	$ 1,059
Due after one year	512	4,198
Total	¥ 641	$ 5,257

16. 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 most trade payables, including notes and accounts, are less than four months.

The borrowings from banks, other financial institutions, and debenture bonds are principally raised for capital investment, and their maximum maturities do not exceed 16 years and 4 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 risk; 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.u.

(3) Fair values of financial instruments

The contract or notional amounts of derivatives that are shown in Note 17 do not represent the amounts exchanged by the parties and do not measure the Group's exposure to credit or market risk.

Fair value of financial instruments

	Millions of yen		
March 31, 2022	**Carrying Amount**	**Fair Value**	**Unrealized Gain/Loss**
Marketable and investment securities	¥ 79,683	¥ 83,516	¥ 3,833
Long-term debt, including current potion	(246,152)	(245,961)	191
Derivatives	(1,014)	(1,014)	–

	Millions of yen		
March 31, 2021	**Carrying Amount**	**Fair Value**	**Unrealized Gain/Loss**
Marketable and investment securities	¥ 78,746	¥ 86,290	¥ 7,544
Long-term debt, including current potion	(246,198)	(249,315)	(3,117)
Derivatives	(1,107)	(1,107)	–

	Thousands of U.S. Dollars		
March 31, 2022	**Carrying Amount**	**Fair Value**	**Unrealized Gain/Loss**
Marketable and investment securities	$ 653,139	$ 684,557	$ 31,418
Long-term debt, including current potion	(2,017,642)	(2,016,073)	1,569
Derivatives	(8,311)	(8,311)	–

Carrying amount of investments in equity instruments that do not have a quoted market price in an active market

	Millions of Yen		Thousands of U.S. Dollars
	2022	**2021**	**2022**
Unlisted equity instruments:			
Stock of associated companies	¥ 552	¥ 490	$ 4,528
Other	2,461	2,028	20,168

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

March 31, 2022	Millions of Yen Due in One Year or Less	Due after One Year through Five Years	Due after Five Years through 10 Years	Due after 10 years
Cash and cash equivalents	¥ 154,855	–	–	–
Time deposits	7,143	–	–	–
Notes and accounts receivable:				
Trade notes and accounts	122,150	¥ 63	–	–
Held-to-maturity securities:				
Debt securities	10,000	–	–	–
Available-for-sale securities:				
Debt securities	–	–	–	–
Investment trusts and other	11,000	–	–	–
Total	¥ 305,148	¥ 63	–	–

March 31, 2022	Thousands of U.S. Dollars Due in One Year or Less	Due after One Year through Five Years	Due after Five Years through 10 Years	Due after 10 years
Cash and cash equivalents	$ 1,269,303	–	–	–
Time deposits	58,550	–	–	–
Notes and accounts receivable:				
Trade notes and accounts	1,001,229	$ 512	–	–
Held-to-maturity securities:				
Debt securities	81,967	–	–	–
Available-for-sale securities:				
Debt securities	–	–	–	–
Investment trusts and other	90,164	–	–	–
Total	$ 2,501,213	$ 512	–	–

Financial Instruments Categorized by Fair Value Hierarchy

The fair value of financial instruments is categorized into the following three levels, depending on the observability and significance of the inputs used in making fair value measurements:

Level 1: Fair values measured by using quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Fair values measured by using inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly.

Level 3: Fair values measured by using unobservable inputs for the assets or liabilities.

If multiple inputs are used that have a significant impact on the measurement of fair value, fair value is classified at the lowest level in the fair value measurement among the levels to which each of these inputs belongs.

(1) The financial assets and liabilities measured at the fair values in the consolidated balance sheet

	Millions of Yen			
March 31, 2022	**Level 1**	**Level 2**	**Level 3**	**Total**
Marketable and investment securities:				
Available-for-sale securities:				
Equity securities	¥ 36,320	¥ 2,292	–	¥ 38,612
Total assets	¥ 36,320	¥ 2,292	–	¥ 38,612
Derivative transactions:				
Foreign currency forward contracts	–	¥ 963	–	¥ 963
Interest rate swaps	–	51	–	51
Total liabilities	–	¥ 1,014	–	¥ 1,014

	Thousands of U.S. Dollars			
March 31, 2022	**Level 1**	**Level 2**	**Level 3**	**Total**
Marketable and investment securities:				
Available-for-sale securities:				
Equity securities	$ 297,704	$ 18,785	–	$ 316,489
Total assets	$ 297,704	$ 18,785	–	$ 316,489
Derivative transactions:				
Foreign currency forward contracts	–	$ 7,889	–	$ 7,889
Interest rate swaps	–	422	–	422
Total liabilities	–	$ 8,311	–	$ 8,311

(2) The financial assets and liabilities not measured at the fair values in the consolidated balance sheet

March 31, 2022	Millions of Yen			
	Level 1	Level 2	Level 3	Total
Marketable and investment securities:				
Held-to-maturity securities:				
Corporate bonds	–	¥ 10,000	–	¥ 10,000
Available-for-sale securities:				
Equity securities	¥21,261	–	–	21,261
Other	–	33,800	–	33,800
Total assets	¥ 21,261	¥ 43,800	–	¥ 65,061
Long-term debt, including current potion	–	¥ 245,961	–	¥ 245,961
Total liabilities	–	¥ 245,961	–	¥ 245,961

March 31, 2022	Thousands of U.S. Dollars			
	Level 1	Level 2	Level 3	Total
Marketable and investment securities:				
Held-to-maturity securities:				
Corporate bonds	–	$ 81,966	–	$ 81,966
Available-for-sale securities:				
Equity securities	$ 174,272	–	–	174,272
Other	–	277,049	–	277,049
Total assets	$ 174,272	$ 359,015	–	$ 533,287
Long-term debt, including current potion	–	$ 2,016,073	–	$ 2,016,073
Total liabilities	–	$ 2,016,073	–	$ 2,016,073

The following is a description of valuation methodologies and inputs used for measurement of the fair value of assets and liabilities:

Marketable and Investment Securities

The fair values of listed equity securities, government bonds, municipal bonds and corporate bonds are measured at the quoted market prices. Since listed equity securities and government bonds are traded in active markets, the fair values of listed equity securities and government bonds are categorized as Level 1. As the quoted market prices of municipal bonds and corporate bonds are not considered to be in active markets due to low market transactions, the fair values of municipal bonds and corporate bonds are classified as Level 2.

Derivatives

The fair values of interest rate swaps and foreign currency forward contracts are measured by using discounted present value techniques considering observable inputs such as interest rates and foreign currency exchange rate, and are classified as Level 2.

Long-Term Debt

The fair values of long-term debt are measured by using discounted present value techniques considering assumptions including expected future cash flows and discount rates taking into account maturity and credit risk, and are classified as Level 2.

17. 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, 2022 and 2021, were as follows:

	Millions of Yen			
March 31, 2022	**Contract Amount**	**Contract Amount Due after One Year**	**Fair Value**	**Unrealized Gain/(Loss)**
Foreign currency forward contracts:				
Selling U.S.$	¥ 15,330	–	¥ (764)	¥ (764)
Selling Euro	1,178	–	(51)	(51)
Selling Swiss franc	–	–	–	–
Buying U.S.$	118	–	(3)	(3)
Buying Euro	–	–	–	–
Buying Japanese yen	2	–	0	0
Total	¥ 16,628	–	¥ (818)	¥ (818)

	Millions of Yen			
March 31, 2021	**Contract Amount**	**Contract Amount Due after One Year**	**Fair Value**	**Unrealized Gain/(Loss)**
Foreign currency forward contracts:				
Selling U.S.$	¥ 17,263	–	¥ (889)	¥ (889)
Selling Euro	831	–	(13)	(13)
Selling Swiss franc	7	–	(0)	(0)
Buying U.S.$	110	–	(3)	(3)
Buying Euro	20	–	(0)	(0)
Buying Japanese yen	42	–	(6)	(6)
Total	¥ 18,273	–	¥ (911)	¥ (911)

March 31, 2022	Thousands of U.S. Dollars Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/(Loss)
Foreign currency forward contracts:				
Selling U.S.$	$ 125,654	–	$ (6,257)	$ (6,257)
Selling Euro	9,654	–	(420)	(420)
Selling Swiss franc	–	–	–	–
Buying U.S.$	971	–	(28)	(28)
Buying Euro	–	–	–	–
Buying Japanese yen	15	–	1	1
Total	$ 136,294	–	$ (6,704)	$ (6,704)

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

March 31, 2022	Millions of Yen Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/(Loss)
Interest rate swaps:				
(Fixed rate payment, fixed rate receipt)	¥ 5,000	¥ 5,000	¥ (23)	¥ (23)
Total	¥ 5,000	¥ 5,000	¥ (23)	¥ (23)

March 31, 2021	Millions of Yen Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/(Loss)
Interest rate swaps:				
(Fixed rate payment, fixed rate receipt)	¥ 5,000	¥ 5,000	¥ (26)	¥ (26)
Total	¥ 5,000	¥ 5,000	¥ (26)	¥ (26)

March 31, 2022	Thousands of U.S. Dollars Contract Amount	Contract Amount Due after One Year	Fair Value	Unrealized Gain/(Loss)
Interest rate swaps:				
(Fixed rate payment, fixed rate receipt)	$ 40,984	$ 40,984	$ (187)	$ (187)
Total	$ 40,984	$ 40,984	$ (187)	$ (187)

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, 2022 and 2021, were as follows:

		Millions of Yen		
March 31, 2022	**Hedged Item**	**Contract Amount**	**Contract Amount Due after One Year**	**Fair Value**
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)	Long-term debt	¥ 8,585	¥ 8,099	¥ (29)
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)*	Long-term debt	15,000	15,000	–
Total		¥ 23,585	¥ 23,099	¥ (29)

		Millions of Yen		
March 31, 2021	**Hedged Item**	**Contract Amount**	**Contract Amount Due after One Year**	**Fair Value**
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)	Long-term debt	¥ 8,836	¥ 8,506	¥ (85)
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)*	Long-term debt	25,000	25,000	–
Total		¥ 33,836	¥ 33,506	¥ (85)

		Thousands of U.S. Dollars		
March 31, 2022	**Hedged Item**	**Contract Amount**	**Contract Amount Due after One Year**	**Fair Value**
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)	Long-term debt	$ 70,369	$ 66,388	$ (235)
Interest rate swaps:				
(Fixed rate payment, floating rate receipt)*	Long-term debt	122,951	122,951	–
Total		$ 193,320	$ 189,339	$ (235)

* 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 16.

March 31, 2022	Hedged Item	Millions of Yen		
		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	–
Currency swaps:				
(U.S.$ payment, Thai baht receipt)	Long-term debt	4,186	4,186	¥ (147)
Total		¥ 10,686	¥ 10,686	¥ (147)

March 31, 2021	Hedged Item	Millions of Yen		
		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	–
Currency swaps:				
(U.S.$ payment, Thai baht receipt)	Long-term debt	3,792	3,792	¥ (85)
Total		¥ 10,292	¥ 10,292	¥ (85)

March 31, 2022	Hedged Item	Thousands of U.S. Dollars		
		Contract Amount	Contract Amount Due after One Year	Fair Value
Currency swaps:				
(Japanese yen payment, U.S.$ receipt)*	Long-term debt	$ 53,279	$ 53,279	–
Currency swaps:				
(U.S.$ payment, Thai baht receipt)	Long-term debt	34,311	34,311	$ (1,203)
Total		$ 87,590	$ 87,590	$ (1,203)

* 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 16.

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.

18. GUARANTEES OBLIGATION

(1) Guarantee obligations

At March 31, 2022, the Group had guarantee obligations as follows:

	Millions of Yen	Thousands of U.S. Dollars
Guarantee for deposit of subsidiary	¥2,235	$18,318
Guarantees for bank borrowings of a business-related company	91	749

(2) Contingent liabilities

On July 6, 2021, a lawsuit was filed against the Company in Nagoya District court and the Company received the complaint on October 29, 2021 that P.T.Paiton Energy (“Paiton”), its insurance companies and their reinsurer companies (“the plaintiffs”) filed a claim against the Company for compensation for damages of US$151,392,337.48 (¥16,828,772,234) and the amount of the relevant delay charges. Thereafter, the plaintiffs issued petition for amendment of claim on January 11, 2022, the amount of the claim increased by US$41.36 (¥4,796) to US$151,392,378.84 (¥16,828,777,030) and the relevant delay changes.

In January 2018, a fire incident allegedly occurred in a transformer (“Transformer”) installed in a thermal power plant (“Power Plant”) in Indonesia operated by Paiton. In connection with this accident, the plaintiffs filed a claim against the Company for damages and relevant delay charges based on alleged product liability and torts.

The Company is a distributor of the bushing (manufactured in 2010) incorporated in the Transformer. The Company delivered the bushing to a third-party transformer manufacturer that incorporated the same into the Transformer. The Transformer was then delivered to the Power Plant through a plant engineering manufacturer.

The Company believes that it is not liable for the incident described above. Therefore, the Company will take necessary actions in response to the claim to demonstrate the quality of the bushings and the adequacy of the Company’s operations.

The Company will make timely disclosures in relation to this lawsuit upon the occurrence of any incident that may have a material impact on the Company’s financial results.

19. OTHER COMPREHENSIVE INCOME (LOSS)

The components of other comprehensive income (loss) for the years ended March 31, 2022 and 2021, were as follows:

	Millions of Yen		Thousands of U.S. Dollars
	2022	2021	2022
Unrealized (loss) gain on available-for-sale securities:			
(Loses) gains arising during the year	¥ (2,154)	¥ 12,567	$ (17,658)
Reclassification adjustments to profit or loss	(1,128)	(1,184)	(9,240)
Amount before income tax effect	(3,282)	11,383	(26,898)
Income tax effect	1,086	(3,465)	8,899
Total	¥ (2,196)	¥ 7,918	$ (17,999)
Deferred (loss) gain on derivatives under hedge accounting:			
(Losses) gains arising during the year	¥ (6)	¥ 292	$ (46)
Reclassification adjustments to profit or loss	–	–	–
Amount before income tax effect	(6)	292	(46)
Income tax effect	1	(16)	7
Total	¥ (5)	¥ 276	$ (39)
Foreign currency translation adjustments:			
Adjustments arising during the year	¥ 27,296	¥ 16,942	$ 223,732
Reclassification adjustments to profit or loss	(670)	43	(5,492)
Total	¥ 26,626	¥ 16,985	$ 218,240
Share of other comprehensive income (loss) in associates—			
Gains (losses) arising during the year	¥ 261	¥ (186)	$ 2,143
Defined retirement benefit plans:			
Gains arising during the year	¥ 3,122	¥ 1,202	$ 25,584
Reclassification adjustments to profit or loss	1,052	1,527	8,627
Amount before income tax effect	4,174	2,729	34,211
Income tax effect	(1,207)	(814)	(9,894)
Total	¥ 2,967	¥ 1,915	$ 24,317
Total other comprehensive income	¥ 27,653	¥ 26,908	$ 226,662

20. NET INCOME PER SHARE

Reconciliation of the differences between basic and diluted net income per share ("EPS") for the years ended March 31, 2022 and 2021, were as follows:

	Millions of Yen	Thousands of Shares	Yen	U.S. Dollars
Year Ended March 31, 2022	Net Income Attributable to Owners of the Parent	Weighted-Average Shares	EPS	
Basic EPS—Net income available to common shareholders	¥70,852	312,726	¥226.56	$1.857
Effect of dilutive securities:				
Stock options	–	542		
Diluted EPS—Net income for computation	¥70,852	313,268	¥ 226.17	$1.854
Year Ended March 31, 2021				
Basic EPS—Net income available to common shareholders	¥38,496	316,565	¥121.61	
Effect of dilutive securities:				
Stock options	–	484		
Diluted EPS—Net income for computation	¥38,496	317,049	¥121.42	

21. SUBSEQUENT EVENTS

a. Appropriation of Retained Earnings

The following appropriation of retained earnings at March 31, 2022, was approved at the Company's shareholders' meeting held on June 27, 2022:

	Millions of Yen	Thousands of U.S. Dollars
Year-end cash dividends, ¥33 ($0.27) per share	¥ 10,284	$ 84,296

b. Reclassifications in Segments

In the fiscal year ended March 31, 2022, the business segments consisted of "Energy Infrastructure," "Ceramics," "Electronics," and "Process Technology." However, along with the change of organization effective on April 1, 2022, the business segments have been changed to "Environment," "Digital Society," and "Energy & Industry," from the fiscal year ending March 31, 2023.

Listed below are main products of the respective new business segments.

Business Segment	Main products
Environment	Automotive ceramics for exhaust gas purification and sensors
Digital Society	Components for semiconductor manufacturing equipment, ceramic components for electronics, beryllium copper products, and molds
Energy & Industry	NAS® (sodium-sulfur) batteries, Insulators, hardware for insulator assemblies, current limiting arching horn, bushing shells, fuse cut-outs, APM, line arrester, corrosion-resistant ceramic apparatuses, for chemical industries, gas analyzer, industrial heating systems, refractory products and radioactive waste treatment systems

The segment information for the year ended March 31, 2022 using the new operating segments is as follows:

(1) Information about sales and profit (loss) by business segment

	Millions of Yen					
	2022					
	Reportable Segments					
	Environment	Digital Society	Energy & Industry	Total	Reconciliations	Consolidated
Sales:						
Sales to customers	¥ 292,670	¥ 150,312	¥ 67,457	¥ 510,439	–	¥ 510,439
Intersegment sales or transfers	18	3	2,430	2,451	¥ (2,451)	–
Total	¥ 292,688	¥ 150,315	¥ 69,887	¥ 512,890	¥ (2,451)	¥ 510,439
Segment profit (loss)	¥ 65,061	¥ 19,866	¥ (1,406)	¥ 83,521	¥ 7	¥ 83,528

	Thousands of U.S. Dollars					
	2022					
	Reportable Segments					
	Environment	Digital Society	Energy & Industry	Total	Reconciliations	Consolidated
Sales:						
Sales to customers	$ 2,398,936	$ 1,232,060	$ 552,931	$ 4,183,927	–	$ 4,183,927
Intersegment sales or transfers	148	28	19,915	20,091	$ (20,091)	–
Total	$ 2,399,084	$ 1,232,088	$ 572,846	$ 4,204,018	$ (20,091)	$ 4,183,927
Segment profit (loss)	$ 533,285	$ 162,836	$ (11,526)	$ 684,595	$ 59	$ 684,654

(2) Disaggregation of revenue

	Millions of Yen			
	2022			
	Reportable Segment			
	Environment	Digital Society	Energy & Industry	Total
Products and services:				
Automotive ceramics for exhaust gas purification	¥ 228,938	–	–	¥ 228,938
Sensors	63,732	–	–	63,732
Components for semiconductor manufacturing equipment	–	¥ 96,904	–	96,904
Electronics components	–	29,522	–	29,522
Metal related	–	23,885	–	23,885
Energy storage	–	–	¥ 1,315	1,315
Insulators	–	–	39,280	39,280
Industrial processes	–	–	26,863	26,863
Total	¥ 292,670	¥ 150,311	¥ 67,458	¥ 510,439
Geographical areas:				
Japan	¥ 27,610	¥ 46,975	¥ 50,271	¥ 124,856
North America	51,077	54,426	5,441	110,944
Europe	105,378	2,936	517	108,831
Asia	100,546	45,899	8,647	155,092
Other	8,059	75	2,582	10,716
Total	¥ 292,670	¥ 150,311	¥ 67,458	¥ 510,439
Timing of revenue recognition:				
Goods and services transferred at a point in time	¥ 292,670	¥ 150,311	¥ 54,580	¥ 497,561
Goods and services transferred over time	–	–	12,878	12,878
Total	¥ 292,670	¥ 150,311	¥ 67,458	¥ 510,439

	Thousands of U.S. Dollars			
	2022			
	Reportable Segment			
	Environment	Digital Society	Energy & Industry	Total
Products and services:				
Automotive ceramics for exhaust gas purification	$ 1,876,542	–	–	$ 1,876,542
Sensors	522,395	–	–	522,395
Components for semiconductor manufacturing equipment	–	$ 794,299	–	794,299
Electronics components	–	241,978	–	241,978
Metal related	–	195,782	–	195,782
Energy storage	–	–	$ 10,778	10,778
Insulators	–	–	321,967	321,967
Industrial processes	–	–	220,186	220,186
Total	$ 2,398,937	$ 1,232,059	$ 552,931	$ 4,183,927
Geographical areas:				
Japan	$ 226,311	$ 385,043	$ 412,055	$ 1,023,409
North America	418,667	446,117	44,598	909,382
Europe	863,757	24,066	4,234	892,057
Asia	824,146	376,218	70,878	1,271,242
Other	66,056	615	21,166	87,837
Total	$ 2,398,937	$ 1,232,059	$ 552,931	$ 4,183,927
Timing of revenue recognition:				
Goods and services transferred at a point in time	$ 2,398,937	$ 1,232,059	$ 447,372	$ 4,078,368
Goods and services transferred over time	–	–	105,559	105,559
Total	$ 2,398,937	$ 1,232,059	$ 552,931	$ 4,183,927

22. 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 business segments are components of the Group for 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 four business segments: the Energy Infrastructure Business Segment, Ceramics Business Segment, Electronics Business Segment, and Process Technology Business Segment while planning a comprehensive strategy for domestic and overseas markets. Consequently, the Group defines those four business segments as its reportable business segments.

Business Segment	Main products
Energy Infrastructure	Insulators, hardware for insulator assemblies, current limiting arching horn, bushing shells, fuse cut-outs, APM, line arrester and NAS® (sodium-sulfur) batteries
Ceramics	Automotive ceramics for exhaust gas purification and sensor
Electronics	Ceramic components for electronics, beryllium copper products, and molds
Process Technology	Components for semiconductor manufacturing equipment, corrosion-resistant ceramic apparatuses, for chemical industries, gas analyzer, industrial heating systems, refractory products and radioactive waste treatment systems

(2) Methods of Measurement for the Amounts of Sales, Profit (Loss), Assets, 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, and Other Items

	Millions of Yen						
	2022						
	Reportable Segments						
	Energy Infrastructure	Ceramics	Electronics	Process Technology	Total	Reconciliations	Consolidated
Sales:							
Sales to customers	¥ 40,595	¥ 292,670	¥ 53,407	¥ 123,767	¥ 510,439	–	¥ 510,439
Intersegment sales or transfers	653	18	3	2,490	3,164	¥ (3,164)	–
Total	¥ 41,248	¥ 292,688	¥ 53,410	¥ 126,257	¥ 513,603	¥ (3,164)	¥ 510,439
Segment (loss) profit	¥ (2,718)	¥ 65,061	¥ 5,697	¥ 15,481	¥ 83,521	¥ 7	¥ 83,528
Segment assets	56,484	475,050	70,537	151,910	753,981	228,852	982,833
Other:							
Depreciation and amortization	1,982	34,717	3,424	9,148	49,271	–	49,271
Impairment losses on assets	126	1,034	–	–	1,160	–	1,160
Increase in property, plant, and equipment and intangible assets	1,247	20,067	5,448	6,894	33,656	4,475	38,131

	Millions of Yen						
	2021						
	Reportable Segments						
	Energy Infrastructure	Ceramics	Electronics	Process Technology	Total	Reconciliations	Consolidated
Sales:							
Sales to customers	¥ 41,997	¥ 248,908	¥ 54,100	¥ 107,039	¥ 452,044	–	¥ 452,044
Intersegment sales or transfers	635	9	1	1,979	2,624	¥ (2,624)	–
Total	¥ 42,632	¥ 248,917	¥ 54,101	¥ 109,018	¥ 454,668	¥ (2,624)	¥ 452,044
Segment (loss) profit	¥ (3,978)	¥ 41,161	¥ 2,769	¥ 10,853	¥ 50,805	¥ 19	¥ 50,824
Segment assets	54,107	459,392	64,014	139,978	717,491	191,476	908,967
Other:							
Depreciation and amortization	1,871	31,798	3,068	8,206	44,943	–	44,943
Impairment losses on assets	786	–	1,292	25	2,103	164	2,267
Increase in property, plant, and equipment and intangible assets	1,524	23,607	7,511	12,100	44,742	6,089	50,831

	Thousands of U.S. Dollars						
	2022						
	Reportable Segments						
	Energy Infrastructure	Ceramics	Electronics	Process Technology	Total	Reconciliations	Consolidated
Sales:							
Sales to customers	$ 332,745	$2,398,937	$437,760	$1,014,485	$ 4,183,927	–	$4,183,927
Intersegment sales or transfers	5,350	147	28	20,407	25,932	$ (25,932)	–
Total	$ 338,095	$2,399,084	$437,788	$1,034,892	$ 4,209,859	$ (25,932)	$4,183,927
Segment (loss) profit	$ (22,282)	$ 533,286	$ 46,694	$ 126,897	$ 684,595	$ 59	$ 684,654
Segment assets	462,982	3,893,857	578,170	1,245,163	6,180,172	1,875,836	8,056,008
Other:							
Depreciation and amortization	16,245	284,568	28,064	74,981	403,858	–	403,858
Impairment losses on assets	1,032	8,476	–	–	9,508	–	9,508
Increase in property, plant, and equipment and intangible assets	10,225	164,481	44,653	56,509	275,868	36,678	312,546

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 ¥235,965 million ($1,934,136 thousand) and ¥198,256 million at March 31, 2022 and 2021, 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								
2022								
	North America		Europe		Asia			
Japan	USA	Others	Germany	Others	China	Others	Other Areas	Total
¥ 124,856	¥ 106,920	¥ 4,024	¥ 46,717	¥ 62,114	¥ 93,242	¥ 61,850	¥ 10,716	¥ 510,439

Millions of Yen								
2021								
	North America		Europe		Asia			
Japan	USA	Others	Germany	Others	China	Others	Other Areas	Total
¥ 127,526	¥ 85,739	¥ 3,439	¥ 25,649	¥ 70,215	¥ 80,644	¥ 49,622	¥ 9,210	¥ 452,044

Thousands of U.S. Dollars								
2022								
	North America		Europe		Asia			
Japan	USA	Others	Germany	Others	China	Others	Other Areas	Total
$ 1,023,409	$ 876,395	$ 32,987	$ 382,928	$ 509,129	$ 764,277	$ 506,965	$ 87,837	$ 4,183,927

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

(2) Property, plant, and equipment

Millions of Yen								
2022								
	North America		Europe		Asia		Other	
Japan	USA	Others	Poland	Others	China	Others	Areas	Total
¥ 175,592	¥ 24,262	¥ 14,559	¥ 78,351	¥ 6,655	¥ 50,258	¥ 24,919	¥ 716	¥ 375,312

Millions of Yen								
2021								
	North America		Europe		Asia		Other	
Japan	USA	Others	Poland	Others	China	Others	Areas	Total
¥ 182,226	¥ 20,871	¥ 14,414	¥ 77,870	¥ 3,208	¥ 48,675	¥ 24,310	¥ 637	¥ 372,211

Thousands of U.S. Dollars								
2022								
	North America		Europe		Asia		Other	
Japan	USA	Others	Poland	Others	China	Others	Areas	Total
$ 1,439,276	$ 198,868	$ 119,338	$ 642,222	$ 54,553	$ 411,950	$ 204,253	$ 5,869	$ 3,076,329

* * * * * *

Independent Auditor’s Report

Deloitte.

Deloitte Touche Tohmatsu LLC
JP TOWER NAGOYA
1-1-1 Meieki, Nakamura-ku
Nagoya, Aichi 450-8530
Japan

Tel: +81 (52) 565 5511
Fax: +81 (52) 569 1394
www.deloitte.com/jp/en

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of NGK INSULATORS, Ltd.:

Opinion

We have audited the consolidated financial statements of NGK INSULATORS, Ltd. and its consolidated subsidiaries (the "Group"), which comprise the consolidated balance sheet as of March 31, 2022, and the consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, all expressed in Japanese yen.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of March 31, 2022, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with accounting principles generally accepted in Japan.

Convenience Translation

Our audit also comprehended the translation of Japanese yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made in accordance with the basis stated in Note 1 to the consolidated financial statements. Such U.S. dollar amounts are presented solely for the convenience of readers outside Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the provisions of the Code of Professional Ethics in Japan, and we have fulfilled our other ethical responsibilities as auditors. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matter

A key audit matter is a matter that, in our professional judgment, was of most significance in our audit of the consolidated financial statements of the current period. The matter was addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on the matter.

Member of
Deloitte Touche Tohmatsu Limited

Independent Auditor's Report

Revenue recognition for product sales	
Key Audit Matter Description	How the Key Audit Matter Was Addressed in the Audit
The Group manufactures and sells products that utilize its unique ceramics technology, which includes ceramics that are used to purify exhaust fumes from automobiles. In addition, NGK INSULATORS, Ltd. (the "Company"), the parent company, is the Group's core company with its sales being quantitatively material for the Group's consolidated sales. The process for recognizing revenue from product sales is largely divided between "(1) Input orders," "(2) Register information including the reception of products," and "(3) Record sales." Although the Company performs this processing using an ERP system, it also uses systems being utilized by each business unit or transport company for certain commercial distribution to "(2) Register information including the reception of products." A mechanism to "(3) Record sales" has been developed by sharing information automatically between these systems and the ERP system (these systems will be collectively referred to as the "IT systems"). The process for recognizing revenue from product sales, regardless of the commercial distribution, is broadly dependent on the IT systems as this process operates upon the assumption that the IT systems are functioning as intended. In this manner, the Company recognizes the revenue from its product sales through its operating processes based on the automated information sharing that takes place between its IT systems with a multitude of products of varying types while each of its business unit sells their products at mostly stable unit prices. Therefore, the impact to its financial reporting may be significant in cases where the Company does not appropriately record its sales in the accounting period. Based on the reasons above, we determined the appropriateness of how the Company recognizes revenue from its product sales as a key audit matter.	Our audit procedures related to the revenue recognition for product sales included the following, among others: (1) Evaluation of internal controls ✧ With the assistance of our IT specialists, we evaluated the design and operating effectiveness of internal controls as follows: • We tested the general IT controls, including the development and change management, security controls, operation controls, service level management and so forth for the IT systems being used in the operating processes related to sales. • We tested the IT application controls for the multiple applicable IT systems, including the control total checks related to the interfaces between the IT systems. • We tested the IT application controls in place to ensure the accuracy of the Company's sales, which includes the edit validation checks within the order input process. ✧ In addition to evaluating the segregation of duties by understanding the Company's sales processes, which were developed by the Company as a control for recording sales, we tested the design and operating effectiveness of applicable controls. (2) Test of sales transactions ✧ We performed a comparative analysis of the Company's monthly budget and actual performance and an analysis of sales transitions for each business unit. ✧ We selected transactions, including those with high unit prices, to examine the rationality of the Company's transactions through inquiring of management regarding its commercial distribution, nature of its customers and so forth. In addition, we traced the Company's accounting records to the documented evidence serving as the basis of the Company's recorded sales. ✧ For sales from product sales that were not selected above, we traced documented evidence serving as the basis of the Company's recorded sales, including purchase orders and delivery receipts from the customer, to accounting records for sales transactions that we selected through sampling.

Independent Auditor's Report

Other Information

Management is responsible for the other information. Audit & Supervisory Board members and the Audit & Supervisory Board are responsible for overseeing the Directors' execution of duties relating to the design and operating effectiveness of the controls over the other information. The other information comprises the information included in the Annual Report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Audit & Supervisory Board Members and the Audit & Supervisory Board for the Consolidated Financial Statements

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

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern in accordance with accounting principles generally accepted in Japan and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Audit & Supervisory Board members and the Audit & Supervisory Board are responsible for overseeing the Directors' execution of duties relating to the design and operating effectiveness of the controls over the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in Japan will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks. The procedures selected depend on the auditor's judgment. In addition, we obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Independent Auditor's Report

- Obtain, when performing risk assessment procedures, an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate whether the overall presentation and disclosures of the consolidated financial statements are in accordance with accounting principles generally accepted in Japan, as well as the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with Audit & Supervisory Board members and the Audit & Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide Audit & Supervisory Board members and the Audit & Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with Audit & Supervisory Board members and the Audit & Supervisory Board, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Independent Auditor's Report

Interest Required to Be Disclosed by the Certified Public Accountants Act of Japan

Our firm and its designated engagement partners do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

Deloitte Touche Tohmatsu LLC

August 12, 2022

Subsidiaries and Affiliated Companies

As of March 31, 2022

JAPAN

JAPAN	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■ ENERGY SUPPORT CORPORATION	100	Power distribution equipment
■ AKECHI INSULATORS, LTD.	100	Electrical insulators
■ 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
■ NGK ELECTRONICS DEVICES, INC.	100	Ceramic packages for semiconductors and ceramic electronic components
● METAWATER CO., LTD.	24.4	Environmental protection systems
● NGK LIFE CO., LTD.	100	Insurance agency service and golf course management

Other Group Companies

■ HOKURIKU ENERGYS CORPORATION	■ KYUSYU ENERGYS CORPORATION	NGK TECHNICA, LTD.
■ ENERGYS SANGYO CORPORATION	NGK SPORTS PLANNING CO., LTD.	NGK LOGISTICS, LTD.
■ KANSAI ENERGYS CORPORATION	NGK YU-SERVICE CO., LTD.	Ena Electric Power Co., Ltd.

NORTH AMERICA

NORTH AMERICA	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■ NGK NORTH AMERICA, INC.	100	Holding company
■ NGK-LOCKE, INC.	100	Electrical 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

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

ASIA PACIFIC	Company's Direct and Indirect Ownership (%)	Principal Products and Services
■ 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	NGK AUTOMOTIVE CERAMICS KOREA CO., LTD.
■ NGK MATERIAL USA, INC.	NGK TECHNOLOGIES INDIA PVT. LTD.
■ NGK AUTOMOTIVE CERAMICS MEXICO, S. DE R.L. DE C.V.	NGK ITALY S.R.L.
■ NGK ELECTRONICS DEVICES (M) SDN. BHD.	NGK ELECTRONICS DEVICES ASIA SDN. BHD.
■ NGK GLOBETRONICS TECHNOLOGY SDN. BHD.	NGK ENERGYS MYANMAR CO., LTD.
■ NGK INSULATORS TANGSHAN CO., LTD.	FM INDUSTRIES (MALAYSIA) SDN. BHD.
■ LOCKE INSULATORS, INC.	

■ Consolidated companies
● Affiliated companies accounted for by the equity method

FSC
www.fsc.org
MIX
Paper from
responsible sources
FSC® C016722

This Consolidated Financial Statements is printed on
FSC-approved paper using vegetable oil inks.