

# Environmental Accounting

We are working on the applications and research of environmental accounting with the goal of making business and the environment compatible

Nitto Denko Group has introduced its environmental accounting practices since fiscal 2000.

We have compiled statistics in our own way while referencing guidelines from the Ministry of the Environment and the Ministry of Economy, Trade and Industry principles to create tools that deal with reducing both, environmental impact and cost.

Our Group's approach to environmental accounting is unique in two respects. First, each business unit/group company sets an environmental budget as a goal to make environment issues and responsibility, which each company has, clear. Second, in addition to "environmental conservation costs" as articulated in the Ministry of the Environment's (Environmental Reporting) Guidelines,

we also address "environmental impact costs" as "value of industrial waste" (processing and materials costs of industrial waste that do not actually become products) as well as the cost of energy, solvent and water used at the production stage. We have made this data available, including in our financial statement announcements at the conclusion of each fiscal year.

In this way, we make efficient use of "environmental conservation cost" and can strive to cut "environmental impact costs"; thus, the total low costs is being realized by enhancing efficient use of resources. However, this has not been adequately adopted as a management guideline. We will continue researching how best to use environmental accounting as a management guideline.

## Fiscal 2003 results

In fiscal 2003, both ratios, the environmental impact cost ratio and value of industrial waste ratio, were improved.

Nitto Denko itself improved its environmental impact cost ratio (the ratio of environmental impact costs to net sales) to 15.3% (17.6% in fiscal 2002) and value of industrial waste ratio to 13.8% (15.6% in fiscal 2002). Group companies in Japan logged improvements in both, the

environmental impact cost ratio to 5.3% (5.4% in fiscal 2002) and the industrial waste ratio to 5.4% (6.0% in fiscal 2002). Likewise, group companies outside Japan also improved both, recording the environmental impact cost ratio of 8.2% (10.7% in fiscal 2002) and industrial waste ratio of 4.5% (7.7% in fiscal 2002).

### ● Nitto Denko Corporation (Non-consolidated)

(Unit: ¥million/year)

Categories	Fiscal 2003 budget (A)	Fiscal 2003 results (B)	Balance (B-A)	Budget ratio balance (B-A)	
Total sales	248,676.0	278,025.6	29,349.6	111.8%	
Production amount	234,807.6	261,861.6	27,054.0	111.5%	
Environmental conservation costs	General and administrative overhead	873.6	873.6	0.0	100.0%
	Treatment for industrial waste	1,030.8	1,161.6	130.8	112.7%
	External services for environmental management	230.4	223.2	7.2	96.9%
	Personnel	498.0	462.0	36.0	92.8%
	Depreciation	1,051.2	1,054.8	3.6	100.3%
	R&D&E	980.4	883.2	97.2	90.1%
	<b>Total</b>	<b>4,664.4</b>	<b>4,658.4</b>	<b>6.0</b>	<b>99.9%</b>
Environmental impact costs	Value of industrial waste	33,963.6	36,058.8	2,095.2	106.2%
	Energy	4,668.0	4,084.8	583.2	87.5%
	Organic solvents	2,064.0	2,163.6	99.6	104.8%
	Water	334.8	291.6	43.2	87.1%
	<b>Total</b>	<b>41,030.4</b>	<b>42,598.8</b>	<b>1,568.4</b>	<b>103.8%</b>
Ratio of environmental impact costs	16.5%	15.3%	1.2 point	92.7%	

## The Method of Environmental Accounting Calculations

### Period under review

Nitto Denko Group's accounting period (from April 1 to March 31 each year)

### Definition

- The activities related to the environment and have an impact on the environment are evaluated by monetary value (accounting information) or the amount of materials (quantitative information).
- Environmental cost consists of environmental conservation cost and environmental impact cost.

### Environmental conservation cost

Cost consumed for environmental conservation

#### 【General expenses】

From the total environmental conservation cost, waste disposal, outsourcing, salary and compensation, R&D&E costs, and facility investment (depreciation) are deducted. (Maintenance and repair costs for exhaust gas/wastewater treatment equipment, cost for ISO 14001 acquisition, activity cost required for reducing waste and saving energy, cost and

donations for environmental information disclosure and environmental advertisements)

#### 【Waste disposal】

Part of the environmental conservation cost that is required for waste disposal and recycling

#### 【Outsourcing】

Cost for subcontracting operations required for environmental conservation to the companies within/outside the group.

#### 【Salary and compensation】

Cost for the employees engaged in environmental conservation

#### 【Capital investment (depreciation)】

Total depreciation of the equipment targeted at environmental conservation (hereinafter referred to as "environmental equipment") in the target period (fiscal year)

#### 【R&D&E cost】

Total of general expenses, waste disposal, outsourcing, salary and compensation costs, and equipment investment (depreciation) for the technological development, which are mostly targeted at environmental conservation

### Environmental impact cost

Cost of the things that have an impact on the environment

#### 【Cost of industrial waste】

Material and treatment costs for industrial waste

#### 【Energy】

Total amount of the costs for electricity and fuel (heavy oil, LPG, natural gas, etc.) purchased by production factories from external parties

#### 【Solvent supply】

Total amount of the costs for organic solvents purchased from external parties

#### 【Water】

Total amount of industrial and tap water expense

#### 【Ratio of environmental impact cost】

[Ratio of environmental impact cost] = [Environmental impact cost] / [Sales amount] x 100

#### 【Industrial waste ratio】

[Industrial waste ratio] = [Industrial waste cost] / [Production amount] x 100

## ● Domestic Group Companies (Japan)

(Unit: ¥million/year)

Categories	Fiscal 2003 budget (A)	Fiscal 2003 results (B)	Balance (B-A)	Budget ratio balance (B-A)	
Total sales	33,651.6	32,866.8	784.8	97.7%	
Production amount	21,265.2	20,631.6	633.6	97.0%	
Environmental conservation costs	General and administrative overhead	14.4	16.8	2.4	116.7%
	Treatment for industrial waste	91.2	82.8	8.4	90.8%
	External services for environmental management	26.4	4.8	21.6	18.2%
	Personnel	52.8	50.4	2.4	95.5%
	Depreciation	80.4	58.8	21.6	73.1%
	R&D&E	66.0	30.0	36.0	45.5%
	<b>Total</b>	<b>331.2</b>	<b>243.6</b>	<b>87.6</b>	<b>73.6%</b>
Environmental impact costs	Value of industrial waste	1,203.6	1,112.4	91.2	92.4%
	Energy	427.2	393.6	33.6	92.1%
	Organic solvents	194.4	218.4	24.0	112.3%
	Water	7.2	4.8	2.4	66.7%
	<b>Total</b>	<b>1,832.4</b>	<b>1,729.2</b>	<b>103.2</b>	<b>94.4%</b>
Ratio of environmental impact costs	5.4%	5.3%	0.1point	98.1%	

Tabulation range: Nitto Shinko Corp., Nitoms Inc., Saitama Nitto Denko Corp., Mie Nitto Denko Corp., Nitto Life-tech Co., Ltd

## ● Overseas Group Companies

(Unit: ¥million/year)

Categories	Fiscal 2003 budget (A)	Fiscal 2003 results (B)	Balance (B-A)	Budget ratio balance (B-A)	
Total sales	56,214.0	52,573.2	3,640.8	93.5%	
Production amount	45,331.2	40,506.0	4,825.2	89.4%	
Environmental conservation costs	general and administrative overhead	74.4	139.2	64.8	187.1%
	Treatment for industrial waste	181.2	159.6	21.6	88.1%
	External services for environmental management	98.4	52.8	45.6	53.7%
	Personnel	73.2	61.2	12.0	83.6%
	Depreciation	248.4	297.6	49.2	119.8%
	R&D&E	115.2	110.4	4.8	95.8%
	<b>Total</b>	<b>790.8</b>	<b>820.8</b>	<b>30.0</b>	<b>103.8%</b>
Environmental impact costs	Value of industrial waste	2,656.8	1,818.0	838.8	68.4%
	Energy	1,665.6	1,539.6	126.0	92.4%
	Organic solvents	954.0	895.2	58.8	93.8%
	Water	80.4	66.0	14.4	82.1%
	<b>Total</b>	<b>5,356.8</b>	<b>4,318.8</b>	<b>1,038.0</b>	<b>80.6%</b>
Ratio of environmental impact costs	9.5%	8.2%	1.3point	86.3%	

Tabulation range: Nitto Denko (Shanghai Songjiang) Co., Ltd., Nitto Denko (Taiwan) Corporation, Nitto Denko Electronics Material (Thailand) Co., Ltd., Permacel, Hydranautics, and Nitto Europe N.V.

## TOPICS

### Environmental management method developed in Germany

#### Contributing to the widespread adoption of materialflow cost accounting environmental management method developed in Germany.

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Our company has introduced material flow cost accounting in select areas. This method refers to a type of environmental management method developed in Germany. This method takes the materials, energy and other production costs poured into producing a good and divides them into production and waste flows so that we can see exactly what is being used in the production process per unit in terms of materials and money. As a result, this shows clearly the areas of production that need to be improved to make possible introducing efficient remedial measures and investing in equipments. At Nitto Denko, we introduced this material flow cost accounting ahead of other companies, and this was profiled as part of a special event at the "government panel corner" of the Ecoproducts 2003 event.

In addition, the Ministry of Economy, Trade and Industry

is pushing the expansion of material flow cost accounting as a means of "making the environment and the economy compatible". We are wholeheartedly cooperating in activities promoting this method and participating in seminars and lectures around Japan to introduce and present cases using this accounting methodology.

In fiscal 2003, we also delivered a lecturer at Sophia University (second semester once each week) as well as at a project sponsored the Hokkaido Bureau of Economy, Trade and Industry designed to nurture "green" business people.

