

PLOTTING OUT FURTHER GROWTH



ANNUAL REPORT 2012
Year Ended March 31, 2012

Management Philosophy



**Concentrate member companies' knowledge and expertise
on the creation and development of businesses
that concern air, water, and the planet in general,
in the spirit of entrepreneurship that contributes to society**

Consolidated Financial Highlights (Comparison between the past 5 fiscal years)

	Million of yen					Thousand of U.S. dollars(Note 1)	Increase (Decrease)
	2012	2011	2010	2009	2008	2012	2012/2011
Net sales	¥492,680	¥471,810	¥426,357	¥448,773	¥426,226	\$5,994,403	4.4 %
Cost of sales	380,536	359,560	320,758	344,317	324,910	4,629,955	5.8
Selling, general and administrative expenses	80,472	80,981	77,397	78,677	75,738	979,097	(0.6)
Operating income	31,672	31,269	28,202	25,779	25,578	385,351	1.3
Net income	17,167	11,680	13,916	12,681	14,503	208,870	47.0
Comprehensive income	16,005	11,293	—	—	—	194,732	41.7
Total assets	430,547	407,639	392,759	385,563	353,399	5,238,435	5.6
Total net assets	182,700	169,127	163,950	143,230	137,992	2,222,898	8.0
Cash flows from operating activities	39,662	32,576	44,593	27,884	21,664	482,565	21.8
Cash flows from investing activities	(28,695)	(34,766)	(25,820)	(39,999)	(36,033)	(349,130)	(17.5)
Cash flows from financing activities	(7,612)	(1,592)	(20,615)	22,784	9,801	(92,615)	378.1
Cash and cash equivalents at end of year	21,562	18,131	21,529	23,185	12,524	262,343	18.9

PER SHARE OF COMMON STOCK	Yen					U.S. dollars (Note 1)	
	2012	2011	2010	2009	2008	2012	
Net income - basic	¥89.35	¥61.24	¥73.64	¥68.56	¥79.29	\$1.09	45.9
Net income - diluted	87.21	59.56	70.03	68.49	78.63	1.06	46.4
Cash dividends applicable to the year	22.00	22.00	22.00	22.00	22.00	0.27	0.0
Net assets	873.78	822.05	789.89	715.60	689.41	10.63	6.3

Note: 1. Translation into U.S. dollars has been made solely for the reader's convenience at the rate of ¥82.19 = U.S. \$1.00, the rate prevailing on the Tokyo Foreign Exchange Market on March 31, 2012.

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Forward-looking Statements (Business Risk Factors, etc.)

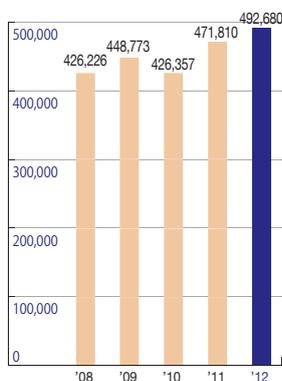
The forward-looking statements in this Annual Report regarding estimates of business performance and predictions of future developments reflect Management's judgments based on currently available information, but also involve potential risks and uncertainties. Actual business performance could be significantly different from the projections made herein due to changes in various factors. The primary potential risk factors are summarized below.

- Significant changes in demand in East Asia, an important market for our major customers
- Progress in passing on to the customer increased costs resulting from higher LPG and kerosene contract prices and rising crude oil prices
- Increased transport expenses, including the costs of light oil, fuel oil, ocean freight, and air freight due to rising crude oil prices
- Increased raw materials costs for our frozen food business
- Decreased sales or reduced profits for our medical gases and medical services resulting from revision of national insurance drug and medical examination reimbursement prices
- Risks arising from a production problem, product defects, accidents, etc.
- Risks arising from the failure of merger and acquisition activities or other investments to perform as anticipated
- Risks arising from the failure to implement adequate measures such as business expansion and cost reductions in response to competition
- Increased cost of compliance as a result of revised or newly implemented environmental laws and regulations
- Risks due to natural disasters and other potential risks

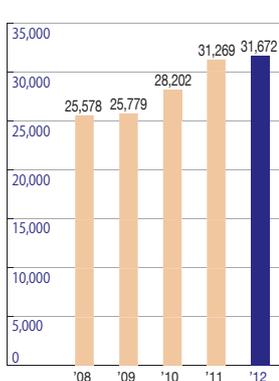
The financial statement information contained in this Annual Report is based on the accounting term for the year ended March 31, 2012, and for previous terms as indicated. All other content is based on information available on August 31, 2012, when the editing of the Annual Report was completed.

AIR WATER INC. and Consolidated Subsidiaries, Years ended March 31

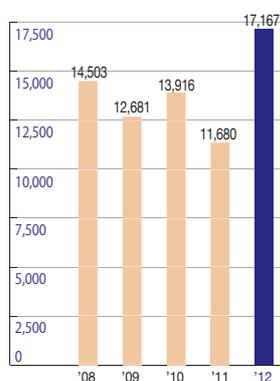
■ Net Sales (Million yen)



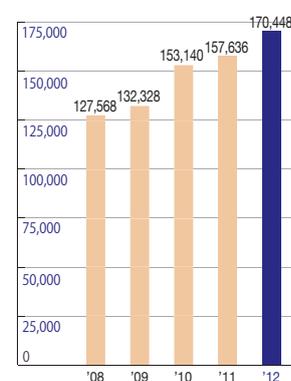
■ Operating Income (Million yen)



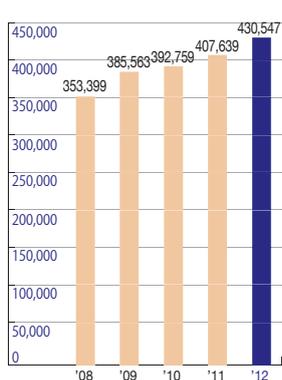
■ Net Income (Million yen)



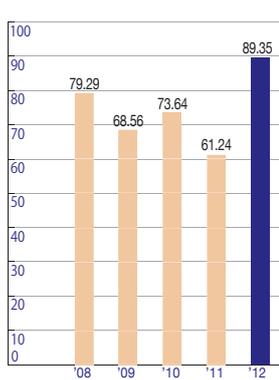
■ Total Net Assets (Million yen)



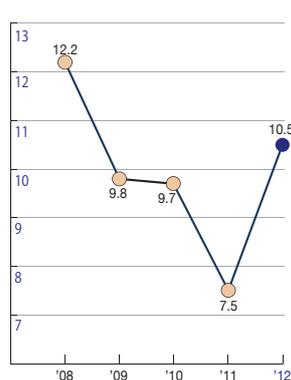
■ Total Assets (Million yen)



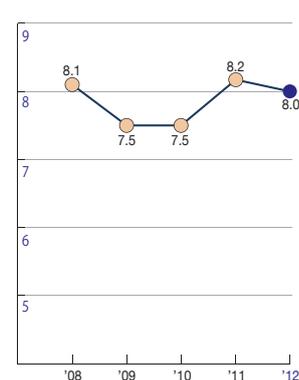
■ Net Income – Basic (Yen)



■ Return on Equity (%)



■ Return on Assets (%)



Fully utilizing the All-Weather Management System under a tumultuous economy to steadily reach mid-term business plan targets.

Summary of FY2011

FY2011 brought numerous unpredictable events including the Great East Japan Earthquake that made for a tumultuous year for the Japanese economy. Despite a faster-than-anticipated recovery from the supply chain confusion caused by the earthquake, the second half of the fiscal year was affected by such factors as stalling foreign economies due to escalation of the European debt crisis, a worsening of the export environment due to prolonged appreciation of the yen, and a re-emergence of supply chain confusion due to flooding in Thailand. All these factors once again brought domestic manufacturing industries back into a difficult phase.

Under these circumstances, Air Water achieved revenue growth again this year, with consolidated net sales of the Air Water Group for this period of 492.680 billion yen (104.4% year-on-year). In earnings, operating income was 31.672 billion yen (101.3% year-on-year), ordinary income was 33.602 billion yen (102.0% year-on-year), and net income was 17.167 billion yen (147.0% year-on-year). Profit growth in ordinary income was achieved for the 9th consecutive term.

The ability to realize growth of profits and revenue despite the harsh business environment is surely an indication that the Air Water Group has been able to make full use of its strong integrated power thanks to the All-Weather Management System placed at the core of its management strategy and the Order Rodentia Style of Business carried out by a group of companies with an alert and agile energy.

Business outlook for FY2012

In the beginning of FY2012, we expected to continue seeing signs of recovery in production in the domestic industrial sector, especially in the automotive and export-related industries, which we had seen at the end of the previous year as the U.S economy improved. However, we were since hit with a spreading slump in foreign economies caused by various problems including the growing severity of the European debt crisis and the stagnation of the Chinese economy. With a sense of caution regarding the future due to our position in the domestic manufacturing sector, we are only just beginning to see signs of adjustment in production activities and equipment investment. Moreover, the business

environment surrounding the Air Water Group certainly does not leave room for optimism, riddled with risk factors such as rising crude oil prices, a continuing appreciation of the yen, power rate hikes and supply constraints that may hurt the economy.

Regardless of this situation, we anticipate the final results for the Air Water Group for FY2012 to be 520 billion yen in consolidated net sales (105.5% year-on-year), 33.5 billion yen in consolidated operating income (105.8% year-on-year), 35.0 billion yen in consolidated ordinary income (104.2% year-on-year) and 18.0 billion yen in consolidated net income (104.9% year-on-year), for continued growth in profits and revenue. We will further advance our All-Weather Management System and Order Rodentia Style of Business, both of which have continued to make a significant contribution during the fast-moving economic fluctuation seen until now. In addition, we will continue to actively and flexibly respond to changes in the market environment. By doing so, we will steadily implement our various policies and measures to achieve our performance targets without fail.

Progress of the medium-term business plan

Looking at the numerical targets of the "NEXT-2020 Ver.1" mid-term business plan, we generally achieved the final targets in FY2011 and are safely on track to reach the targets in the final year.

In spite of being placed in an unfavorable environment, we will continue to accomplish growth in industry-related businesses such as Industrial Business and Chemical Business through shrewd investment in equipment and by focusing on growth fields.

We anticipate the life-related core businesses of Medical Business and Energy Business to expand in scope, strengthen earning capacity and act as a force that drives profits for the entire group. The Order Rodentia businesses, composed of magnesia, salt manufacturing, logistics, food products, aerosol and other areas, although small in scale, show great promise for promoting steady sustained growth while exploiting each of their strengths and advantages to help drive profitability of the Air Water Group as a whole.

In predicting our performance for FY2012, we can forecast that our well-balanced business portfolio based on the All-Weather Management System will absorb the impact of economic fluctuations and make a strong contribution to sustained growth.



Towards further growth

Reflecting over the past two years, numerous challenges have become apparent with respect to the "Foundation for Further Growth" key concept of the NEXT-2020 Ver.1, including how to maintain the growth path of industry-related businesses that form Air Water's foundation and how to further accelerate the growth of life-related core businesses and Order Rodentia businesses.

One policy for overcoming these challenges is to strengthen our capacity for technological development. Management of research and development activities will be re-delegated so that business-based technological development themes are managed by the Market Development Divisions of each Company while other themes such as new fields and company-wide development themes will be managed by the Air Water R&D Co., Ltd. This new system will enable smooth implementation of development strategies for each business division.

The next policy is reorganization of local businesses. Under this policy, current local business companies will be transformed into regional "Mini Air Water" that will generate new business models in line with the unique characteristics of the region in which they are located. Air Water offers a wealth of products not limited to industrial and medical gases but that also includes energy, food products, agriculture, water, nursing care and others. We will develop these sectors under individual blocks throughout Japan.

Finally, we will also further strengthen and develop another vital strategy of Air Water: overseas expansion. This strategy is already under way in Air Water's Magnesia Business, Medical Business, and NV Business, but we will accelerate it further by, for example, establishing locally incorporated companies, mostly in developing nations across Asia such as Vietnam.

Based on the NEXT-2020 Ver.1 interim summary, the Air Water Group has already begun detailed formulation of a Ver.2 mid-term business plan for the next term. Going forward, we will strive to achieve even further growth through the combined strength of the group. It is my hope that as we strive towards these goals, we will be able to continue to count on your warm support and understanding.

Hiroshi Aoki
Chairman of the Board, Chief Executive Officer
September 2012

A handwritten signature in black ink, reading "H. Aoki" with a stylized flourish at the end.

Review of FY2011	Sales trends by category (Year ended March 31)												
<p>Industrial Gas Business</p> <p>Just as Large-scale On-site Gas sales to steel manufacturers were beginning a solid recovery from the effects of the Great East Japan Earthquake, there was another slowdown caused by the floods in Thailand and appreciation of the yen, which adversely affected exports. In contrast, gas supply levels for the automobile industry and related industries surpassed those of the previous year starting in the second half of FY2011 as a result of speedy recovery from supply chain confusion. In regional business, full operation of nine VSU plants including one new plant enabled stable local supplies to disaster-stricken and other areas and brought a start to recovery in supply of cylinders mostly for the civil engineering and construction industry. However, business as a whole for the current period continued suffering hardships due to the increase in manufacturing and distribution/sales costs resulting from the continued rise in electricity rates and lengthening of transport distances caused by the earthquake.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>130,871</td></tr> <tr><td>'12</td><td>133,320</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>13,419</td></tr> <tr><td>'12</td><td>12,223</td></tr> </table>	Year	Net Sales (Million yen)	'11	130,871	'12	133,320	Year	Ordinary Income (Million yen)	'11	13,419	'12	12,223
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<p>Electronics Business</p> <p>Bulk Gas and On-site Gas shifted to satisfactory levels thanks to early restoration of disaster-affected liquid crystal and semiconductor related plants and the relatively minor impact of supply chain disruptions and power shortages, which had been of great concern. Business for Specialized Materials such as Specialty Gases and Specialty Chemicals generally showed solid growth for LED, solar cell and other applications. Environmental System Business improved to exhibit good performance, including sales and deliveries, due in large part to new orders for PFC (perfluorocarbons) collection, purification and recycling equipment received from both inside and outside Japan, where there is growing environmental awareness in electronic device plants.</p> <p>Sales in Information and Electronics Materials continued to be unsatisfactory due to the low operation rates of major customers affected by the Great East Japan Earthquake and the floods in Thailand.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>48,863</td></tr> <tr><td>'12</td><td>46,907</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>3,581</td></tr> <tr><td>'12</td><td>4,040</td></tr> </table>	Year	Net Sales (Million yen)	'11	48,863	'12	46,907	Year	Ordinary Income (Million yen)	'11	3,581	'12	4,040
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<p>Chemical Business</p> <p>In Coal Chemical Business, income from Gas Purification and Gas Byproducts operations became stable in the latter half of FY2011 thanks to recovery in disaster-affected steel works, but total Coal Chemical Business income fell below that of the previous year. Carbon Materials Business improved to exhibit satisfactory performance, backed by the continued strong demand for hydrocarbon resin "FR" used for tires in developing countries. Tar Distillation Business improved to exhibit satisfactory performance as a whole, since the demand for needle coke for electric furnace electrodes, its mainstay product, remained strong in overseas markets, particularly in the US and Europe, and since the demand for chemical products was brisk.</p> <p>Fine Chemical Business performed poorly due to such factors as the decline in sales of functional chemicals for electronic materials and falling prices of the fine chemical products used in agrochemicals.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>78,467</td></tr> <tr><td>'12</td><td>77,766</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>3,398</td></tr> <tr><td>'12</td><td>3,353</td></tr> </table>	Year	Net Sales (Million yen)	'11	78,467	'12	77,766	Year	Ordinary Income (Million yen)	'11	3,398	'12	3,353
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Year	Ordinary Income (Million yen)												
'11	3,398												
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<p>Medical Business</p> <p>Despite problems in supply caused by the earthquake, Medical Gas Business improved to exhibit satisfactory performance through the acquisition of new client hospitals and by streamlining distribution. Medical Equipment showed solid growth due to expanded sales of new-born baby and infant ventilators, replacement demand for hyperbaric oxygen chambers, and an expansion in sales of INOflow® inhalation gas pharmaceutical products. Growth was strong in the Medical Services Field thanks to such factors as an increase in the volume of new orders and cost reduction efforts.</p> <p>Hospital Facility Construction Business improved to exhibit good performance, by proposing the cutting-edge operating rooms and ICUs such as Nagoya Simulation Center and Real AMhouse and other unique business models which meet the needs of operating rooms for more advanced functions, particularly in acute hospitals.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>66,879</td></tr> <tr><td>'12</td><td>74,478</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>4,383</td></tr> <tr><td>'12</td><td>5,168</td></tr> </table>	Year	Net Sales (Million yen)	'11	66,879	'12	74,478	Year	Ordinary Income (Million yen)	'11	4,383	'12	5,168
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<p>Energy Business</p> <p>LP Gas Business successfully attained the same sales volume as in the previous year despite declines in sales to existing customers due to the Great East Japan Earthquake and heightened energy-saving consciousness in households, thanks to increased sales of the "VIVIDO" hybrid hot water supply and heating system to household customers and aggressive promotion of our proposed systems for shifting fuels used in industry from current energy sources to LP gas, to increase per-capita consumption and acquire new customers. Sales of kerosene improved to exhibit satisfactory performance due to the increase in sales to LP gas customers, efforts to acquire new direct sales customers, and the cold weather which continued throughout the high-demand period. In addition, the Natural Gas Pipeline Distribution Business showed steady growth thanks to recovery of customer operations in the Chitose Rinku Industrial Complex.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>47,554</td></tr> <tr><td>'12</td><td>51,232</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>2,733</td></tr> <tr><td>'12</td><td>2,670</td></tr> </table>	Year	Net Sales (Million yen)	'11	47,554	'12	51,232	Year	Ordinary Income (Million yen)	'11	2,733	'12	2,670
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Year	Ordinary Income (Million yen)												
'11	2,733												
'12	2,670												
<p>Other Businesses</p> <p>Within the Seawater Business segment, in Salt Manufacturing Business, the Ako and Sanuki Plants increased their production to cover operations at the Onahama Plant, and alternative salt sources were secured to ensure a stable salt supply. Magnesia Business showed strong growth by responding to the strong demand in developing nations for magnesia to be used in electromagnetic steel sheets.</p> <p>Logistics Business improved to exhibit satisfactory performance with the increase in the volume of shipments and with the expansion of Food Products Logistics in the Tohoku and Kinki regions. Furthermore, with the addition of elements such as a new link with Hokkaido Body, the Logistics Business absorbed the aftereffects of the earthquake and fuel cost rises and improved to exhibit good performance.</p> <p>Food Products Business showed satisfactory performance as a whole thanks to growth in sales of frozen farm products, expansion of sales channels of commercial-use sauces, and the launch of new livestock products.</p>	<p>Net Sales (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Net Sales (Million yen)</th></tr> <tr><td>'11</td><td>99,176</td></tr> <tr><td>'12</td><td>108,977</td></tr> </table> <p>Ordinary Income (Million yen)</p> <table border="1"> <tr><th>Year</th><th>Ordinary Income (Million yen)</th></tr> <tr><td>'11</td><td>5,362</td></tr> <tr><td>'12</td><td>6,243</td></tr> </table>	Year	Net Sales (Million yen)	'11	99,176	'12	108,977	Year	Ordinary Income (Million yen)	'11	5,362	'12	6,243
Year	Net Sales (Million yen)												
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'11	5,362												
'12	6,243												

*New business segmentation system from 2012.

Industrial Business



As a new segment to cope with the tumultuous times, Industrial Business will build a foundation for sustainable growth driven by exhaustive cost reductions. To address the hollowing out of the domestic market, it will increase its technological capabilities and build a business structure that will enable diversified overseas expansion.

- **Industrial Gas Division**
 - Tank Trucks and Cylinders (Regional industrial gas distribution)
 - Mini On-site and Gas Generators
- **Industrial Equipment Division**
 - Welding (Welding and cutting)
- **On-site Division**
 - Large-scale On-site
 - VSU Network (Regionally distributed, stationary type gas plants)
- **Engineering Division**
 - Engineering and Maintenance
- **Electronics Division**
 - Gas and Chemical
- **Air Water Bellpearl**
 - Functional Materials BELLPEARL® and BELLFINE®
- **Printec**
 - Semiconductor Substrate and Electronics Circuit Materials
- **Inoueki**
 - Import and Export of Electronics Materials and Chemical Products

With a "firm growth path based on diverse plant technologies and unique business models" as its key policy for Industrial Business, Air Water will take on initiatives to ensure continued growth through timely capital investment and a focus of efforts on growth fields for the domestic market in which conditions remain harsh.

In general, the outlook for future demand for Industrial Gas Business does not offer optimism, due to the harsh operational climate surrounding domestic manufacturing industries that includes six major troubles (strong yen, high corporate tax rate, delay in trade liberalization, labor regulations, environmental regulations and power shortages).

Under these conditions, the plan for domestic business is to strengthen distinctive regional business by reorganizing the local business company system and by launching the tenth VSU in Hirakata City, Osaka, thereby improving local business. Air Water will increase its supply capacity in western Japan in the carbon dioxide market, in which supply and demand will continue to grow tighter, by building a new carbon dioxide plant in Sanyo Onoda City, Yamaguchi, by the end of 2012. Moreover, to achieve energy conservation and streamlining of on-site hubs, Air Water will carry out plans such as replacing the existing plant with a cutting-edge high-efficiency V3 plant at the group company Senboku Oxygen. It will thus aim for further stable growth by thoroughly enhancing its production capabilities and streamlining supplies.

Chemical Business



- **Coal Chemical Division**
 - Coal Chemical
- **Fine Chemical Division**
 - Fine Chemical

With "building global competitiveness by shifting Fine Chemical production overseas" as its key policy for Chemical Business, Air Water will create a presence in overseas markets through cost structure reforms.

In Coal Chemical Business, coke oven operations have been restored and coke treatment volume is gradually returning to pre-earthquake levels. As a result, stability of operations for Gas Purification and Gas Byproducts is expected to be sustained. The Carbon Materials Field will aggressively expand sales of new and existing thermally expandable graphite (TEG) products and strive to develop new applications.

In the field of Fine Chemicals, as an effort to strengthen cost competitiveness, Air Water established new fine chemical joint production bases in China, which have commenced production. By moving its contract business for commodities to production in China, it will build global competitiveness and further strengthen the bases in China through increased utilization.

Medical Business



- **Medical Gas Division**
 - Medical Gas
 - Medical Equipment
- **Medical Service Division**
 - Medical Services
- **Air Water Safety Service Group**
 - Hospital Facility Construction

With "sustaining high growth through even further cultivation of growth fields that match Japan's health care policies" as its key policy for Medical Business, Air Water will strengthen and expand its niche fields.

Medical Gas Business will be affected by such factors as implementation of the Diagnostic Procedure Combination (DPC) inpatient hospital payment system and reorganization of hospitals, but Air Water will strive to acquire contracts with new hospitals to minimize the effects of these factors. In the field of Medical Equipment, it will continue actively offering solutions to NICU facilities in order to increase the number of patients using its unique INOflow® inhalation gas pharmaceutical products. It will also promote an increase in the volume of home oxygen medical treatment system rentals in an effort to strengthen its activities in the field of Home Care.

Air Water will also increase its share in the hospital facility construction market by offering high value-added solutions via the original business models, Nagoya Simulation Center and Real AMhouse, in order to respond to the need to increase the scale and sophistication of health care facilities.

Energy Business



- **Energy Related Business Division**
 - LP Gas and Kerosene
 - Life Support
- **Energy Solution Division**
 - LNG Transport and Storage Tank
 - Natural Gas Pipeline Distribution

With "strengthening measures to respond to the need for distributed energy systems that utilize the distinctive properties of LP gas" as its key policy for Energy Business, Air Water will actively expand by offering novel solutions.

In the LP Gas Field, Air Water will continue to increase direct-to-customer sales and promote switching to LP gas as well as increase sales of its "VIVIDO" hybrid hot water supply and heating system and increase unit consumption. Moreover, as distributed energy systems using LP gas are gaining a higher reputation and greater needs, it will take on new initiatives that involve newly expanding sales of LP gas bulk tank trucks and jointly developing an LP gas-type mobile power source car that is the first of its kind in Japan with group company Hokkaido Body. With LP gas positioned as an energy with new growth potential, Energy Business will actively release new products that exploit the properties of LP gas.

Furthermore, in Natural Gas Business, Air Water will work to expand sale of its 15.7-ton LNG tank truck, one of the largest in the country, to respond to an anticipated increase in the number of liquid natural gas import hubs in Japan.

Other Businesses



- **Nihonkaisui**
- **Tateho Chemical Industries**
- **Air Water Specialized Transportation**
- **Saveur SS**
- **AW-Water Division**
- **Agricultural Strategy Division**
- **Air Water Sol**
- **Air Water Mach**
- **Air Water NV**
- **ECOROCA Wood-Plastic Composites Division**

With "forming a strong Order Rodentia Style of Business by actively seeking growth fields and creating new business" as its key policy for Other Businesses, Air Water will strive to strengthen each group company in order to stabilize growth of the entire group as a whole.

Within the Seawater Business segment, Salt Manufacturing Business will expand products such as environment-related products and potassium chloride that effectively utilize seawater resources. In Magnesia Business, Air Water will develop and expand magnesia for high quality electromagnetic steel sheets as a field for further growth.

In Logistics Business, Air Water will expand its range of Food Product Logistics Business in the Kansai area by utilizing distinctive low temperature transportation technologies.

In Food Products Business, Air Water will pursue further synergy from Sagami Ham's M&A, such as increased production efficiency and sales expansion through the use of both company brands, and expand into the Kanto market.

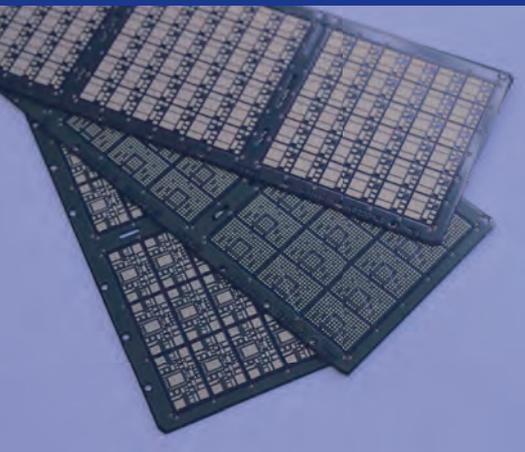
*The Industrial Gas Business segment and Electronics Business segment were merged to change the number of Air Water's business segments to five.



Special Column 1

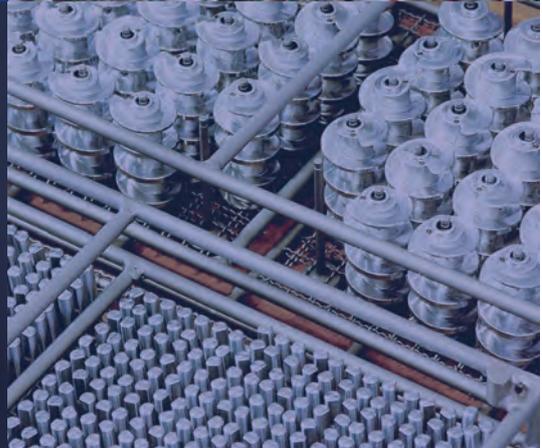
A plan for further growth with strategic diversification

Air Water style management model



Since its founding, Air Water has promoted structural reforms of its businesses and construction of a unique business model with an eye toward an All-Weather Management System that is unaffected by fluctuations in the business environment. A fundamental strategy is the Order Rodentia Style of Business that is a management model generating stable profits by building a portfolio from a group of small-scale yet highly profitable and varied businesses, thereby ensuring sustained growth.

This special column focuses on this business diversification strategy and introduces Air Water's creative business model that is continuing to make breakthroughs with unique technologies and services, the active pursuit of M&A and the expansion of synergies between existing businesses.



Limitless growth potential offered by use of seawater resources

Development of seawater resources
(Nihonkaisui Co., Ltd.)

Nihonkaisui does not stop at simply being the No. 1 salt producer in Japan, and is steadily growing its Seawater Business, armed with seawater resources that have limitless potential.

For example, the magnesium hydroxide slurry used in desulfurizing and wastewater neutralizing is a product made by extracting and purifying magnesia components from seawater. The company's "READ series" of highly functional adsorbent and remover, for which there is a need in environmental and medical fields, has been developed from seawater purification technologies that remove boron from seawater.

The company is also accelerating its synergies with other group companies. In addition to supplying Tateho Chemical Industries with bittern that is the raw ingredient of magnesia, it is strengthening its own Delivery Business using the distilled water and mineral ingredients obtained in the salt-making process. Furthermore, it also began manufacturing potassium chloride to be used as a raw ingredient in fertilizers in 2011, and future synergies with agricultural businesses hold great promise. Seawater is said to still contain many untapped resources, such as uranium and rare metals. Nihonkaisui will continue to pursue the possibilities while collaborating with the Air Water R&D and with other group companies.



Original drinking water production at Sanuki Plant in Kagawa Prefecture

Vast hidden potential of the seawater industry



Corporate profile

Nihonkaisui

Comprehensive manufacturer of salt that commands the leading market share within Japan for industrial and household salt. The first company in the world to successfully commercialize the ion exchange membrane salt production method. Since joining the Air Water Group in 2007, it has actively developed a new field of business that effectively uses seawater resources. It continues to grow and expand its Environmental Business as a new core business in addition to its Salt Business.

Developing magnesia products through world-class distinctive technologies

Expansion into the world's magnesia markets
(Tateho Chemical Industries Co., Ltd.)

The Magnesia Business being developed by Tateho Chemical Industries can be considered the starting point in Air Water's diversification strategy. In 1987, when its group profits were still mostly based on Industrial Gas Business, Air Water was quick to become involved in managing the company. Air Water gained a foothold in the new field of seawater chemicals and saw to future leaps in progress by steadily advancing its Magnesia Business that encompasses world-leading technological capabilities.

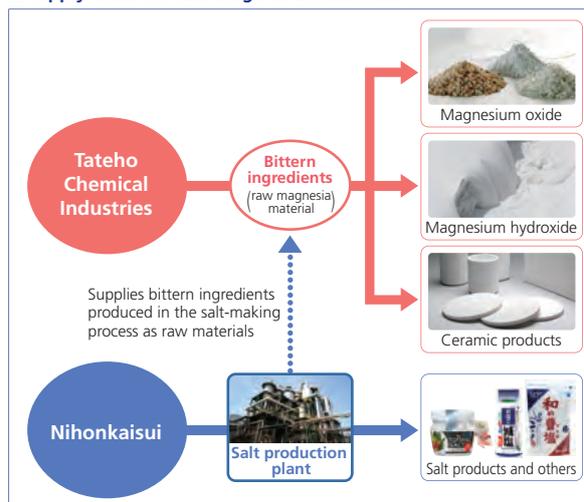
Today, the various types of magnesium-related products created by Tateho Chemical Industries are being used in all sorts of industrial fields including the manufacture of heat- and fire-resistant products and cutting-edge electronics devices. Particularly, the magnesia for high-quality electromagnetic steel sheets created with unique technologies boasts a global share as a vital component that contributes to the properties of specialty steel sheets used in electricity infrastructure. As needs for consolidating electricity infrastructure increase in the world's developing nations, sales are expected to show continued growth in the future.

By adding Nihonkaisui to the Group, Air Water has established a supply chain for ensuring a stable supply of bittern, a raw material, thereby further cementing Tateho Chemical Industries' business foundation and accelerating its expansion into world markets.



Using advanced technologies to develop the internationally recognized Tateho brand

Supply chain for raw magnesia materials



Corporate profile

Tateho Chemical Industries

Started in 1948 as the chemical products division of the Aiko Nishihama Salt Business Association in the city of Aiko in Hyogo Prefecture, where salt fields have been developed since the Nara Period. In 1960, this pioneer became the first company in the world to establish industrial production technology for electrofused magnesia with the raw material of bittern obtained from seawater. Became a wholly owned subsidiary of Air Water in 2006. The company provides the world's industries with sophisticated magnesia products created from its unrivaled advanced crystallization control technology.

One-stop solutions for operating rooms and ICUs (intensive care units)

Advanced medical facility construction team

(Air Water Safety Service Inc., Miwa Electric Medical Co., Ltd., Seiken Medical Co., Ltd.)

Air Water's Advanced Medical Facility Construction Business was started from scratch through M&A as a revolutionary new business. The strengths of Air Water Safety Service that takes on medical gas piping construction, Seiken Medical that makes the hospital facility equipment and Miwa Electric Medical that produces operating room equipment are combined to create a business team that offers "one-stop solutions" for construction of operating room and ICU (intensive care unit) facilities.

The base for outputting this superior integrated power is the Nagoya Simulation Center. Its simulation rooms can actually show different layouts with the latest instruments and equipment according to customer requests. This innovative solution business has garnered a high contract rate. Moreover, in 2011, technologies from all three companies were fused together to develop a groundbreaking new construction method that consists of "wall hanger units". In this new construction method, movable box-shaped units simply need to be rearranged to create the ideal remodel. This method holds strong promise as a powerful vehicle for increasing order volume and the Real AMhouse was built anew in Shinagawa (Tokyo) in October 2011 as a proposal showroom for displaying it in detail.

Air Water will exploit its powerful solutions to take an even higher share in the operating room and ICU construction market with needs that are becoming increasingly advanced.



Real AMhouse showroom that shows and allows visitors to experience the new construction method

One-stop solutions for advanced medical facility construction



Corporate profile

Air Water Safety Service Group

Kawasaki Safety Service Industries (now Air Water Safety Service), which handles everything from medical gas piping construction to design and construction of facilities for all types of hospitals, joined the group in 2005. With the addition of Seiken Medical, a dedicated manufacturer of hospital facility equipment in 2006, and Miwa Electric Medical, a manufacturer of equipment and instruments for operating rooms, in 2010, the specialized areas of the three companies were fused together to remarkably expand the group's achievements. The Safety Service Group continues to grow rapidly as a leading domestic total supplier for the operating room and ICU construction field.

Achieving steady business growth based on the key concept of "strategic expansion"

Production and product synergies

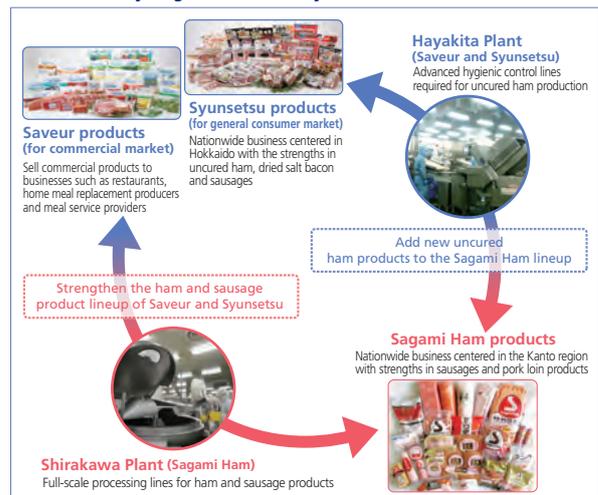
(Saveur SS Inc.)

Saveur SS's Food Business is another starting point of Air Water's diversification strategy, with a history of over 30 years. At the time, its aim was new development of frozen foods business as one use of industrial gas (liquid nitrogen) application technology, or in other words, strategic expansion of the synergy between existing businesses and new businesses. This can also be considered the true starting point of the Air Water business model.

Currently, a core field is ham and delicatessen products of Saveur and Syunsetsu that have established a position as a high quality brand. After M&A in 2009, Saveur SS added to its lineup Sagami Ham, a company with strong brand power in the Kanto region, and reciprocal production began between the Saveur SS Hayakita Plant and Sagami Ham Shirakawa Plant. The companies are carrying out production activities that make use of advantages of each other's plants, for example with Saveur SS producing uncured ham at its Hayakita Plant and shipping it out to the Kanto region under the Sagami Ham label. Synergies are being pursued, such as the merger with Sagami Ham in July 2012, to increase the competitiveness of the three brands.

In 2008, Air Water also entered the cooking sauce field to expand synergies with its existing products, for example, a product strategy involving collaborations with uncured ham. Starting this fall, it will also carry out strategic expansion by utilizing synergies with various management resources, including a new marketing plan that involves selling frozen domestic vegetables offered by group company Tomiichi under the Saveur brand.

Production synergies between Hayakita Plant and Shirakawa Plant



Corporate profile

Saveur SS

Air Water began the frozen food product business in 1980 as a use of liquid nitrogen application technology and established a dedicated company in 1995. In 2002, the company took over a meat processing plant in Hokkaido and began a ham and delicatessen product business. The high-quality brands are available everywhere from supermarkets, volume retailers and department stores to hotels and restaurants throughout the country. In recent years, the company has also been actively expanding its business in a variety of fields such as meal services, commercial cooking sauces and sweets.

Using low temperature transport technology as a vehicle to take advantage of absolute strengths in niche fields

High value-added logistics service
(Air Water Specialized Transportation Inc.)

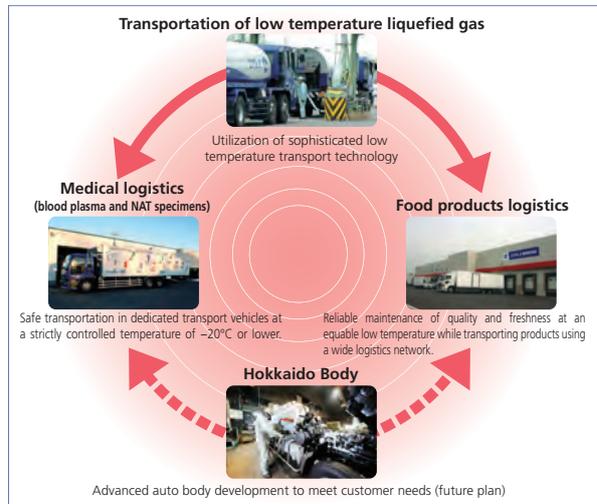
Air Water's large competitive advantage in Logistics Business is due to its advanced temperature control technology developed in its own low temperature liquefied gas transportation services. The field that takes the most advantage of its strengths is the field of "medical logistics." Powered by pioneering technologies that can fulfill strict low temperature control needs, Air Water has been an exclusive provider of blood plasma and NAT specimen transportation for the Japanese Red Cross Society for many years. Air Water has also used its equitable low temperature control technologies to establish its position in the field of "food products logistics" that requires meticulous temperature regulation. Air Water further expanded its business area in Honshu by adding Tohoku Carytec that was involved in Food Products Logistics in the Tohoku region (current name Air Water Food Transportation) to the group in 2010, and its order volume is increasing.

As a new Logistics Business development, in 2011, Hokkaido Body, with its superior specialty automotive manufacturing technology capabilities, was brought into the Air Water Group. Principles of auto body manufacturing were used to establish a dedicated business system for offering proposals that would match customer needs more closely. This company is starting to utilize its synergy with other group companies, seen in the collaboration with a Life Solution & Energy Company to develop a mobile power source car that can generate electricity from LP gas in 2012.



Responding to development of new products with sophisticated auto body manufacturing technology

Expanding logistics services through low temperature transport technology



Corporate profile

Air Water Specialized Transportation

Became independent in 1962 in order to take on a comprehensive logistical function for the entire group. Furthermore, it actively seeks out contract transporting business from customers outside the Air Water Group. It offers business in the fields of transportation, food products logistics, medical and environment, and distributive processing, which are available for customers nationwide, centered on Hokkaido. It is growing as a company with an independent business structure that comprises an unprecedented 70% of direct sales ratio. Through M&A with Hokkaido Body, a specialty automotive manufacturer, in April 2011, it has further increased the level of its solutions and services.

Creating a pioneering agriculture business model through group synergy and M&A

Air Water-type agriculture
(Air Water Farm Agricultural Production Corporation)

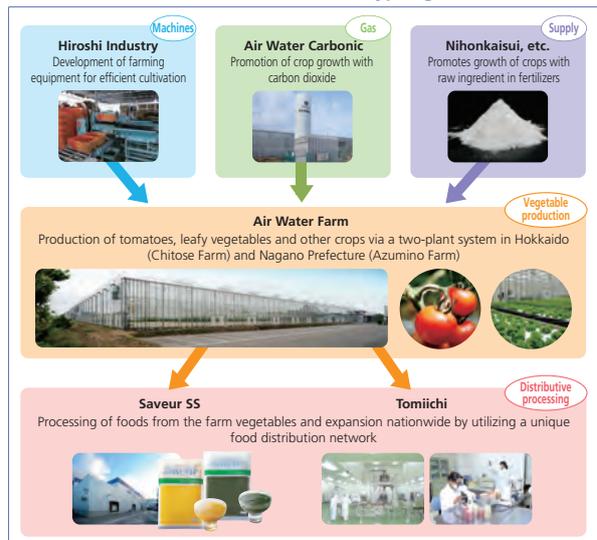
The Agricultural Business that Air Water is pursuing as a new growth field combines the diverse operational resources of the Air Water Group with cutting-edge cultivation techniques. Air Water Carbonic currently provides a steady supply of carbon dioxide to the environmental control style greenhouses being developed in Hokkaido and Nagano and controls carbon dioxide concentrations in the greenhouses. Sunlight, temperature, humidity, irrigation and other environmental factors are automatically regulated to achieve optimal cultivation that is unaffected by climatic fluctuations. For crop harvesting operations, sorting work has been made more efficient by using sorters made by Hiroshi Industry, a dedicated farming equipment manufacturer. In addition to vegetable transportation that utilizes Air Water's know-how in food product logistics, the use of raw ingredients in fertilizers developed by Nihonkaisui and the Kanto Natural Gas Development and the use of Saviour SS's food distribution network, Air Water is investigating joint development of all steps of processed foods from the cultivation of ingredients to the formation of final products.

In addition to contract cultivation, Air Water plans to further expand its business in the market with its own brand. As the groundwork for this strategy, a new capital acquisition was made in April 2012 of Tomiichi, a company that undertakes fruit and vegetable distribution and processing. Air Water is pursuing a business model that does not stop at just vegetable production by constructing an integrated supply chain that covers everything from production and processing to distribution. This clearly represents the goal to establish "Air Water-type agriculture," an agricultural model of the future through which Air Water will continue to expand its development.



Tomato cultivation at Azumino Farm

Business model aimed with Air Water-type agriculture



Corporate profile

Air Water Farm

Founded to establish a new growth business in 2009, and began producing tomatoes and leafy vegetables grown in a large-scale greenhouse in Chitose City, Hokkaido. In 2011, tomato cultivation operations were also begun at Azumino Farm in Nagano Prefecture, marking the launch of full-scale vegetable production in the two greenhouses. The company is aiming to create an unprecedented agricultural model of the future by seeking synergies with other group companies and new M&A.

A "technology-driven company" that continues to evolve through innovation and originality

In order for Air Water to attain its management goal of becoming a 1 trillion yen company in net sales by 2020, it is essential for its growth to be driven by the technology divisions. Air Water will proceed through the final year of its Mid-term Business Plan "NEXT-2020 Ver.1" and start off towards the next stage of Research and Development Institute.

Simultaneously promoting rapid commercialization of the fruits of research and further maturation of innovative technology

In June 2012, the technology divisions were largely reorganized into two main fields in an effort to build an organization capable of concurrently promoting both speedy commercialization of the fruits of research and further advancement of innovative technology that will generate the next generation of growth.

The Air Water R&D Co., Ltd. that sustains technological development from a mid- to long-term perspective is responsible for setting "strategic technological development themes" based on novel far-seeing technology. The aim of the Institute is to support technological development of the entire Air Water Group and drive new growth through further advancement of high value-added technologies.

In the meantime, the Market Development Division of Company that sustain rapid commercialization of technologies are responsible for setting "business-based technology development themes" based on greater application of existing technologies and market exploration. Air Water thus aims to respond with agility to market needs and quickly develop differentiated technologies that are vital to its global strategy.

Research and development fields

- Gas processing technology
- Gas collection and recycling technology
- Gas applied technology
- Welding technology
- Electronics materials technology
- Plasma surface treatment technology
- Fine chemicals and new materials technology
- Functional resin materials technology and carbon materials technology
- Medical-related technology
- Metal surface treatment technology
- Collagen applied technology
- Environmental and food-related technology

● Air Water R&D Co., Ltd.

● Market Development Division of Company

[Nagano]

● Matsumoto Institute

Gas application development, medical gas technology, electrode materials and other growth business-related technologies

● Industrial Company Electronics Division

Semiconductor material technology

● Medical Company

Development of medical equipment



[Hyogo]

● Amagasaki Institute

Gas nitriding and carburizing metal surface treatment technology



[Osaka]

● Sakai Institute

Gas processing technology (cryogenic air separation, adsorption/separation refining), gas application development



[Hokkaido]

● Life Solution & Energy Company
Market development of LPG- and LNG-related equipment



[Tokyo]

● Medical Company
Market development of medical-related technology



[Ibaraki]

● Chemical Company
Market development of carbon materials and fine chemicals



[Osaka]

● Industrial Company
Market development of gas generators, gas applications, and others



[Wakayama]

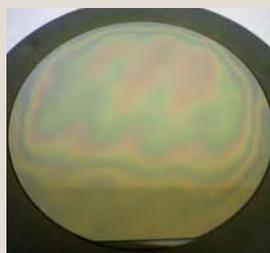
● Industrial Company Industrial Equipment Division
Market development of welding-related technology (welding and cutting)



Promoting expansion of Air Water's original SiC semiconductor substrate manufacturing technology under a newly established SiC Division

With the reorganization of its technology divisions, Air Water at the same time newly established an independent SiC Division. The new division uses silicon carbide (SiC) and gallium nitride (GaN) technology to take on SiC semiconductor substrate production, one of Air Water's advanced differentiated R&D technologies with strong potential.

Since 2006, when it became the first company in the world to establish a technology for manufacturing large-area monocrystalline substrates (200 mm in diameter) in joint development with Osaka Prefecture University, Air Water has further increased the sophistication of the technology through the "high vacuum epitaxial growth system" for VCE equipment that it studied and developed over many years. In 2011, it succeeded in developing large area (up to eight inches) and inexpensive SiC film technology, among other achievements, and continues delivering samples as next-generation semiconductor materials. This clearly represents one part of Air Water's initiatives as a "technology-driven company" that is not limited to industrial gas.



Six-inch SiC-on-silicon technology



High vacuum epitaxial growth system (VCE)

The world's first argon purification small-scale plant: The VSUA Bringing together the latest industrial gas technologies developed until now

The Process Developing Group successfully developed the "VSUA" argon purification high efficiency small-scale liquid gas plant that is the first of its kind in the world.

Air usually only contains about 0.93% argon, so the conventional method for its purification is co-production during purification of large volumes of oxygen and nitrogen in large-scale plants. The Group was able to achieve strong cost benefits of argon production in a small-scale plant and uniquely developed a purification system that reaches a world class level argon collection rate. By adding this to the conventional model VSU, the Group successfully developed a small-scale plant that can produce liquid argon in addition to liquid oxygen and liquid nitrogen.

To enable it to supply on-site oxygen to steel manufacturers operating at night, the VSUA plant uses a special operating system that is equipped with two operating modes – an oxygen gas purification GO mode at night and on holidays and a liquefied gas purification LO mode during the daytime on weekdays. In addition to all the innovative technologies of previous VSU plants, such as high-efficiency heat exchangers, high-efficiency turbines and specialty vacuum insulation, the new plant brings together the latest technologies to reach an unprecedented level of competitiveness.



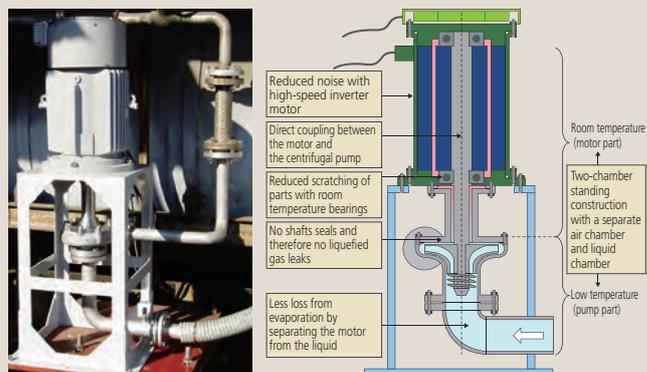
Daio VSUA Center that is capable of producing liquefied argon at 110 Nm³ per hour

Unique development of a "standing gas-liquid two-compartment" centrifugal pump for liquefied gas Solving past problems with the creation of innovative new applications

The Second Developing Group has uniquely developed a new "VCP series" pump for liquefied gas tank truck that achieves a groundbreaking long operating life as well as a leak-free, compact, lightweight and low noise design. The new pump went on sale in FY2012.

This new type of pump utilizes a standing gas-liquid two-chamber construction with a motor located in the upper ambient temperature gas and a pump placed in the lower low temperature liquefied gas, separate from each other. With this design, the new type of pump achieves all the advantages outlined in the diagram below and moreover drastically improves performance thanks to such factors as a maintenance cycle that is roughly 20-80 times* longer than that of conventional pumps. (*Varies depending on usage conditions.)

These advantages and increases in maintenance efficiency give the pump strong potential for use in not only conventional liquefied gas tank truck applications, but also in processing applications for plants that operate around the clock. In response to LNG that has been attracting attention as a clean energy source in recent years, the new pump also shows potential for expansion in needs, for example as a highly safe pump to offer low pressure large-quantity transport and high-speed filling for LNG tank trucks and power plants.



New type of pump that can be mounted on a liquefied gas tank truck / LNG tank truck (left), Pump construction and advantages (right)

First "liquid nitrogen production system" in the V1 series

The Process Developing Group has developed the V1XT-30 small-scale liquid nitrogen production system that uses a new gas process called "air expansion."

In the past, stably supplying small amounts of liquefied gas required continuous transport via PLCs (ultra-low temperature liquefied gas containers). This technological development now enables production and supply of liquid nitrogen within facilities at universities and research and development institutes.



Compact liquid nitrogen production system V1XT-30

"Pulse tube refrigerator" for gravitational wave telescopes

The First Developing Group has succeeded in developing the "single-stage type pulse tube refrigerator" for the 20 to 50 K (-253 to -223°C) temperature range that is among the most powerful in the world while maintaining low vibration. It will be used in experimental studies on refrigeration in gravitational wave telescope equipment.

In the past, GM refrigerator systems with high cooling capabilities were used for telescope applications. The pulse tube that features the advantage of low vibration can now be used in these applications thanks to technological enhancements.



New pulse tube refrigerator

Atmospheric pressure plasma generator for thin resin tubes

The First Developing Group has developed new atmospheric pressure plasma treatment technology capable of exterior and interior surface treatment of thin resin tubes such as catheters (hollow tubes used in medical applications) that are used in intravenous drips and vascular treatment, for example.

This technology has a great track record in the Electronics Materials Field in such applications as the washing, surface treatment and etching of parts. This new development further expands the scope of its application.



A treatment unit for thin resin tubes

Electrode materials and coated electrodes for power storage devices

The Electrode Material Development Group has succeeded in enhancing the low-resistivity and output characteristics of the BELLFINE® negative electrode material for power storage devices whose raw material is BELLPEARL® particulate phenolic resin that was uniquely developed by Air Water.

Over the years, BELLFINE®, which exhibits strong electrical properties, has been achieving more and more success in such applications as electrode materials and electrode sheets for parts such as electric double-layer capacitors and lithium ion capacitors. It has great potential for further expansion of applications centered on high-end power storage devices.



Industrial Business



Offering a full range of services for a wide array of users — production, transportation, on-site, engineering, and maintenance

The primary strength of Air Water's Industrial Gas Business is its ability through the Air Water Group to provide a wide array of comprehensive functional solutions, including everything from gas production technologies, such as cryogenic air separation, PSA and membrane separation, container and storage tank technologies, such as CE, portable containers and cylinders, to transportation technologies, such as tank trucks and trailers, and even engineering and maintenance technologies related to the design, development, construction and maintenance management of gas plants, gas generation

systems and container facilities. For many years now Air Water has pursued comprehensive gas business, putting its own nationwide distribution infrastructure to optimal use, as exemplified by the "V-series" and "VSU." From small- to medium-scale gas supply via tank trucks and cylinders to large-scale gas supply in the form of large-scale gas plants installed at users' plants, Air Water is a comprehensive gas supplier capable of supplying industrial gas in a manner which is optimally suited to users' needs.

The first argon purification type VSUA, the tenth of domestic VSU plants, goes on line

In April 2012, the tenth domestic VSU plant, a new type VSUA, began operation on-site at Group company Daio (in Hirakata City, Osaka). The new plant is a liquefied argon co-production type plant, never before seen among small-scale plants. This special plant is capable of producing 3,000m³ of oxygen per hour, which far exceeds the capabilities of other plants in the VSU series.

The VSUA greatly streamlines transportation and advances the stable supply to regions as a plant that strengthens and enhances liquefied gas production bases in the Kinki region. In addition, at night and on weekends and holidays, oxygen gas is supplied via piping to neighboring steel manufacturers, employing special operation methods that do not exist in the previous VSUs. The plant aims to achieve efficient operation in concert with daytime production and distribution of liquefied gas during the week.



Daio VSUA center

Industrial Gas Division

Tank Trucks and Cylinders (Regional industrial gas distribution)

An integrated production and sales system for delivering gas to every corner of Japan

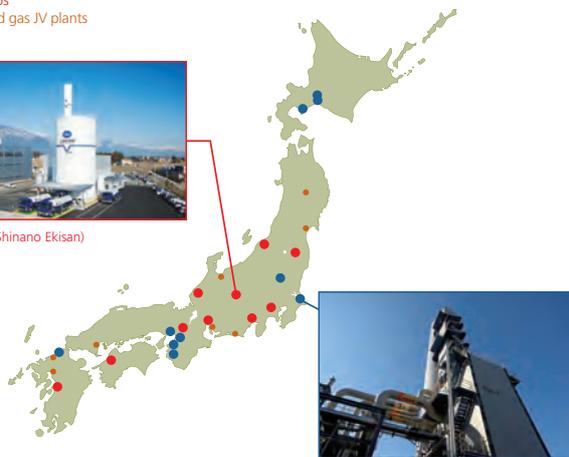
The starting point of Air Water's gas business is an integrated production and sales system which is rooted in the idea of "making and delivering our own gas to users." The solid distribution network that ties Air Water's gas production facilities and filling stations throughout Japan with its Regional Business Companies nationwide is utilized to provide a stable supply of various industrial gases, including oxygen, nitrogen and argon, to regional industries. From regional shipment of gas cylinders to distribution via PLC (ultra-low temperature liquefied gas containers) and gas cylinder bundles, which are suited to larger-quantity gas users, and even distribution via liquefied gas tank trucks capable of transporting large quantities of liquefied gas over long distances, Air Water works to stably and reliably supply gas to users in a manner which is optimally suited to the individual user's quantity and usage needs.

Localized, stable distribution system built around liquefied gas production hubs

- Main, large-scale on-site hubs
- VSU hubs
- Liquefied gas JV plants



VSU hub (Shinano Ekisan)



On-site hub (Kashima Plant)



Industrial gases produced at liquefied gas production hubs throughout Japan are delivered in a variety of forms via filling stations.

Mini On-site and Gas Generators

Distinctive system variations that ensure stable gas supply

"Mini on-site" is a distinctive business model of Air Water that involves setting up a small- to medium-scale gas generator on-site at the user's production facility so as to provide them with a stable supply of gas. The core of this model is the "V-series" of small- to medium-scale cryogenic air separation systems that provide highly pure nitrogen and oxygen, which are essential to electronics and glass manufacturing. In 1984, Air Water utilized its unique technological advancements to successfully develop the V1 high-purity nitrogen generator, which is now the standard for on-site gas distribution systems, particularly at electronics manufacturing plants, throughout Japan. As a mini on-site stable distribution business model, the "V-series" is expanding its offerings which now include the V2, which generates oxygen, the V3, which co-generates nitrogen and oxygen, and the VH, which supplies hydrogen on-site.

In addition to these mini on-site systems, Air Water also offers low-purity-type gas generation systems quite unlike cryogenic air separation-type systems, such as VP facilities and PSA-type oxygen generation facilities optimized for electric furnaces, paper and pulp, and PSA-type and membrane separation-type nitrogen generation systems essential to shipbuilding, construction equipment and metalworking. This diverse lineup of products comprises a key part of Air Water's Industrial Gas Business.

On-site gas services utilizing gas generation systems



Gas center and mini on-site (V1, V2, V3 generators)



VH hydrogen gas generator



VP facilities and PSA oxygen facilities



PSA and membrane separation nitrogen facilities

Operation, management, repair and maintenance



Gas generation systems are installed on-site at user plants, and integrated management is provided from supply operations to repair and maintenance.

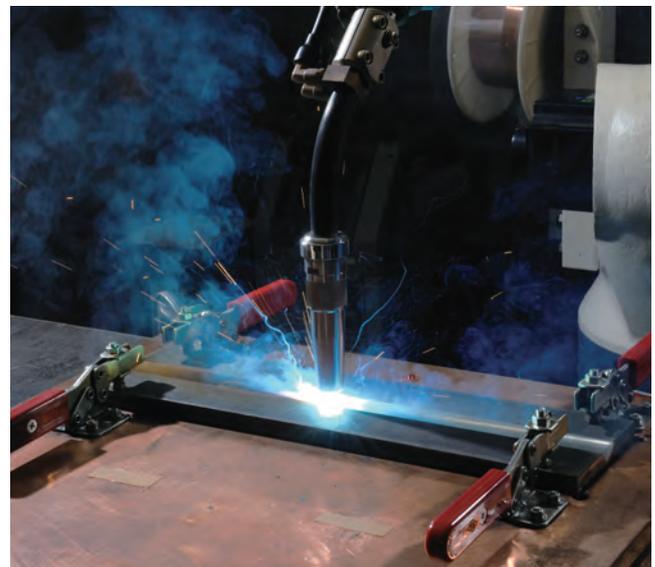
Industrial Equipment Division

Welding (Welding and cutting)

Unique production and development of welding gas for high quality welding and cutting

In the field of welding, ELNACKS® shielding gas for steel plate welding boasts the highest market share within Japan. The high-quality, economical gas is produced via a unique production method involving the extraction of a highly pure direct mixture of argon and oxygen obtained from Air Water's cryogenic air separation plants. This method enables distribution via cylinders as well as distribution of large quantities of gas via liquefied gas tank trucks. In addition, Air Water offers a variety of welding shield gases suited to user needs, such as AW-Shield, which is an argon-based mixed gas for stainless steel and aluminum welding.

In the field of cutting, Air Water's business revolves around the Aqua Gas Generator used in the production of "aqua gas," an oxyhydrogen gas mixture uniquely developed by Air Water. Aqua gas is created from hydrogen and oxygen obtained through water electrolysis and mixed with propane, which, compared with traditional LPG cutting, allows for higher-quality, more rapid cutting as well as reduced energy consumption thanks to the concentrated flame produced from the combustible characteristics of hydrogen. Demand for aqua gas is growing within high-rise building construction, bridge construction and other construction projects that increasingly utilize high-tension steel, specialized steel and other high-strength steel that have traditionally been resistant to gas cutting.



ELNACKS® welding argon gas

■ On-site Division

Large-scale On-site

Direct delivery via piping from plants constructed on-site for users who need a large, continuous supply of gas

Large-scale On-site is a core field of Air Water's Gas Business. Large-scale gas plants are constructed on-site at the production facilities of steel, chemical, semiconductor, electronics, paper, pulp and other manufacturers—users who require a large, continuous supply of industrial gas. These gas plants generate large quantities of oxygen, nitrogen and argon, which are efficiently supplied to users via piping. These plants also play a major role as production facilities of liquid oxygen, liquid nitrogen and liquid argon for direct sales.

Air Water has a particularly strong connection to steel manufacturers, with the large-scale supply of oxygen that is required 24 hours a day for steel manufacturing blast furnaces being the primary area of expertise for its On-site Business.

Currently, on-site facilities have been established at seven domestic plants in Chitose, Wanishi, Kashima, Utsunomiya, Kobe, Wakayama and Kokura. In addition, Air Water is working to further increase the productivity of its on-site plants, replacing them with cutting-edge high-efficiency plants that greatly reduce power costs and provide other advantages.



On-site Wanishi Plant that began operation of its cutting-edge TO-5 plant (left)

VSU Network (Regionally distributed, stationary type gas plants)

Bringing forth a "locally produced, locally distributed" gas business

The VSU was developed by Air Water as the industry's first high efficiency, compact liquid nitrogen/oxygen co-production plant. This revolutionary plant was inspired by the stable supply concept that began with the V1, and incorporates cutting-edge technology with such novel ideas as twin turbines and vacuum insulation.

VSUs overturned the "large-scale production and long-distance shipping" conventional wisdom of liquefied gas distribution, and instead provided validation for a new business model that emphasizes "production near those areas where there is demand." VSUs ensure a stable gas supply to users as well as streamlined shipping costs and reduced CO₂ emissions through a "'just-enough production' and short-distance shipping" approach. And thanks to the regionally distributed VSU network, even if some plants stop operation due to a natural disaster or other occurrence, the other plants are able to provide a backup supply.

This mutual reinforcement is also being augmented by the creation of a new supply network that is centered on VSUs and involves building strong partnerships with local industrial gas companies in the various regions of Japan. The first VSU went on line in Niigata in 2004, followed by nine other VSU plants in Kumamoto, Fukui, Aichi, Fukushima, Kanagawa, Ehime, Shizuoka, Nagano, and Osaka. An eleventh VSU plant is scheduled to start operation in Hofu City, Yamaguchi Prefecture, in FY2013.



Shizuoka Ekisan VSU, which supplies gas centered on the Kanto and Tokai regions

■ Engineering Division

Engineering and Maintenance

Integrated provider of gas plants and gas-related equipment, from design and construction to safety management

The Engineering and Maintenance field centers its business around the Engineering Division that is responsible for overall management of projects, and comprises three working group companies.

Air Water Plant & Engineering Inc. takes an integrated approach that includes everything from process development to the design, manufacture, construction, and quality and safety management of industrial gas-related facilities and equipment. In addition to providing a variety of air separation system and gas generation system solutions, the company also strives to develop gas applications tailored to on-site needs. The development of advanced gas processing technologies, based on cryogenic air separation technology and absorption/refining technology, also contributes to sound technologies used in the creation of distinctive business models, including those like the V-series and the VSU, which are at the core of Air Water's Industrial Gas Business.

Shinko Air Water Cryoplant Ltd. specializes in the process engineering of large-scale air separation systems and, in addition to playing a key role in supporting Air Water's on-site gas distribution business, provides solutions and engineering services tailored to a wide range of customer needs in the area of air separation system engineering.

Air Water Maintenance Inc. provides the entire group with gas process repair and maintenance services, performing tasks ranging from equipment operation and management to maintenance inspections for all gas supply lines, thereby ensuring a thoroughly reliable system in place, which in turn ensures peace of mind for users.



Integrated provision of everything from plant design and fabrication to construction management

■ Electronics Division

Gas and Chemical

Providing users with unrivaled added value thanks to a unique business model and supply chain

《Bulk Gas and On-site Gas》

It is essential to semiconductor, LCD, PDP, solar cell, electronic component and all other manufacturers in the electronics industry that they are constantly supplied with nitrogen gas. Air Water has built a highly reliable and stable supply system with its unique mini on-site V1 high-purity nitrogen generators and liquefied gas supply. Through coordination with Daido Air Products Electronics, Inc., Air Water supplies nitrogen and other industrial gases throughout Japan.



"V1" high-purity nitrogen generator

《Specialty Gases and Specialty Chemicals》

Air Water imports specialty gases, such as nitrogen trifluoride and silane for use in LCD production, and specialty chemicals, such as semiconductor device film formation materials and compound semiconductive organic metal materials, from leading overseas manufacturers, such as U.S.-based Air Products and Chemicals, Inc., and provides users with a stable supply of these gases and chemicals rigorously checked for quality.

Also in recent years, Air Water has begun production of ultra high-purity ammonia as well as hydrogen selenide.



Filling special gas cylinder bundles

《Environmental System, Gas and Chemical-related Equipment》

In recent years increasing interest has been paid to the collection and recycling of PFC waste gases, such as CF₄ and SF₆, which directly contribute to global warming; thus, Air Water has stepped up its efforts to sell its PFC Collection, Purification and Recycling System, actively promoting it not only domestically but also in other countries.

Also, as a total gas and chemical supplier, Air Water provides specialty gas and specialty chemical supply systems as part of its total support for users.



PFC Collection, Purification and Recycling System

■ Air Water Bellpearl

Functional Materials BELLPEARL® and BELLFINE®

Expanding original products such as functional resins and gas generators

Air Water Bellpearl Inc. has developed a broad business of functional materials (BELLPEARL® resins and BELLFINE® activated carbon) as well as energy-saving, environment-friendly products that take advantage of these materials' properties (power storage device electrode materials and PSA type nitrogen generators). Focus is currently being placed on expanding the series of PSA type nitrogen generators that use BELLFINE® highly adsorbent materials and expanding sales to overseas customers.



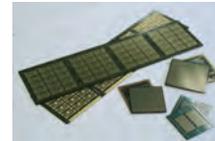
BPN series new space saving PSA generators

■ Printec

Semiconductor Substrate and Electronics Circuit Materials

Expanding specialized electronic materials to emerging markets in Japan and Asian markets

Printec has developed a range of distinctive electronics materials unlike anything else on the market, combining superior thermal control technology with polyimide epoxy resin technology; examples of these products include one of the world's most heat resistant semiconductor substrates and a highly thermostable and high-flex flexible printed wiring board adhesive. Printec flexibly introduces these products into growth markets, like next-generation semiconductors and LEDs, to develop new customers in Korea and Taiwan.



BN300 highly thermostable semiconductor substrate

■ Inoueiki

Import and Export of Electronics Materials and Chemical Products

Expanding sales of Group products by taking advantage of the domestic and international distribution networks

Inoueiki Co., Ltd., the trading company specializing in electronic materials and chemical products, has an important function as the "business antenna" for the Group, providing support for the Group's growth. Its network of sales hubs throughout the Kyushu region, where Japan's semiconductor industry is concentrated, and East Asia is widely used by Group companies for domestic and international development, raw materials procurement and a host of other functions.



Imari logistics base

■ Business regions for Electronics Business

Gas and Chemical Field



Bulk Gas and On-site Gas
Nitrogen, argon, oxygen, hydrogen, helium etc.



Specialty Gases and Specialty Chemicals
Nitrogen trifluoride, silane, hydrogen selenide, high-purity ammonia, organic metal materials, compound semiconductive materials etc.



Environmental system, etc.
PFC Collection, Purification and Recycling System and gas and chemical-supply equipment

Daido Air Products Electronics and regional business companies

〈Domestic market〉



Primary users

- LCD and PDP
- Semiconductors
- Solar cells
- LEDs
- Electronic components etc.

Electronics Materials Field



BELLPEARL®, BELLFINE®



PSA type nitrogen generators



Electrode materials and sheets



Semiconductor substrate materials and electronic circuit materials

Inoueiki (provides overseas network)

〈Overseas market〉



Primary overseas markets

- China
- Taiwan
- Korea
- Other countries in Southeast Asia

(Business expansion into the overseas market utilizing Inoueiki)

Chemical Business



Chemical products born from an abundance of coal chemical technology are utilized in a broad array of fields, including chemicals, agriculture and electronics

Chemical Business is grounded in Air Water's close relationship with steel manufacturers through the Industrial Gas Business. Its two pillars are Coal Chemical Business, which manufactures purified gas and a variety of coal chemicals from the coke oven gas and coal tar created as byproducts from the process involved in making the coke used as fuel for blast furnaces at steel works, and Fine Chemical Business, which manufactures pharmaceutical and agricultural

intermediates and electronics materials at various synthesizing plants. Air Water's Chemical Business started full-scale operation in 2002 with the M&A of chemical manufacturers affiliated with a large steel manufacturer. The Kashima and Wakayama Plants, which undertake the manufacturing, are both located on the premises of major steel works and engage in multifaceted business development centered on stable production activities conducted in coordination with the steel works.

Enhancing global competitiveness of fine chemicals through the establishment of overseas production facilities

In April 2012, Air Water established the overseas corporation Air Water-Richap Chemical (Jiangsu Co., Ltd.) in Lianyungang, China, to specialize in the production of fine chemicals with the aim of strengthening its global competitiveness in the field.

The company was formed through a joint investment with an electronic materials and agricultural chemical intermediates manufacturer in China with which Air Water had been strengthening its relationship through raw materials procurement and production outsourcing. The joint investment and new company came about with the goal of better streamlining the production of fine chemical products and expanding operations.

Going forward, Air Water will actively promote a shift of its general-purpose fine chemical outsourcing business to China and quickly develop a system to supply products to Japanese users via the development of new facilities. Air Water will also globally develop cost-competitive products with the aim of expanding its lineup of fine chemical production items as quickly as possible.



Official opening of Air Water-Richap Chemical (Jiangsu Co., Ltd.)

Coal Chemical Division

Coal Chemical

Separating and refining the active ingredients in coke to create essential, high value-added products for the world

《Gas Purification and Gas Byproducts》

Coke oven gas supplied from steel works is separated and refined in order to directly supply the steel works with the purified gas (fuel gas) essential to blast furnace operation.

Furthermore, the crude benzene, ammonium sulfate and other gas byproducts generated from the refining process are provided as raw materials for resins, solvents, agricultural fertilizer, etc. to manufacturers in a wide range of industries, including diversified chemicals.



Gas purification plant in Wakayama Plant

《Carbon Materials》

The field of Carbon Materials is a unique product area involving applications of coal chemical technology. The thermally expandable graphite TEG is sold to carbon materials manufacturers as a packing material for automobile engines and exhaust gas pipes, and the hydrocarbon resin FR is sold to tire manufacturers primarily as a rubber strengthener.

Air Water is the only domestic manufacturer of these carbon material products essential to automobile production.



"TEG" used as flame retardant

《Tar Distillation》

C-Chem, which is a joint business venture with Nippon Steel Chemical Co., Ltd., has one of Japan's largest tar distillation capacities.

C-Chem receives its raw materials from the Chemical plants and turns these into a core product in the form of needle coke for electric furnace electrodes for domestic and overseas electrode materials manufacturers. It also provides chemical manufacturers with naphthalene, phthalic anhydride and a variety of other tar-derived products.



Needle coke that is the raw material in electric furnace electrodes

Fine Chemical Division

Fine Chemical

Development of high-grade organic compound products via tar-derived synthetic chemistry technology

《Agricultural Chemical Intermediates》

In the field of Agrochemicals, Air Water is the top global manufacturer of raw material for agrochemicals and agricultural chemical intermediates using quinolines, isoquinolines and indoles, developing business not only in Japan but also in Asia, America and the EU. Raw materials derived from the tar produced by Japanese and Chinese steel works are being utilized to further increase Air Water's competitiveness in the international market.



Agricultural chemical intermediates

《Pharmaceutical Intermediates》

In the field of Pharmaceuticals, Air Water utilizes its multipurpose synthesis plants (Air Water Kashima Plant and SUN CHEMICAL), which feature advanced production facilities that satisfy GMP standards, to handle the full spectrum of production needs for pharmaceutical raw materials and pharmaceutical intermediates and perform high precision chemical synthesis.

Air Water will exploit its unflinching technical competence to build strong relationships of trust with leading pharmaceutical manufacturers and other customers.



GMP plant in Kashima Plant

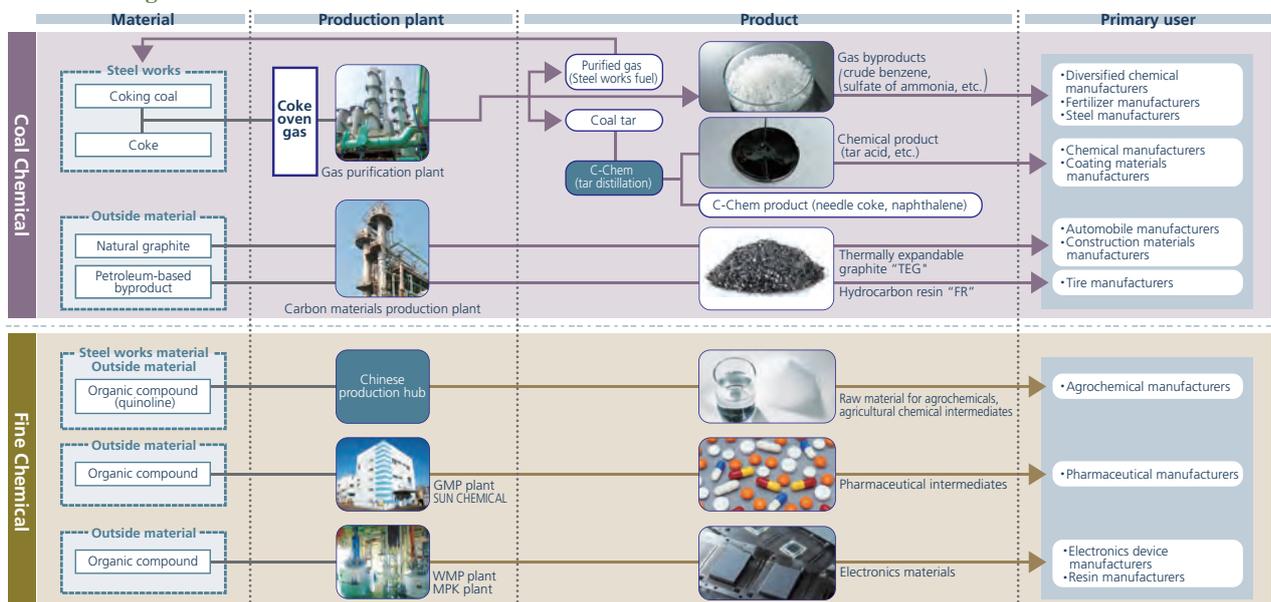
《Electronics Materials》

In the field of Electronics Materials, Air Water is developing SK Resin as its own core brand of thermosetting phenolic resin which is used in semiconductor sealing. This top-quality semiconductor sealing material commands a domestic market share in excess of 30%. Air Water is working to respond to the large-scale demand that has arisen as a result of an increasing need for high-grade products in Japan and overseas.



Semiconductor sealing material, "SK Resin"

Business regions for Chemical Business



Medical Business



Developing comprehensive medical services, including stable distribution of the essential medical gases, to support the "front lines of healthcare"

Because Medical Business is highly immune to economic fluctuations, it is one of the key business areas supporting the stable growth of the Air Water Group. Air Water seeks to comprehensively develop "total solutions" through its Medical Business that is centered on medical gases essential to all medical facilities and includes the design and construction of gas distribution facilities, such as gas piping, as well as operating rooms and ICUs; the acceptance of outsourced hospital services, such as providing various medical equipment, supplying

consumable goods and performing instrument sterilization; and even the provision of home medical and nursing care services. This distinctive business model is unlike anything offered by other medical gas manufacturers. Air Water will continue to grow its Medical Business by providing more comprehensive healthcare solutions to all customers in Japan, from medical facilities to localized healthcare, through the further cultivation of medical equipment, facilities and services in the course of providing a stable supply of medical gases.

Opening of the "Real AMhouse," a proposal for a new construction method for operating rooms

In October 2011, Air Water Safety Service Inc. and Miwa Electric Medical Co., Ltd. jointly developed a new construction method that dramatically increases the ease of renovating operating rooms compared to existing methods, and opened a proposal type showroom, the Real AMhouse, in Shinagawa Ward, Tokyo, which offers tours and hands-on experience with the new method.

Previous construction methods are associated with many problems. For example, their all-in-one design in which instruments are built into the walls means that changing the layout for each procedure or introducing the latest instruments is difficult and construction work is time-consuming. In the new construction method, medical instrument wall structures (AM Boxes) are built at the factory and can then be assembled on-site by simply mounting them to hanger units on the operating room walls. This not only reduces the time required for construction work, but also facilitates changing medical instruments and room layout even after the construction is completed.

Air Water plans to further develop the Real AMhouse and actively propose this new construction method to hospitals in Japan. Its future outlook also includes expansion to hospitals overseas.



Medical instrument wall hanger unit in the Real AMhouse

Medical Gas Division

Medical Gas

As the top supplier of medical oxygen in Japan, Air Water exploits its infrastructure to establish a stable and reliable distribution system

Air Water has supplied a variety of essential medical gases, including the three most commonly needed gases (oxygen, nitrous oxide and nitrogen) as well as sterilization gas and MRI-use helium gas, to the "front lines of healthcare" for more than half a century.

A stable supply of medical oxygen, in particular, can be a life or death issue for patients, and Air Water has an ironclad system in place that involves a shipping infrastructure network linking up Air Water's many production and supply hubs, especially large-scale on-site plants and regional VSU production plants, to ensure the supply of medical oxygen under all circumstances. Air Water has earned the trust of a wide range of users, from large-scale medical facilities to community clinics.



Medical gas CE

Medical Equipment

Provision of equipment and services rooted in gas and centered on the infant, child and perinatal care fields

Air Water works with leading global medical equipment manufacturers to provide medical facilities with equipment strongly connected with medical gas, such as a hyperbaric oxygen chamber for which Air Water boasts a greater than 50% domestic market share, infant/child/perinatal medical equipment and circulatory system treatment equipment.

Air Water demonstrates particular expertise in the advanced medical field of NICU (neonatal intensive care units), which has been growing recently in terms of facilities expansion and construction. Sales of INOflow®, a gas pharmaceutical product for neonatal pulmonary hypertension treatment, are also increasing year by year, helping Air Water continue in its aim to achieve even further growth as an NICU expert.



Sechrist Industries hyperbaric oxygen chamber

Medical Service Division

Medical Services

Establishing Air Water's market position as a total healthcare supplier, from hospital support services to localized medical services

Through SPD (hospital supply, processing and distribution) Business, which involves accepting contracted responsibility for the management of all disposable medical supplies within a hospital, and Sterilization Services Business, which involves the sterilization of medical equipment, Air Water helps to keep hospital staff from being distracted by matters not directly related to providing healthcare. Air Water's sterilization services, in particular, are able to flexibly accommodate customer needs, thanks to specialized staff that are dispatched to hospitals to perform high-quality sterilization and backed up by ten contract sterilization centers located throughout Japan.

Air Water also offers localized medical services, which include nursing care product rental and provision of equipment developed in-house, like home oxygen concentrators and Viami® shower equipment for home healthcare and nursing care use.



Viami® shower equipment for home healthcare and nursing care use

Air Water Safety Service Group

Hospital Facility Construction

Providing one-stop solutions for advanced medical facilities from the basic concept to design, construction and maintenance

Air Water Group companies Air Water Safety Service Inc., a pioneer in the construction of medical gas supply facilities and other medical facilities, Miwa Electric Medical Co., Ltd., a leading company in systems geared towards operating rooms and ICUs (intensive care units), and Seiken Medical Co., Ltd., a dedicated manufacturer of hospital facility equipment, work in conjunction to provide one-stop solutions related to advanced medical facility design and construction.

In recent years, Air Water has been actively developing a new business model that takes full advantage of each company's area of specialization, as seen in the Nagoya Simulation Center that simulates the latest operating room and ICU environments and the Real AMhouse showroom that shows a layout proposal of operating rooms.



Medical gas outlets

Business regions for Medical Business

<Medical Gas Field>
Distribution of various medical gases, including oxygen, nitrous oxide and nitrogen



<Medical Equipment Field>
Distribution of ventilators for infant and child, and home care ventilator-related equipment



<Medical Services Field (Nursing Care)>
Development of products such as "Viami®" shower equipment for home healthcare and nursing care use, and provision of services such as home nursing care



Healthcare Facilities

Medical facilities

Community clinics

Localized Healthcare

Individual homes

Nursing care facilities

<Hospital Facility Construction Field>
Total solutions for advanced medical facilities, including operating room and ICU design and construction



<Medical Services Field (SPD and Sterilization)>
Acceptance of outsourcing, such as SPD and contract sterilization services, from medical facilities



<Medical Services Field (Home Care)>
Provision of ventilator-related services, centering on the home oxygen concentrator, which is essential to home therapy



Energy Business



Developing a business of community-based life solutions centered on Air Water's LP Gas and Kerosene Business and its commanding share of the Hokkaido market

Air Water's Energy Business started in 1955 in Hokkaido with sales of LP gas, and has grown steadily ever since. The core LP Gas and Kerosene Business has used Air Water's solid brand strength cultivated over many years and numerous distribution hubs scattered throughout Hokkaido to develop into a community-based business. Air Water has also applied the cryogenic technology developed through Industrial Gas Business to the field of Natural Gas to further its unique business, such as Natural Gas Pipeline Distribution Business in the Chitose region, and the manufacture and sale of dedicated

LNG (liquefied natural gas) containers, tank truck and satellite facilities. In the wake of the Great East Japan Earthquake, two challenges facing Japan are the reconsideration of overdependence on one type of energy and finding ways to reduce energy costs. Air Water, as an infrastructure company with a responsibility for ensuring stable distribution, has addressed these challenges with solutions centered on a unique distributed energy system that capitalizes on the distinctive characteristics of LP gas.

Market release of the first domestic LP gas-type mobile power source car

As a part of market releases of various new products aimed at furthering growth of its Energy Business, Air Water developed Japan's first mobile power source car fueled on LP gas in July 2012.

The maximum power generating capacity of this mobile power source car is 100 kW, equivalent to that used by 40 households. It is fueled on LP gas, which means that fuel for power generation can be procured easily during earthquakes and other disasters. If power shortages occur as the result of a disaster, the mobile power source car can provide the power needed to operate an LP gas filling station, thus delivering LP gas to homes and other users. With this goal in mind, Air Water plans to equip 4 key hubs in Hokkaido (Sapporo, Muroran, Obihiro and Asahikawa) with mobile power source cars as a first step to further increase the infallibility of the supply network in Hokkaido.

As these cars can also provide power assistance to disaster areas by acting as an emergency power supply, Air Water is also offering rental and purchase of the cars to companies and local governments, thus presenting a new business model that utilizes the unique properties of LP gas.



Example of using an LP gas-type mobile power source car during a disaster

Energy Related Business Division

LP Gas and Kerosene

Business development centered on Hokkaido for half a century, since the early days of the domestic LP gas market

Air Water's LP Gas and Kerosene Business centers on the Hello Gas brand offered primarily in Hokkaido and commands a large share of the local market with a sales network comprising 90 hubs throughout the island prefecture. In recent years, Air Water is focusing on providing customers with optimal energy mix solutions that combine LP gas with other forms of energy. One way in which this has found expression is through the development of Air Water's hybrid hot water supply and heating system VIVIDO, a uniquely developed system that combines an electric heat pump with a high-efficiency gas hot water heater.

Air Water is moreover aiming for new growth in LP Gas Business through solutions such as distributed energy systems using LP gas-based gas co-generation and gas heat pump as well as through the release of new products such as LP gas bulk tank trucks and LP gas-type mobile power source cars.



LP gas supply equipment for use in disasters

Life Support

Providing new LP gas life solutions founded on strong relationships of trust with customers

Air Water puts to use its distinctive characteristics as an LP gas business operator, which enables close contact with customers' lifestyles, to develop community-based lifestyle solutions, such as home reform solutions, LP gas-related equipment sales and installations services, mineral water sales, and welfare/nursing care equipment and services for the elderly.

Air Water uses its ten FUREAI SHOWROOMS MIX in major cities of Hokkaido, as well as other venues such as regional trade shows and sales exhibitions, to connect with customers and offer them new lifestyles that incorporate LP gas.



Demonstration/sales exhibition of the mobile exhibition vehicle

Energy Solution Division

LNG Transport and Storage Tank

Pioneers of reliable cryogenic technology derived from industrial gas technology

Air Water is a pioneer in Japan in LNG transport and storage tank technology, and thanks to the cryogenic technology and know-how it has cultivated in Industrial Gas Business, Air Water develops and offers dedicated containers and mono-coque tank trucks capable of transporting large quantities of LNG. In the field of LNG Transport Equipment, Air Water has a commanding domestic market share in excess of 50%.

This position is the result of products, including a 15.7-ton LNG tank truck with the largest LNG shipping capacity in Japan that was released to the market in June 2012 and Japan's first sea- and land-use LNG container geared towards ship transport, which have been developed from unique technologies and which are acclaimed by customers throughout Japan.



15.7-ton LNG tank truck with the largest LNG shipping capacity in Japan

Natural Gas Pipeline Distribution

Contributing to local industrial development with "the other clean energy"

Since 1999, Air Water has pumped natural gas from the Yufutsu gas field in Tomakomai, Hokkaido, which boasts some of the largest reserves in Japan, via its own gas pipeline to the Natural Gas Distribution Center in the Chitose Rinku Industrial Complex, and this gas continues to provide a stable supply to tenant companies spread out across numerous industries, including the electronics, food product and automobile industries.

This situation is unusual for an industrial gas manufacturer, but through this distribution of natural gas – the other clean energy – Air Water seeks to contribute to the development of local industries.



Chitose Pipeline Distribution Center

Business regions for Energy Business

<LNG-related equipment sales>
Air Water Plant & Engineering Inc., Sapporo Factory
(Dedicated production hub for LNG-related equipment)



<Natural gas pipeline distribution>



<LP gas and kerosene supply areas in Hokkaido region>
Large market share (exceeding 30%) thanks to a sales infrastructure comprising 90 hubs in Hokkaido



<LP gas and kerosene supply areas in Eastern Japan and Tohoku region>
Expanded business development capitalizing on niche areas such as Gas Co-generation System and Gas Heat Pump System

Other Businesses



Seawater Business

Another field of chemistry in which Air Water excels is seawater chemicals, which seeks to effectively utilize seawater resources

■ Nihonkaisui

Salt Manufacturing and Environment Products

Committed to providing industries and general consumers alike with a stable supply of Japan's top salt brand

Nihonkaisui Co., Ltd. is a comprehensive manufacturer of salt that commands the leading market share in Japan, and it is working to develop a diverse range of businesses that make effective use of seawater resources.

The Salt Manufacturing Business, which involves the manufacture and sale of salt for both commercial and general consumer use, is carried out at three plants in Japan – the Ako, Sanuki and Onahama Plants – which produce a reliable supply of high-quality, safe salt products to suit individual customer needs, such as not only edible salt and salt for food processing but also salt for melting snow and salt for use in boilers, and distribute them throughout Japan. (*As of August 31, 2012, production at the Onahama Plant has been temporarily suspended due to the Great East Japan Earthquake.)

In addition to Salt Manufacturing Business, Air Water is effectively utilizing seawater resources and technologies to develop other businesses as well, such as "READ series" water contamination removers, magnesium hydroxide (smoke gas desulfurizing treatment agents) and other Environment Business as well as environment-friendly products such as mineral ingredients derived from seawater (to be added to AW-Water) and potassium chloride (as a raw ingredient for fertilizer).



Broad series of general household salts

■ Tateho Chemical Industries

Magnesia

Establishing the Tateho brand as a leader in global market share with distinctive technologies born from Japan's abundant seawater resources

Tateho Chemical Industries Co., Ltd. sells high-function and high value-added magnesia products that have seawater-derived bittern and mineral magnesium as their primary ingredients and are manufactured at the head office plant (Ako City, Hyogo Prefecture) and the Dalian Plant (China).

The Air Water Group company uses crystal control technology, firing technology, and other distinctive, unmatched technologies to produce high value-added products under the internationally recognized Tateho brand. It also supplies many other magnesia products to a wide array of industry fields, including annealing and separating agents for high grade electromagnetic steel sheets, heater fillers for home electric appliances and industrial equipment, electrode protective films for PDP, ceramics, and pharmaceutical products and heavy chemicals.

A new business of selling "organic magnesium" as food with nutrient function claims to general consumers was also launched in 2012. Magnesium, which is a major essential mineral required for healthy bone and tooth formation, metabolism and blood circulation, is made into a water-soluble powder through the unique method to achieve high absorbability into the body, thus creating a newly developed product that takes advantages of seawater technology findings.



Single crystal magnesia substrate



Logistics Business

Offering nationwide advanced logistics services using reliable transportation technology developed through the field of high-pressure gas

Air Water Specialized Transportation

High-pressure Gas Logistics

The logistics business that gave birth to transport technology using equable low temperature

Air Water's businesses founded on the distribution of industrial and medical gases are never complete without the Logistics Business, which ensures that Air Water itself always delivers these gases to the customers. From liquefied gas tank trucks to trailers and trucks, transport vehicles optimally suited to customer needs and based on the transport expertise and advanced transport technology using equable low temperature that Air Water has cultivated over many years are used to quickly and safely deliver high pressure gas.



Liquefied gas filling

General Cargo Logistics

A diversity of transport methods to handle any lot size

Air Water utilizes a transport network linking all parts of Japan to transport general cargo such as construction materials and agricultural products. It offers a diversity of efficient transport arrangements suited to customer needs, including ferries and other large volume container transport methods and joint logistics for small- and medium-sized cargo lots and up to 3PL, with the aim of increasing reliability and lowering transport costs to provide high quality logistics services that will attract customers.



Container transport method

Food Products Logistics

Thoroughly temperature-controlled transporting to ensure freshness

Air Water carries out food products distribution centered on a meticulous logistics network in Hokkaido and the Tohoku region, and incorporating transport technology using equable low temperature, cultivated from high-pressure gas shipping, to ensure the sensitive temperature control needed to preserve quality and freshness.



Ebetsu Logistics Center

Medical and Environmental Logistics

Cutting-edge technology providing rigorous control over the "essence of life"

Blood plasma and NAT sample transportation involves taking the blood (blood plasma) collected at Blood Centers nationwide and reliably transporting it in dedicated transport vehicles at a strictly controlled temperature of -20°C or lower to Japanese Red Cross Society plasma fractionation centers and blood management centers.



Blood donation blood plasma transportation truck

Warehouse and Distributive Processing

Adding new value to increasingly complex logistics services

Air Water provides high value-added Logistics Business in a wide array of fields, including such services as proper inventory management and delivery services using Air Water warehouses as well as product tagging at distribution centers. Air Water is actively promoting this business, for example by offering joint logistics via these services.



Sapporo Distribution Center

Making Specialty Vehicles

Carefully responding to customers' logistics needs through vehicle production

The Air Water Group is building an integrated service system to meet various needs by offering not only a choice of transport method but also the production by group company Hokkaido Body of dedicated vehicles optimized for the specific type of transport.



Hokkaido Body manufacturing plant



Agriculture and Food Products

Food products, water and agriculture – delivering high-quality, safe and reliable food for a diverse range of life situations

Saveur SS

Food Products

Breaking into new markets, from upscale ham/delicatessen products and raw ingredient-type frozen foods to sauces and sweets

Air Water's Food Products Business is centered on three brands: Saveur and Syunsetsu, which are based in Hokkaido and have won national acclaim, and Sagami Ham, which has strong brand prestige in Kanagawa Prefecture and the surrounding southern Kanto region.

They use their high-quality ham and delicatessen products which command 30% of the domestic uncured ham market, and raw ingredient-type frozen foods, as the core vehicle for their development of general consumer and commercial business. Furthermore, they are actively working to add new products to their sales repertoire, including original cooking sauces developed and produced at their own factories, Hokkaido sweets and much more, and are finding a large base of customers nationwide, including supermarkets, hotels, restaurants, restaurant chains and school cafeterias.

In addition, a group company Sagami Ham was merged into Saveur SS in July 2012. By passing on the company's operational resources that include human resources, production technology, R&D, sales routes and more to Saveur SS, Air Water will seek further expansion of efficient business development and business range.



The Hayakita Plant launched in December 2011 to produce sauces for commercial use

AW-Water Division

Home-delivered Drinking Water

Drinking water containing a good balance of "sea minerals" – safe, delicious and distinctive

AW-Water is a unique product that contains a fine balance of high-purity water treated with reverse osmosis to remove all radioactive substances and other impurities and combined with seawater-derived minerals produced by Nihonkaisui. AW-Water is manufactured at a dedicated plant that ensures rigorous quality control and is distributed by delivery service to homes and offices along with a water-cooler developed in-house.

Furthermore, Air Water is scheduled to complete its first spring water plant in Omachi City, Nagano Prefecture, in March 2013. The plant will supply all areas of Japan with underground spring water from Shinano-omachi that is blessed with the rich natural environment of the Northern Alps and boasts an abundance of high-quality water.



AW-Water Sanuki Plant

Agricultural Strategy Division

Agriculture

High-quality vegetables born from optimal cultivation locations and high-tech greenhouses – Air Water's distinctive "agriculture of the future"

Air Water's Chitose Farm, which produces fresh tomatoes and leafy vegetables in one of Japan's largest greenhouses, and Azumino Farm, which is a base for tomato production in Nagano Prefecture, automatically regulate CO₂ gas concentration, greenhouse temperature, sunlight, irrigation and other environmental factors via compound environmental control systems to suit the cultivation of vegetables, allowing for the growing of high-quality, safe vegetables for year-round supply.

Air Water also acquired capital in Tomiichi, a company that sells and processes fruit and vegetables, in April 2012. Air Water continues to develop its own supply chain to integrate everything from production to sales and processing.



Azumino Farm greenhouse cultivation



Aerosol, O-ring, NV and ECOROCA®

Expanding the scope of the Air Water Group with original products and technologies that support the Order Rodentia Style of Business

■ Air Water Sol

Aerosol

Japan's major manufacturer of aerosol products thanks to the mobilization of Air Water's distinctive technologies

Air Water Sol Inc. commands the No. 3 share of the domestic aerosol market in terms of production volume. Air Water Sol was created through the M&A of a number of manufacturers possessing unique technologies, and its strength lies in its production system incorporating three highly specialized domestic plants and R&D capabilities in a wide array of fields. A diverse range of products is supplied via OEM, centered on coating materials and automotive parts with a large market share as well as the growth markets of cosmetics and quasi drugs.

In recent years, Air Water has also been strengthening the development of products such as UV protection sprays and disinfectant and washing solutions under its own brand, while simultaneously restructuring its business, for example by entering foreign markets and adding a fluid filling company to the Air Water Group.



Air Water Sol brand Aerosol products

■ Air Water Mach

O-rings

Unique rubber and resin molding manufacturing technology well-suited to fields demanding high precision and high quality

Air Water Mach Inc. is a specialized manufacturer of industrial-use rubber that manufactures and sells a variety of rubber molded products and resin molded products geared towards general industrial machinery, home electric appliances, automobiles and medical products, with its most notable product being ultrahigh-performance rubber O-rings for semiconductor and LCD manufacturing systems.

All these products, from high value-added products to mass production products, are flexibly manufactured at production facilities in Japan (Nagano, Ishikawa) and in China (Fujian, Dalian) taking advantage of a strong production system incorporating molding and materials and centered on compounding technology, molding technology and processing technology cultivated over many years.



Rubber O-rings

■ Air Water NV

NV (Metal surface treatment)

Using "gas nitriding technology" to produce harder, more attractive metal surface treatment

Air Water NV develops business that applies a uniquely developed gas activation process based in advanced gas technology to metallic surface hardening treatment. Air Water NV uses processing technologies including NV nitriding, which provides high-quality surface treatment for various steel materials, and Pionite, which increases the hardness of stainless steel without compromising corrosion resistance, to provide optimal solutions for automobile parts and home electric appliances, for which there is an increasing need for efficient resource utilization and size and weight reduction. Air Water will improve operations at commissioned bases in Japan (Hyogo, Gunma) and overseas (Thailand, the Philippines) while continuing to forage into new regions across the globe.



NV processing of automotive parts

■ ECOROCA Wood-Plastic Composites Division

ECOROCA® (Environmental construction material)

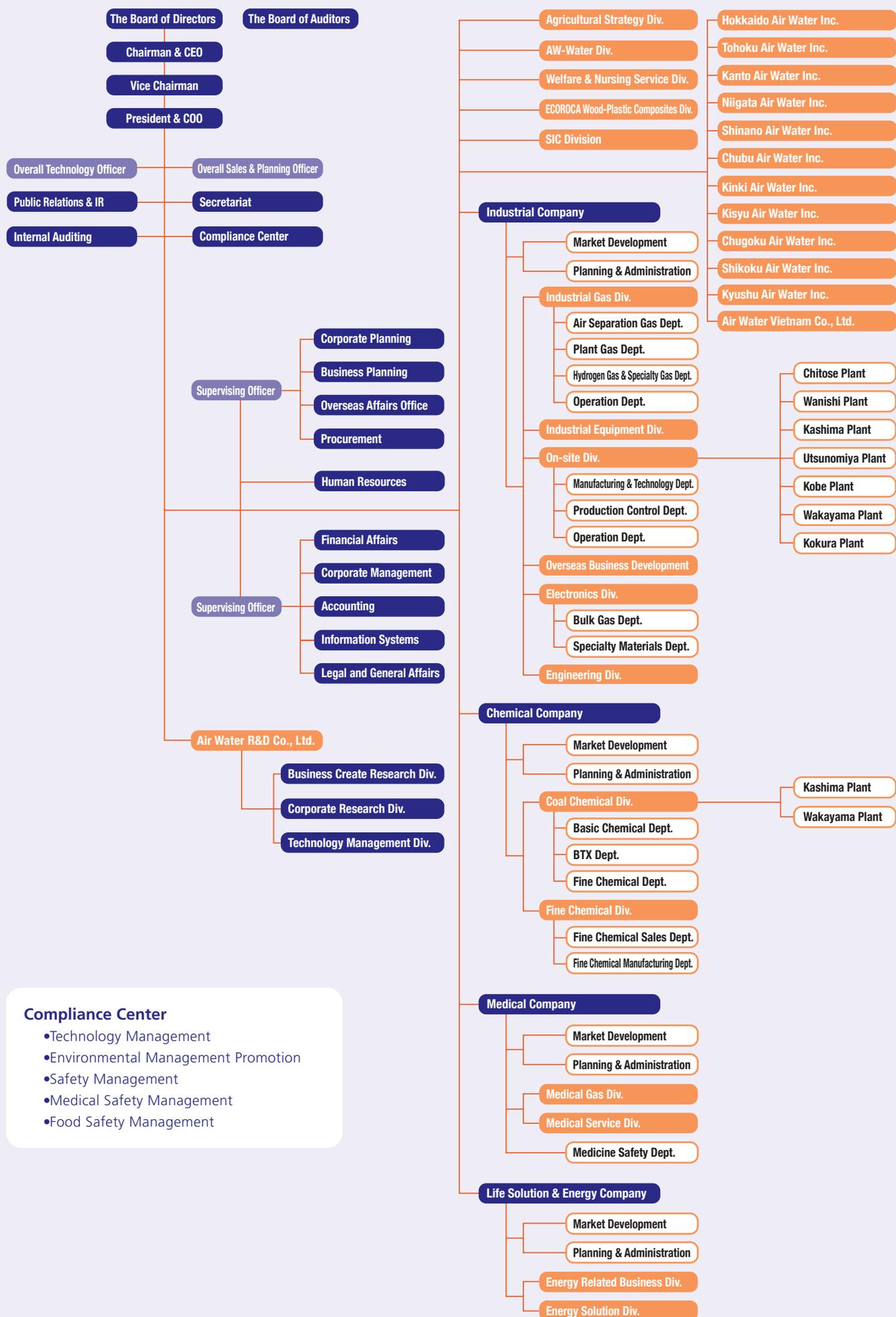
A new kind of environment-friendly construction material that provides the natural feel of wood together with high durability

ECOROCA® is a 100% compound, recycled material made from used wood and waste plastic. This new, environment-friendly material, which provides superior durability together with the natural feel of wood, has found primary applications in such fields as outdoor wooden deck construction. Because of the superior safety it provides, ECOROCA® is particularly valued as a high quality construction material suited to public facilities.

The "heat-blocking deck" was newly developed in FY2011, and ECOROCA® products that use fireproofing technology are scheduled for market release in FY2012. With the Nagano Plant, which produces high-grade product lines and possesses public certification (JIS A5741 certification), as the key driving force, Air Water will continue to offer new and innovative products nationwide.



ECOROCA® construction at a municipal elementary school



Compliance Center

- Technology Management
- Environmental Management Promotion
- Safety Management
- Medical Safety Management
- Food Safety Management

HOXAN Corporation

Sep. 1929 "Hokkai Sanso Co., Ltd." is established in Sapporo.

Dec. 1955 Sales of LPG begin.

Sep. 1963 Sales and production of a bathroom unit named "Bath-All" begin.



Aug. 1966 Company name changed to HOXAN Corporation.

Sep. 1979 The Company's stock is listed on the First Section of the Tokyo Stock Exchange.

Mar. 1981 Manufacture and sales of frozen food begin.



Daido Sanso K.K.

Mar. 1933 "Daido Sanso K.K." is established in Osaka.

Sep. 1961 The Company's stock is listed on the First Section of the Tokyo Stock Exchange.

Apr. 1970 "Senboku Oxygen Co., Ltd." begins operation. The Kansai district's first on-site operation with the capability of generating gas and liquid gas begins.



Oct. 1983 Capital alliance with U.S.-based Air Products and Chemicals, Inc. is formed.

Aug. 1984 High-purity nitrogen generator "V1" is developed. Mini on-site operation for semiconductor equipment manufacture begins.



Dec. 1992 Cryo-Air Co., Ltd., which has an energy-saving cryogenic air separation system utilizing LNG's cold energy, begins operation.

Apr. 1993 "Daido Hoxan Inc." is established.

May 1996 Business alliance between Daido Hoxan and Kyodo Oxygen is formed.

Jan. 1997 "Daido Air Products Electronics Inc." is established.

Apr. 2000 "Air Water Inc." is established.

Oct. 2002 "Sumikin Air Water Chemical Inc." is established. Chemical Business is established around coal chemical.



Apr. 2004 Development of compact liquefied gas plant (VSU). No.1 Unit begins operation in Niigata. (upgrades and expands stable local supply system)



Sep. 2007 Nihonkaisui Co., Ltd. is made a subsidiary of the Air Water Group. Seawater Business is established; including Tateho Chemical Industries Co., Ltd..

Oct. 2007 "Research and Development Institute" is established in Matsumoto City (Nagano). Consolidates the cutting-edge technologies and intellectual properties of the Air Water Group.



Mar. 2010 "NEXT-2020 Ver. 1", a new medium-term business plan is instituted. (Seeks to become a 1 trillion yen company in net sales in FY2020 and puts in place a "Foundation for Further Growth".)

Jun. 2012 Organizational reform for achieving the "Vision for 1 trillion yen company" is instituted. (1) Environmental responsiveness is increased through reorganization into the four-company system (2) Strategic technological development is promoted through corporate spin-offs from research and development functions (3) Domestic markets are further cultivated through reorganization of regional businesses

Kyodo Oxygen Co., Ltd.

Feb. 1962 Kyodo Oxygen Co., Ltd. is established in Wakayama.

Sep. 1979 Manufacture and sales of welding argon gas ELNACKS® begin.



Jan. 1996 The Company's stock is listed on the Second Section of the Osaka Securities Exchange.

Corporate Outline

(As of March 31, 2012)

Company Name	AIR WATER INC.
Head Office	12-8, Minami-Semba 2-chome, Chuo-ku, Osaka, 542-0081, Japan
	Tel (+81) 6-6252-5411 Fax (+81) 6-6252-3965
(Registered Address of Head Office)	2, Kita-Sanjo-Nishi 1-chome, Chuo-ku, Sapporo, 060-0003, Japan
(Tokyo Office)	18-19, Toranomom 3-chome, Minato-ku, Tokyo, 105-0001, Japan
Established	September 24, 1929
Paid-in Capital	¥32,263 Million
Number of Employees	8,062 (Consolidated)
URL	http://www.awi.co.jp/english/

Board of Directors

(As of June 28, 2012)

Chairman of the Board and Chief Executive Officer	Hiroshi Aoki
Vice Chairman	Masahiro Toyoda
President and Chief Operating Officer	Yasuo Imai
Corporate Executive Vice President	Akira Yoshino
Corporate Senior Managing Directors	Takashi Izumida / Toshihiko Akatsu / Akira Fujita
Managing Directors	Kikuo Toyoda / Yuu Karato / Yukio Matsubara
Corporate Directors	Noriyasu Saeki / Masato Machida / Ryohei Minami / Hiroshi Terai / Minoru Nagata / Yasushi Sogabe / Yukio Murakami
Auditors (Standing Auditors)	Tomohiro Katano / Koichi Nakagawa / Hirohisa Hiramatsu
Corporate Auditor (part-time)	Morihiro Sekiyama / Akihiko Takashima

Principal Shareholders

(As of March 31, 2012)

Company	Number of shares held (thousands)	Ratio of shares held (%)
Sumitomo Metal Industries, Ltd.	10,000	5.10
Sumitomo Mitsui Trust Bank, Limited	7,936	4.05
The Master Trust Bank of Japan, Ltd. (trust account)	6,893	3.51
Sumitomo Mitsui Banking Corporation	6,196	3.16
Japan Trustee Services Bank, Ltd. (trust account)	5,936	3.03
State Street Bank and Trust Company	5,882	3.00
Daiwa Securities Co. Ltd.	5,489	2.80
Air Water Customers' Stockholding	5,211	2.66
National Mutual Insurance Federation of Agricultural Cooperatives	4,780	2.44
Japan Trustee Services Bank, Ltd. (trust account 9)	4,347	2.22

Information on Shares

(As of March 31, 2012)

Fiscal Year	From April 1 to March 31
Annual General Meeting of Shareholders	June
Record Dates	Annual meeting March 31 Year-end dividends March 31 Interim dividend September 30
Number of Shares per Unit	1,000 shares
Manager of the Register of Shareholders	Sumitomo Mitsui Trust Bank, Limited. 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan
Telephone Number for Inquiries	TEL 0120-176-417 (toll-free in Japan)
URL	http://www.smtb.jp/personal/agency/index.html
Means of Advertising	Electronic advertising *URL depicting advertising http://www.awi.co.jp/ir/koukoku.html
Stock listing	Tokyo, Osaka, Sapporo

