

The comprehensive service site that supports location of enterprises from both inside and outside Japan, into "Hyogo-Kobe" through one-stop services.

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Leading the environmental business in Japan and Asia, with the keyword of "Global System"

Marking the 100th anniversary of the foundation, we aim to soar even further ahead ALSTOM K.K., a pioneer in energy conservation and environmental protection

ALSTOM K.K., whose head office is located in Kobe city, is the Japanese arm of the Alstom Group, which is headquartered in France and has 65,000 employees in more than 70 countries throughout the world. Being a pioneering foreign-affiliated firm, ALSTOM K.K. celebrated its 100th anniversary in Japan in November last year. As the times change, its organization has changed from Gadelius Trading in the early days of the foundation, to ABB, and then to ALSTOM K.K. The business cores, however, have consistently been energy conservation in power generation equipment and environmental protection. The Company President, Yoshihiro Shimomura was asked what policy and vision the Company has as one of the pioneers of environmental business in Japan.



ALSTOM K.K.

President

Yoshihiro Shimomura

- Please tell us about your current business activities.

Alstom Group's business is largely classified into two: railway transport and power generation systems. The Group has the world's top or second position in railway transport, as represented by TGV, and as for the power plants, the Group maintains the world's largest power generation installation base. Virtually one out of four light bulbs in the world is lit by power from power plants delivered by Alstom.

ALSTOM K.K. specializes in supply of power generation systems and maintenance services with focus in two fields: energy conservation and environmental protection. The core products are air preheaters, which are energy-saving equipment for boilers. Currently, approximately 900 air preheaters are on-stream and have been indispensable for power generation industries in Japan. Air preheaters improve boiler efficiency by about 5%, and the total energy-savings achieved since the end of World War II are equivalent to the heavy oil that would fill approximately 520 large-scale 300,000 ton oil tankers. Our major product in environmental protection is the electric precipitator, which is an exhaust gas treatment system of power plants. We have an excellent track record for nearly half a century in the business related to environmental preservation systems including the electrostatic precipitators.

- What are the roles of the Company?

We strive to continuously expand our operational presence in the domestic market. Unfortunately, we can hardly hope for a large increase of demand for new power generation plants in Japan in the near future. However, there are opportunities to improve plant efficiency and scrap-and-build projects (demolishing ageing equipment / facilities and

rebuilding them), including CO₂ reduction initiatives at existing power plants. With this in mind, we believe it is our responsibility to thoroughly conduct after-sales services.

In Southeast Asia, on the other hand, demands for new power plant construction projects is still very strong. Japanese trading houses and plant makers currently boost export and/or business development activities in the region supported by Japanese ODA (Official Development Assistance). We focus on participating in such initiatives by delivering power generation systems. Contributions to the Group in such business initiatives are considered very important because order volumes often reach several hundred billion yen.

The Alstom Group embraces the strategy that a local group company covers the specific business field by capitalizing on its strength according to regions such as Americas, Europe and Asia. ALSTOM K.K. with the long established energy conservation businesses and accumulated know-how is designated as a lead center for the energy conservation business operations in Asia.

- Why did you choose Kobe as headquarters?

While the Gadelius head office was in Tokyo, the power generation business has always been located in Kobe since it opened its office here in 1918. Since then we have established good relations with the local major customers. In 1999, when the power generation business was acquired by Alstom, we relocated the head office from Tokyo to Kobe. As our business activities are mainly design and engineering and our customers are spread out all over Japan from Hokkaido to Okinawa, the location of the headquarters is not of vital importance. We have our affiliated companies in and around Kobe and have been fully supported by the local industrial technology infrastructure developed in this area for many years. Furthermore with the Kobe airport, easy access to the Shinkansen and the good living conditions Kobe offers, we feel very comfortable here.

- What is the theme and direction for the 100th anniversary of business?

Today, we pursue a total "Global System." In other words, we intend to take a more

international role as a member of a global company such as Alstom, focusing on the global market as well as the Japanese market. We recently established a factory in Shanghai that manufactures major parts for air preheaters as a joint venture with a local company in China. This is an example that demonstrates our initiative of the Global System. China these days faces various energy and environment issues, and we believe it is significantly important to contribute to environmental protection and infrastructure improvement there, based on the know-how and experiences we have accumulated in Japan.

In order to achieve the Global System initiative, each employee's expertise and capabilities are of increasing importance. Therefore, we have developed and implemented our independent training program, called "MICHIZANE." This program is to realize our wish that employee training programs should be continuously developed and handed down from generation to generation. Further, Alstom Group has an international training program called "Alstom University," in which employees are encouraged to actively participate.

- Please tell us your plans for future initiatives.

CO₂ reduction will be an increasingly important issue from now. The focal point, therefore, will be how and how much we can reduce or capture the CO₂ emitted from power plants, which is a 30 % contributor of total CO₂ emissions in Japan. R&D initiatives have been launched for CO₂ zero emissions and CO₂ capture, for which Alstom is now engaged in demonstration tests for full-scale commercial application in 2012.

ALSTOM K.K.

Head office location: 2-3-4, Minatojima-Nakamachi, Chuo-ku, Kobe city / **Business initiation:** November 1907 / **Foundation:** March 1919 / **Capital:** 2,800,050,000 yen (capital stock paid-in) / **Business activities:** research & development, engineering & design, production, sales & services regarding energy conservation-related equipment, environmental protection equipment, and power generation systems / **Number of employees:** 270 persons

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Industries in Hyogo Prefecture are becoming increasingly diversified and active, with "the environment" as a key word.

~ Status quo of environmental business in Hyogo prefecture ~



Advanced environment-related industries are concentrated

In Hyogo prefecture, heavy industries, etc., that manufacture environment / energy-related plants, equipment, etc., are concentrated in the area centered on Amagasaki city, Kobe city, and Himeji city. The advancement of small- and medium-sized companies has also been getting active, and the production value of environmental systems, etc., here accounts for over 10% of that of the entire nation. The share of systems for waste water treatment and waste disposal in particular is high, and another characteristic is that there are many companies related to recycling of waste tires, etc., and new energy, such as cogeneration equipment and photovoltaic power generation.

Furthermore, the prefecture established the "Hyogo Eco-town Project," which aims to realize a wide-area resources recycling system by making the best use of the facility infrastructure of materials-type industries, etc., and land and sea physical distribution infrastructure, which supported the high growth period.

After receiving joint approval by the Ministry of Economy, Trade and Industry and the Ministry of the Environment in 2003, the prefecture established recycling centers in various places, centered on "recycling facilities that gasify waste tires." Various projects, which will lead the coming recycling-oriented society, are progressing.

Collaboration with China toward Progress of Environmental Business

China, a country that has been making remarkable economic progress, is now facing various environmental issues, such as air pollution, water contamination, and other forms of pollution, as well as waste disposal problems, as Japan used to experience. Urgent measures must be taken. Aiming to promote exchange toward progress of environmental business by developing environmental systems and technologies that respond to the actual state of China, through collaboration and exchange between the environment-related companies in the prefecture and those in China, the prefecture established "Hyogo Prefec-

Main environmental businesses in Hyogo prefecture (undertakings)

The Consumer Co-operative Kobe (Higashinada-ku, Kobe city)	Generates electric power through methane fermentation of animal and plant residues. This power and waste edible oil are used to dry bean curd refuse to make feed.
Asahi Pretec Corp. (Amagasaki city) *	Conducts repair, reuse, and recycling of PCs, etc.
Kobe Steel, Ltd. * (Kakogawa city)	Crushes and granulizes collected plastic, etc., and recycles them as reducer of iron ore.
Kansai Tire Recycle Co., Ltd. (Himeji city) *	Thermally discomposes waste tires, etc., to produce high-calorie gas and oil.
Kawasaki Heavy Industries, Ltd., Akashi Plant (Akashi city)	Established a small-scale distributed thermoelectric power supply system technology using wood biomass as the energy source and sells the system.
Sanyo Electric Co., Ltd. (Kasai city / Sumoto city)	Ahead of the world in mass-producing amorphous silicon solar cells. Production in plants in Sumoto and Kasai.
Matsushita Eco Technology Center (Yashirocho)	Operates the base facility that makes used household electric appliances into usable products again.
Hotel New Awaji Plaza Awajishima (Minamiawaji city)	Introduced a Japan's largest-scale wind power generator (output: 1,950 kW) through a joint project with the New Energy and Industrial Technology Development Organization (NEDO).
Hyogo Prefectural Awaji Agricultural Institute (Minamiawaji city)	Operates a large-scale photovoltaic generation system as a field test project through joint research by the prefecture and NEDO.

(* indicates a major activity of the "Hyogo Eco-town Project.")

ture / Guangdong Province Protocol Concerning Environmental Protection Technology Exchange and Environmental Business" with Guangdong Province and "Hyogo Prefecture - Jiangsu Province Environmental Protection Technology Exchange Protocol" with Jiangsu Province. Thus, mutual exchanges by engineers and visiting parties are made between the prefecture and respective provinces.

In May, the G8 Environment Ministers Meeting will be conducted in Kobe

Lake Toya summit in Hokkaido will be conducted in July this year, and preceding that is the "Environment Ministers Meeting," which will be conducted from May 24 to 26 on Port Island in Chuo-ku, Kobe city. At this meeting, G8 (major eight countries) and the European Commission's ministers in charge of environmental issues will assemble and exchange opinions focusing mainly on the three themes: global warming, biodiversity, and the 3Rs (Reduce, Reuse, and Recycle, of wastes). Furthermore, for four days from May 23 to 26, the "Environmental Fair in Kobe" will be conducted through public-private collaboration mainly at Kobe Central Gymnasium. This event aims to help as many people as possible, including prefectural citizens, to deepen their recognition of the environment

and go on to take various environmental measures, and it will be a great opportunity for the environment-related industries in the prefecture to forward their efforts and results to the world.

Environmental Business Becomes a Hyogo Brand, with "Design" as Key

Satoshi Murashita

Associate professor, Department of Management and Information Science, Osaka International University
Doctor (commercial science)

The environment is a global issue and it is difficult to solve an environmental problem based on morals. It is important to tackle it as business according to economic principles. In this regard, I believe Hyogo prefecture's environmental business measures are realistic and to the point. Because there is now a stage where companies can fully display their abilities, under the name of "Hyogo Eco-town Project," collaboration among companies and new business opportunities can be greatly expected. If the private sector's wisdom and power further accumulate in the future, environmental business will be Hyogo prefecture's brand. A brand is like a swarm of mosquitoes; it is difficult to create one intentionally, but control is possible by applying light - and that is the process of designing environmental business. Because Hyogo prefecture already has its foundation, attractive designs not found in any other area can be expected.