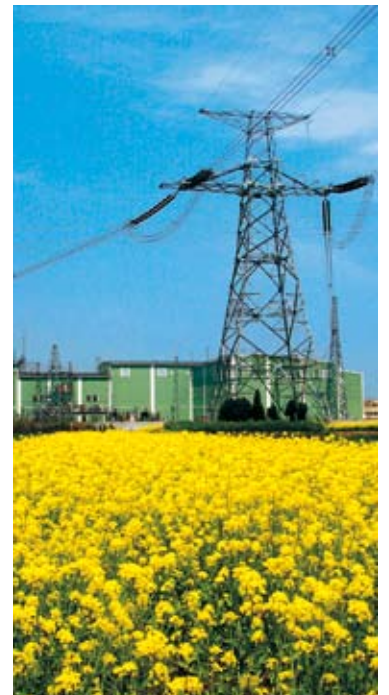


Power and productivity for a better world

ABB Japan profile



ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 100,000 people.



Letter from the President and Country Manager



ABB is one of the world's leading engineering companies. We are dedicated to helping our customers use electrical power efficiently, increase industrial productivity and lower environmental impact in a sustainable way.

Our mission is:

- To drive innovation, which is the key characteristic of our product, systems and service offering.
- To attract and retain talent and offer them an attractive and global working environment—as our development relies on dedicated and skilled people.
- To act responsibly, as sustainability, lowering environmental impact and business ethics stand at the core of our market offerings and our own operations.

Japan is an important market for ABB. Together with our local customers, ABB has completed a full century in Japan. We have helped build, develop and maintain infrastructure for our Japanese customers and partners, both for the domestic market and for export projects.

We are keen to listen to our customers and partners, to address your current needs and to foresee your future demands, and more importantly, to bridge the present and future in a seamless way.

We have been making strong efforts to enable ABB stand out through our competitive strength combining R&D, manufacturing, sales and engineering service. We will make greater efforts to help our utility and industry customers shine with the added values provided by ABB's offerings. After all, partnership means a win-win relationship, care and responsibility for each other, and sharing benefits and success in a sustainable way.

I am grateful to the trust and support we have received from our Japanese customers and partners. We are ready to prove again and again that the ABB Japan team deserves this recognition and trust as a preferred partner in the days to come.

I invite you to learn more about our company, our work and our people in Japan.

A handwritten signature in black ink, appearing to read 'Tony Zeitoun', with a long horizontal flourish extending to the right.

Tony Zeitoun
President and Country Manager
ABB K.K.



ABB technologies help industries improve productivity, reliability and save energy.

As one of the world's leading engineering companies, we help our utility and industry customers to use electrical power effectively and to increase industrial productivity in a sustainable way.

ABB's technology competence, broad application know-how and global presence offer customers easy access to leading electrical engineering and industry automation solutions and systems. Innovation and quality are key characteristics of our service and product offering. ABB is headquartered in Zurich, Switzerland. The ABB Group was formed in 1988, when the Swedish Asea and the Swiss BBC Brown Boveri merged under the name ABB. Asea's history dates back to 1883. BBC Brown Boveri was founded in 1891.

ABB has five divisions – Power Products, Power Systems, Automation Products, Process Automation and Robotics. Our products, systems, solutions and services are used in many industries that affect our daily lives.



ABB's global network covers more than 100 countries worldwide.

The industries we serve include:

- electric, gas and water utilities
- automotive
- chemical and pharmaceutical
- metals
- minerals and mining
- power generation
- cement
- commercial and industrial buildings
- food and beverages
- pulp and paper
- oil and gas
- refining
- railways
- petrochemicals
- marine and turbocharging
- telecommunications and data communication

We also deliver our products and expertise through channel partners such as original equipment manufacturers, engineering, procurement and construction firms, wholesalers and distributors.



ABB Japan opens the door to ABB's world of products, services and solutions.

ABB has strong roots in Japan, dating back to 1907 and the presence of its parent companies in the then-developing market. Today the second-largest economy in the world, Japan represents one of ABB's most important markets.

All of ABB's business divisions are represented in Japan

- Robotics Division
- Automation Products Division
- Process Automation Division
- Power Products and Power Systems Division

(for more on the Divisions' activities, please see the section beginning on page 4)

ABB Japan can provide its customers with its full range of product, services and solutions – in Japanese, in the way people do work in Japan. Japanese customers also gain access to ABB's global network of nearly 100,000 employees in some 100 countries around the globe.

ABB Japan will continue its efforts to remain a true strategic partner for its customers, providing the higher value-added services that improve their productivity and competitiveness.



1
Test paint booth in the Technical Center, equipped with state-of-the-art paint robots.

2
The ABB Japan Technical Center in Shizuoka Prefecture.

Robots, automated painting solutions, software and modular manufacturing cells from the world's leader in industrial robots.



The Robotics Division at ABB Japan focuses mainly on providing paint application solutions to the automotive industry, and full paint shop solutions to Tier 1 in Japan and Asia-Pacific. The Technical Center hosts R&D and production of atomizers for ABB Group worldwide, and provides robotics and atomizer training courses. With a nationwide network of branches, the division provides not only world-class robotics and atomizer solutions, but a complete package of service close to the customer.

An innovative paint line solution

Automotive paint booths consume a large amount of energy for the accurate control of temperature, humidity, air flow and other factors. With ABB's Module System, paint booth lengths – and energy consumption – can be cut in half. Working range is increased by using 8-axis robots, and, thanks to the newly-developed head exchange bell, one atomizer can handle both exterior and interior painting by changing the atomizer head. Used in combination with the Cartridge Bell System, this modular concept created an innovative new paint booth construction that not only saves energy but provides a shorter cycle time.

Energy and emissions savings: the 3 Wet Paint System

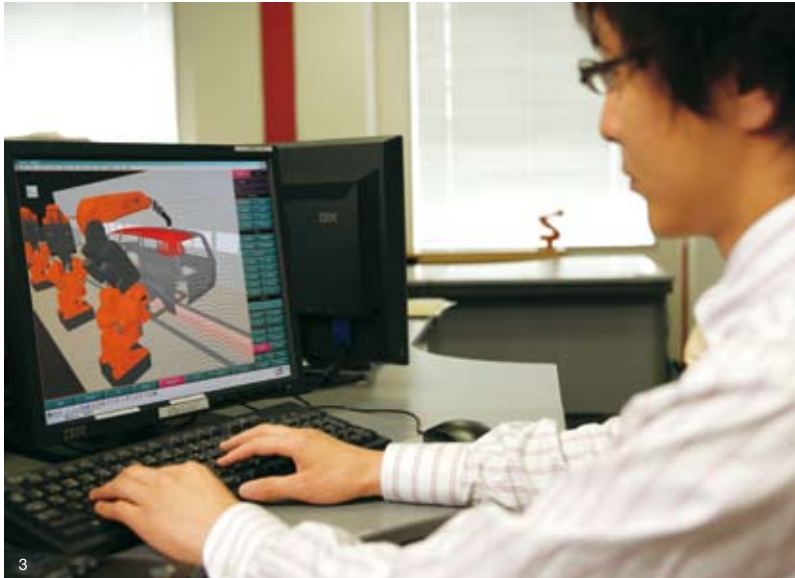
The 3 Wet Paint System combines three paint processes – primer coat, base coat and clear coat – eliminating the need for an oven between the primer and base coat, with an oven used only after the clear coat. This breakthrough paint technology cuts the use of volatile organic compounds (VOCs) by 45 percent, and reduces energy consumption by 15 percent. The precise control provided by ABB's unique integration of atomizer and paint robot system produces paint with uniform thickness while minimizing wasteful over-spray, and thus VOC emissions. Door sensors allow the robots to open the doors and paint the interior and exterior panels simultaneously on an unmanned paint line, improving line speed and assuring consistent high paint quality.

Reducing the number of robots needed

With the new RB1000 Series, ABB Japan has created an atomizer with a paint delivery volume twice that of conventional systems. This allows the number of robots and atomizers on a paint line to be cut in half, greatly reducing both initial and operating costs. The RB1000 features Spray Pattern Size Control, which adjusts the width of the spray pattern depending on the area to be painted. This assures optimal paint delivery and reduced waste, cutting paint costs by 25 to 35 percent while minimizing VOC emissions.

ABB robots: ultra accurate and tough

Japan is famous as the home of some of the world's leading industrial robot companies. Yet in the midst of this tough competition, ABB robots have definitely found their place. ABB is a pioneer in robotics technology, releasing the world's first electric servo-motor driven multi-joint robot in 1974 – the forerunner of today's industrial robot. ABB robots have an overwhelming share of water-jet cutting applications, a process that requires extremely accurate positioning during high-speed operations. To accomplish this, ABB robots feature the unmatched control functions of QuickMove and TrueMove. And the IP67 dust- and waterproof robot is ideal for the harsh operating conditions of casting in automobile and parts manufacturing – and is in wide use in Japan.



3 RobotStudio 3D simulation and programming software allows for pre-planning of robot operations – the only true robot automation solution of its kind.



4 An ABB Japan-produced bell electrostatic atomizer (cutaway view).



5 ABB's Module System allows for shorter paint booths and reduced energy costs.

6 The revolutionary 3 Wet System combines three formerly separate paint operations for reduction of VOC emissions and energy costs.



7 ABB robots boast an overwhelming share of Japan's water jet cutting industry, a demanding operation that requires precision in a harsh environment.



Providing customers with energy-efficient, reliable products that help them increase their productivity.



1

1
ABB high-voltage motors are ideal for applications such as powering large pumps.

2

2
ABB low-voltage pumps are widely used in ships built in Japan.

3

3
A huge plant requires vast numbers of motors and drives.

The Automation Products Division provides Japan's plant and machinery manufacturers and EPCs (engineering, procurement and construction companies) with ABB's motors, drives, instrumentation and low-voltage equipment. Proof of the trust it has built with Japanese customers comes in the large – and growing – number of repeat orders.

A motor may be a commodity item today, but not when backed by the ABB global network for both sourcing and delivery anywhere in the world. ABB automation products are both robust and smaller than their competition, taking up less valuable plant space and able to work in the most demanding environments.

The Automation Products team at ABB Japan is now applying a cross-functional team approach to further penetrate the domestic market while continuing to strengthen its re-export business.



2



3



4



5



6



7



8

4
A drive unit for simulations undergoes inspection at ABB Japan's Tokyo test, demonstration and internal training facility.

5
The global leader in motors and drives, ABB produces a variety of units in factories around the world.

6
ABB provides customized solutions to major projects around the globe.

7
The ACS 6000 medium-voltage drive has won a major global share through its ability to precisely control the speed and torque of three to 27 motors.

8
A complete water analyzer system package for a power plant. Customers can select precisely the needed analyzer from ABB's wide product lineup.

Long-term extruder partnership

There are only a few manufacturers in Japan – and in the rest of the world, in fact – which build the extruders used to produce polyethylene and polypropylene pellets, which in turn are used as the source material for a variety of plastic products. As part of a long-term partnership with one of these Japanese manufacturers, ABB Japan has provided a number of motors and inverters – products normally used in petroleum refining applications. These motors and drives not only provide excellent quality and performance, but meet the very demanding and specialized specifications required in refining, making them indispensable for use in extruders. The ABB ACS6000 large inverter also has a very strong reputation in the field; used by all manufacturers for extruders and adjustable speed mixers, it has won a high market share.

Supplying marine-use motors

Ships, many of them Japanese-built, travel around the globe – and, increasingly, so do ABB motors. ABB Japan has concluded a long-term supply contract with three Japanese heavy industry and machine manufacturers for 110 kW-class low voltage motors for use in ship deck cranes and other applications. ABB Japan now supplies some 150 to 170 motors to each company annually. The motors, produced in Shanghai, have gained high acclaim for their outstanding performance and quality, and for the global service backing them up. ABB can provide service at any port in the world – a major advantage of a company operating in more than 100 countries worldwide.

Project management to support major project

ABB is a global leader in motors and drives, producing a wide variety of products at a number of factories around the world. ABB Japan provides its Japanese customers with a single contact, keeping track of production so that the products can be provided under the conditions demanded. For the major Qatar Gas LNG Project, for instance, the company provided a customized high-voltage motor built to the customer's specifications. ABB Japan also standardizes internal processes, helping to reduce the number of problems which occur – and the cost for the customer. After the project is completed, ABB's service network provides complete after care, significantly reducing customer concerns.

Expanding business through unique measurement technology

As the successor to such well established brands as Kent, Taylor and Fischer & Porter, ABB possesses a range of unique flow measurement technologies. For example, its electromagnetic flowmeters provide stable accuracy and durability for the measurement of high viscosity slurries and other materials containing fiber. These are being increasingly deployed by Japanese paper and pulp manufacturers who previously found the measurement of slurry flow volume difficult. ABB's unique pH sensor technology, featuring original construction and excellent durability, is winning increasing sales in Japan. And in the Qatar Gas LNG Project, ABB's venturi flowmeter won high praise in the Middle East for its stable, high-quality performance.

Integrated solutions for control, plant optimization and industry-specific application knowledge



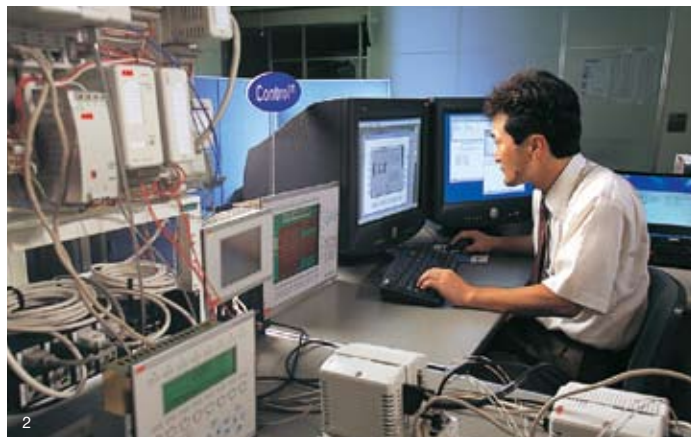
Process Automation at ABB Japan covers a wide range of industries, including oil and gas, power, chemicals and pharmaceuticals, pulp and paper, metals and minerals, marine and turbocharging. The solutions provided help customers to increase the productivity of their assets and boost quality while saving energy.

ABB force measurement products have a dominant position in the Japanese market. Well-known and highly regarded by Japanese manufacturers, they hold between a 60 and 80 percent share of the market, depending on the industry. One area of current focus for Process Automation at ABB Japan is gas analyzers – products that can be used in a wide range of industries. With the scale of Japan's economy – the world's second-largest – this represents a huge potential for ABB Japan.

1
ABB Japan's Process Automation Division provides solutions for a wide range of industries.

2
ABB's Industrial^{IT} provides seamless integration with the enterprise's existing automation systems.

3
ABB Azipod modular propulsion systems help cruise and cargo ships reduce fuels costs up to 15 percent while improving maneuverability and efficiency.





4



5

4
 Pressductor® technology is why ABB's force measurement products have won a top share in Japan's steelmaking industry.

5
 The latest control systems can be observed first-hand at the IndustrialIT corner at ABB Japan's Tokyo headquarters.

6
 Drawing on the technologies of Hartmann & Braun, Bomem and Bendix, ABB Japan is expanding its continuous gas analyzer market share in Japan.



6

Pressductor®: leading the domestic market

More than 50 years ago, ABB first developed the Pressductor® force measurement technology. Based on the magneto-elastic effect, it led to a revolution in the detection and measurement of force, tension, pressure and torque in the harsh environments of heavy industries. ABB products using Pressductor technology have had a long history of achievement in Japan, especially in steelmaking. Its force meter (load cell) and shape meter (Stressometers) hold, respectively, 60 and 40 percent shares of the Japanese steelmaking industry. The shape meter, which detects the flatness of steel sheeting in the rolling process, is indispensable in the manufacturing of high-grade steel sheeting. ABB shape meters are not only widely used in Japan but are also increasingly being exported to China, where they are being incorporated into the steelmaking equipment of Japanese plant manufacturers in order to produce products with higher added value.

Electromagnetic technology applied in national project

For more than 20 years, ABB has worked in close partnership with JFE Steel Corporation in the research and development of electromagnetic technology for the control of molten steel. The FC Mold, a control method using electromagnetic force in continuous casting, is one example of this partnership, with a joint patent issued in 1992. In 1995, ABB joined in the Electromagnetic Power Project, organized by the Japan Research and Development Center for Metals (JRSM). This national project brought together major domestic and foreign steel manufacturers and steelmaking equipment manufacturers. ABB provided molten steel control and magnetic field analysis technology. The resulting technology provides a significant improvement in steel surface quality, as well as energy saving equivalent to 0.2 percent of Japan's total annual energy consumption.

Expanding the domestic analyzer business

Over the years, ABB has acquired the businesses of such famous analyzer manufacturers as Hartmann & Braun, Bomem and Bendix; today, it has a leading share globally in the analyzer field. ABB Japan began the direct marketing of continuous gas analyzers and chemical concentration analyzers for semiconductor production in 2004. The main products handled by ABB Japan today include the PGC 2000 series gas chromatograph and AO 2000 and EL 3000 series of continuous gas analyzers. These are provided both as single units or systems, depending on customer and measurement needs. ABB analyzers have been warmly received – and are expanding into the petrochemical, iron and steel, industrial gas, automotive and other fields.

World-leading DCS and other control systems

ABB is the world leader in large scale DCSs for applications such as plants or power generation stations. ABB first launched the IndustrialIT Extended Automation System 800xA in 2000; it has since delivered this to commercial and public applications around the globe, both as new installations and system upgrading. ABB also provides unmatched, cutting-edge systems in the plant power management system (PMS) field, and systems which are indispensable in large-scale LNG and petroleum refining plants. In the safety system field, ABB provides a diverse lineup including SIL based systems and TMR (Triple Modular Redundancy) systems as well as plant safety diagnosis services. Working with the global ABB Group, ABB Japan provides unique service solutions such as the integration of DCS with other technologies, a hybrid Telecom/Scada solution for wide area monitoring and control of communications and power distribution systems, and the ABB-exclusive Offshore DCS solution.

Providing a complete portfolio of power technologies for safer, more reliable generation, transmission and distribution.



1

ABB contributes to stable power supplies through its advanced electric power systems control and supervision systems.

2

Compact, high-performance ABB high-pressure gas-insulated switchgear (GIS) have won a top share of the world market.

3

With its 20 years of experience, ABB serves wind power customers at every stage of the process, from feasibility study to grid connection.



One contact for the customer: ABB Japan opens the door to the ABB Group's vast array of power technologies for its Japanese customers through a single contact point.

While the customers may be based in Japan, their business is increasingly global. ABB Japan provides the link to the ABB Group and its presence in nearly every country on earth. ABB Japan can supervise production at ABB factories in several different countries, ensuring timely production and delivery, while the local ABB companies can provide on-the-spot support and service, again through the one contact at ABB Japan.

Power projects often require a comprehensive package of products; ABB Japan is there to provide not just the product but the engineering, the project management and follow-up support to ensure success.



4

Leading a multinational team

A vast array of power and control systems are required by a project as huge as a recent \$12 billion liquefied natural gas project in Qatar. The Japanese EPC (engineering, procurement, construction) company for the project called on ABB Japan to provide the multimillion-dollar package of power and control equipment.

With rising petroleum prices, the end-user naturally wanted construction to be completed as quickly as possible. ABB Japan smoothed the process of providing a range of power systems – including transformers, switchgears and control systems – through a “virtual Asian factory” concept. ABB Japan coordinated the activities of factories in Korea, Malaysia, Vietnam and Thailand, reinforced by a factory in Norway for control systems. ABB Japan provided the customer with the clarity of one contact point, while working with several production facilities in creating a unified package of products – and ensuring that delivery was as promised, and on schedule.

Supplying the world’s highest-performance generator circuit breaker

For the Futtsu Thermal Power Station Group 4 in Chiba Prefecture, ABB is supplying its HEC7 SF₆ gas generator circuit breaker. The HEC7 provides a capacity of 200kA-rms, the highest circuit breaking capacity in the world, and is used to switch the high-capacity generator in the plant. ABB in fact developed the world’s first generator circuit breaker in 1969, and remains the global leader in the field. Only ABB can provide this level of circuit breaking capacity, needed for a plant with an generator output of 1,500 megawatts. In total, ABB has supplied some 20 generator circuit breakers domestically, including the Hitachinaka and Hirono Power Stations.

Providing complete electrical equipment packages

One of the strengths of the Power Products and Power Systems Division is in providing a complete package of electrical equipment for projects such as power plants, selecting the most suitable components from ABB factories around the world, then applying the engineering needed to ensure that the products interface seamlessly. For a major coal-fired power plant project in Malaysia, the Division provided equipment including a generator circuit breaker, in-plant transformers (both oil-sealed and dry types), low-voltage switchgear and generator protection relay from ABB factories in Switzerland, Korea, Vietnam and Malaysia. These were provided to the main supplier of power generation equipment for the 2,100 megawatt plant. ABB Japan is also handling project management up to delivery, a major contribution to the efficiency of the project.



5

4
Major projects require a vast array of electric power equipment and control systems. ABB Japan serves its customers by providing a single window to, and complete coordination with ABB Group companies around the globe.

5
Some 20 HEC7 SF₆ gas generator circuit breakers, with the highest circuit breaking capacity in the world, have been provided to customers in Japan.



6

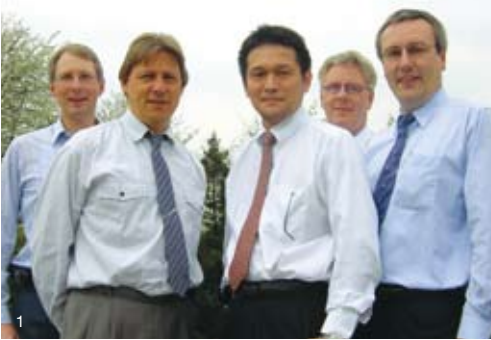
6
For overseas power generation plant projects, ABB Japan provides a package of interface engineering as well as ABB electrical equipment and systems.

7
ABB accomplished a world-first with the realization of a high-voltage direct current (HVDC) power transmission system, which provides low power losses compared to AC systems of the same capacity.



7

ABB is its people: a talented international team from all corners of the globe.



1
Taku Niioka
MV-GIS Switchgears
Power Products Division
ABB Germany

2
Sato Akao
Force Measurement
Process Automation Division

3
Lars Andersson
Robotics Department
Robotics Division

ABB Japan employees may come from many different countries, but they are united by their dedication to excellence. They demonstrate something true for the entire ABB Group: the ability to act and feel at home, whatever the project, wherever in the world it might be.

Taku Niioka
MV-GIS Switchgears
Power Products Division
ABB Germany

"I came to ABB in 1993 as a new university graduate, in charge of protection relays. The number of products I handled increased, and I became manager of the Engineering Execution Department before coming to the Marketing Department of ABB Germany in 2006. I work at a factory in Ratingen, which produces medium voltage gas insulated switchgears and other products—a new challenge in a different environment. Keeping your curiosity is important to succeeding in business. If you have a broad curiosity about people, culture and technologies, then you can understand others and build good relationships. When you have good relationships, you can solve any problems and bring the project to success."

Sato Akao
Force Measurement
Process Automation Division

"I was recruited by ABB in 2005 after I graduated from university, and was assigned to force measurement. My work is in looking after spare parts, from quotation and negotiation to contact and delivery. Right after I was assigned to this area I was sent to a factory in Sweden for a product training course. This training gave me a lot of information about our products, and I got to know the factory staff as well as ABB people from around the world. This was a real motivator for me. I want to build my career in sales, and I feel that ABB respects and supports what the employees, as individuals, want to do in their careers."

Lars Andersson
Robotics Department
Robotics Division

"I've been in Japan for 13 years. I have a Master of Science degree in motion control engineering, and have worked with robots my whole career – I'm addicted to robots! My work is focused on technical sales support to customers. I work with Japanese customers, speaking Japanese. I can go to the customer by myself and talk directly with them – I don't need anybody's help. For me, the best reward is definitely a happy customer. That's hard to do in Japan, where customers are very demanding! But if you satisfy the customer, and they're happy, then you'll probably have a long relationship with them."



4



5

4
Hidehito Amemiya
 Customer Service Department
 Robotics Division

5
Anand Natarajan
 Instrumentation Group
 Automation Products Division

6
Oleg Kudryavtsev
 Proposal and Project Department
 Power Products and Power
 Systems Division

7
Noriyasu Murosono
 Atomizer Application Engineer
 Robotics Division

8
Nobuo Kawakami
 Country HR Manager



6



7



8

Hidehito Amemiya

Customer Service Department
 Robotics Division

“I chose ABB because I wanted to work with advanced machinery. After graduation, I worked on jet engines before encountering my ultimate machine: an ABB robot. During my second year with ABB, I was sent to an automobile manufacturer’s factory to help set up a paint line using 28 of ABB’s most advanced paint robots. My role was not only in maintenance and problem-solving, but in instructing our customer’s employees. Even though I had a lot of learning to do myself, I still felt I was able to play a pretty big role in the project. I’m still finding my way around robots, paint robots and atomizers, and I feel that I’m growing as an engineer – so my life is very exciting!”

Anand Natarajan

Instrumentation Group
 Automation Products Division

“I came to Japan from India over five years ago, originally for a management course at an international university here. Today I’m with Instrumentation in Tokyo. Previously I worked with foreign customers and the Japan ABB factory; now the factories are overseas and my customers are all Japanese! But it’s still very interesting and rewarding. I’m an Indian, working in Japan with Japanese customers, and with factories overseas, especially in Europe and the US. If I can bring all these things together and succeed, it’s a great thrill. It constantly challenges everything I’ve learned and brings me to a higher level personally and professionally.”

Oleg Kudryavtsev

Proposal and Project Department
 Power Products and Power Systems Division

“I specialized in electrical engineering in Russia, then received my Masters and PhD degrees in Japan. Since joining ABB Japan three years ago, though, I have not done much engineering. Most of my work has been in managing one large oil and gas project. Although having an engineering background was very helpful, project management requires a lot of non-technical knowledge and skills you can’t learn in school. Making this job even more demanding is that, apart from your own abilities, success means effectively dealing with many different people. One thing is sure: you won’t be bored managing a project, whether it goes smoothly or turns into a disaster! ABB provides many career opportunities – and we have fun at work. You can decide what career, and what work you will do.”

Noriyasu Murosono

Atomizer Application Engineer
 Robotics Division

“I began my work at the ABB Technical Center in Shizuoka, where we handle paint atomizer R&D and production, and ship products around the world. Today I’m stationed near Paris, working with European customers on engineering issues, helping with sales and communications with the factory – most everything! I think you need an open mind to work in an international business environment. If someone from another culture is approaching an issue a little differently than you might, but you can provide a good response, then the communications go forward. It’s not so much language skills, as having that openness to different ways of doing things.”

Nobuo Kawakami

Country HR Manager

“On the very day I entered ABB, I attended a meeting, all in English, with a lawyer and a CFO! I was already a team member, in charge of legal and tax affairs, for a merger project that would happen in just three months. Since then I have been involved in many important projects. Before we can sign a contract, there are many different issues to overcome. When we finally shake hands with the customer after the tough work towards compromise, I feel a real sense of accomplishment. Today I am responsible for human resources, and my main mission is to create a workplace that increases employee satisfaction—which also means customer satisfaction. Challenge and a sense of accomplishment is what working for ABB is all about.”

ABB technology ensures power reliability, industrial productivity and energy savings.



1 Innovative R&D helps ABB create pioneering products that add economic and environmental value for our customers.

2 Research and production of ABB's advanced technology is often conducted in special clean rooms to ensure our products work perfectly in the real world.

3 At each stage of their development, ABB products such as this ACS converter undergo rigorous testing.

4 Electric motors consume about 65 percent of the electricity used by industry, and more than one million ABB variable speed drives are in use to keep them energy efficient.



At the heart of technology leadership

Research and Development is the foundation of ABB's technology leadership. At its heart are ABB research engineers and scientists, as well as customers, suppliers and leading technology institutions around the world. Our product and process innovations enhance power reliability and industrial productivity, improve competitiveness and reduce environmental impact.

The ABB research presence

Through our R&D centers around the world we maintain close ties to our customers and technology partners. In recent years, we have increased our research presence in growing markets like India and China and strengthened our presence in the U.S. We work closely with more than 50 of the world's leading universities and research institutes, including renowned institutions such as Carnegie Mellon University, Stanford University, the Massachusetts Institute of Technology (MIT), and Cambridge University.

As strong as our people

Our customers want innovations that give them operational flexibility, and also assurance that ABB products and systems will operate reliably for years without unexpected refits or overhauls. Given ABB's massive installed base of power and automation technologies, reconciling innovation and continuity is a high priority for our more than 6,000 research scientists and engineers.



5, 6
ABB motors, drives, instruments and control systems team up to help complex plants run more efficiently.



Solutions made simple

ABB supplies a vast range of advanced power and automation technologies: electrical motors and machines, power transformers and switchgear, drives and power electronics, SCADA systems, low-voltage products, instrumentation, control systems and robotics. Our global installed base of automation solutions alone is valued at more than \$100 billion.

Transmission and distribution leader

Utility and industrial customers around the world rely on ABB. We are the recognized global leader in power transmission and distribution, with a world market share of about 20 percent.

Lower investment and lifecycle costs

In addition to improving quality and productivity, ABB products and solutions help customers to optimize the return on their power and automation investment. Our state-of-the-art control systems support easy upgrades and expansions while allowing operators to retain parts that can still be used. Our power systems increase power quality, reliability and boost production output.

Blackout challenges

Blackouts in recent years demonstrate the vulnerability of power grids. ABB's modern T&D equipment lets operators upgrade existing power systems in an economical way, improving reliability, extending equipment lifetimes and ensuring that even older grids operate dependably and efficiently.

Energy savings, emissions reductions

ABB's total installed base of AC drives alone is estimated to save 96 million megawatt hours of energy per year (the equivalent of 12 nuclear power plants) while increasing productivity and reducing CO₂ emissions by 80 million tons annually - about the same as a country with a population of five to eight million people.



7
ABB power products like these transformers are helping to transmit electricity efficiently and create power connections between countries.

ABB Japan Technical Center:

ABB's global atomizer technology center

ABB Japan's Technical Center in Shimada, Shizuoka Prefecture, is the ABB Group's center for atomizer technology. The center is in charge of the R&D and production of atomizers and peripheral equipment. Created with ABB Japan's state-of-the-art technology, these solutions are supplied not only within Japan, but to global markets through the worldwide ABB Group network. ABB's paint solutions have been highly acclaimed for their ability to provide the highest paint finishing quality while reducing costs and environmental impact. The Technical Center also has a modern training facility for atomizers and paint robots.



8
Paint booth for testing, equipped with state-of-the-art paint robots



9
ABB Japan Technical Center, located in Shizuoka Prefecture

Contributing to economic growth, environmental stewardship and societal development.



1
Ships in Gothenburg, Sweden, use ABB technology to plug into power onshore and cut their emissions while in port.

2
ABB has launched a number of initiatives supporting the professional development of women in the United Arab Emirates.



2



Corporate responsibility

A core element of ABB's approach to business is the need to act with responsibility to stakeholders, ranging from shareholders and customers to employees and the communities in which we operate. Corporate responsibility, underpinned by key values and beliefs, is ongoing work, requiring careful monitoring, and openness to help us determine risks and opportunities.

A key element of our business

Sustainability for ABB means seeking a balance between economic development, environmental stewardship and social progress. Sustainability is built into different aspects of our business, including the manufacturing of energy-saving products, systems and solutions, the sharing of technology throughout our group, particularly with developing countries, and joining multilateral efforts to raise living standards around the world.

Our contribution

One of our main contributions to sustainability lies in the strong environmental performance of our products over their complete life cycles. Using life cycle assessments, we supply products and systems that require less material, have greater efficiency and consume less energy, which means less harmful emissions – particularly during long operating lifetimes.

The triple bottom line approach

ABB follows the guidelines of the Global Reporting Initiative (GRI) – an international, multi-stakeholder undertaking supported by the United Nations. The GRI guidelines are based on a measurable “triple bottom line” reporting approach – covering environmental, economic and social performance. We report accordingly in our annual Sustainability review.

Common efforts

ABB is involved in a wide range of common efforts, partnering other companies and non-governmental organizations in projects around the world. These include joint sustainable development projects in rural parts of Africa, where ABB provides electrification expertise, and an initiative among leading international companies to embed the protection and promotion of human rights in business activities.

Visit us on the web: www.abb.com/sustainability



3

ABB's Access to Electricity program is strengthening economic, environmental and social development in rural Tanzania.

4

People in Argentina learn new farming methods on ABB land, which helps them to improve their living standards.

5

Wind parks around the world use ABB products like generators, motors and transformers to create power, as well as technology to link them to local power grids.



4



5



6



7



8

6

ABB has delivered more than one million energy-saving AC drives in the past decade, used in hundreds of applications to cut costs and reduce emissions.

7

A health and education program sponsored by ABB in Brazil gives poor children access to schooling, food, medical checkups and a chance for a better future.

8

In China, ABB helps financially disadvantaged students to complete their engineering studies.

A unique portfolio of ABB products and systems ensure safe and efficient power transmission from where it is generated to where it is used.

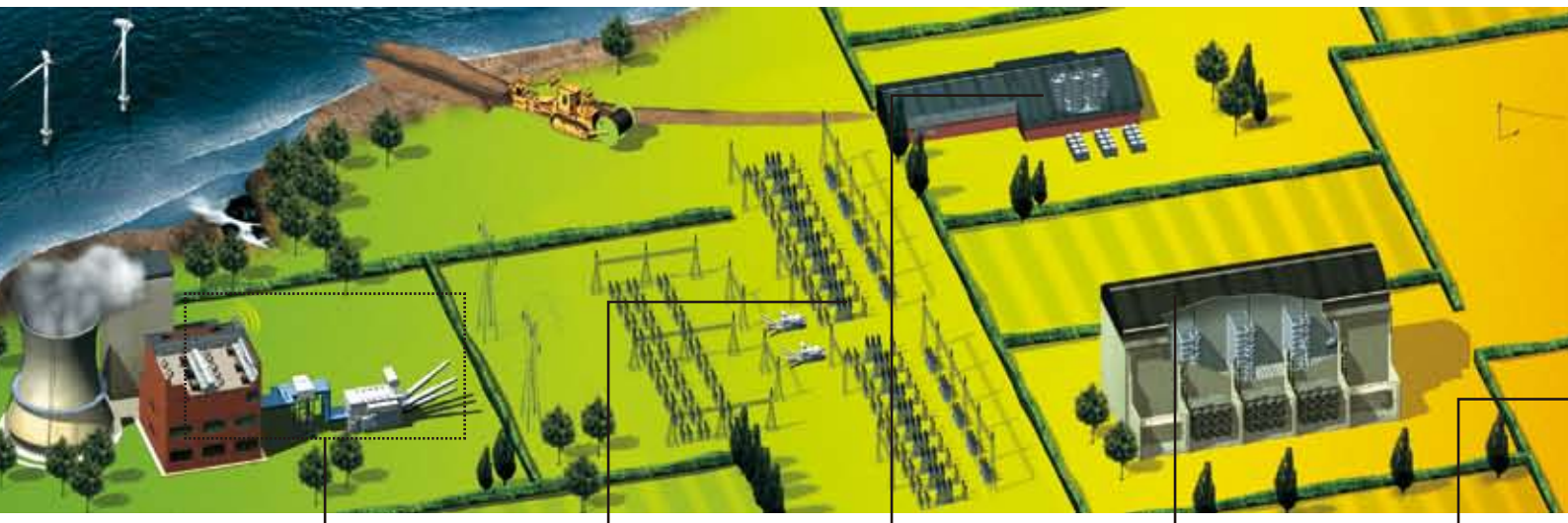


ABB controls and energizes power plants with automation systems and all instrumentation and electrical equipment. ABB holds the world record for current switching by generator circuit breakers.



Transmission substations are used to raise voltages for long distance power transmission. ABB has built more transmission and distribution substations than any other company – well over 5,000.



ABB's unique HVDC Light system is designed for underground or underwater power transmission. Its environmental benefits include no overhead power lines and a neutral electromagnetic field.



High-voltage direct current (HVDC) transmission is an efficient means for long-distance bulk power transmission and for connecting asynchronous power grids. ABB pioneered this technology.



Flexible AC transmission systems (FACTS) enhance the capacity of existing networks and increase power quality. ABB has more than 600 FACTS installations, or 50 percent of the world market.

Our offering

Our power technology offerings serve industrial and commercial customers, as well as electric, gas and water utilities, with a broad range of products, services and solutions for power transmission and distribution. The portfolio includes transformers, switchgear, breakers, capacitors and cables, as well as high- and medium-voltage applications, many of which are also sold through external channel partners like distributors, system integrators, contractors and original equipment manufacturers.



High-voltage products switch power on and off and interrupt current. Gas insulated switchgear is very compact and particularly useful in indoor substations when space is scarce.



Our network management solutions keep power flowing around the world. The latest innovation is the satellite-based Wide Area Monitoring System. ABB's software also facilitates power trading.



Medium-voltage breakers and switchgear turn electricity on and off to protect installations and electrical equipment. High-speed transfer switches protect critical power flow in hospitals and industries.



Transformers raise and lower voltage – an essential part of the transmission and distribution process. ABB produces 1,500 power transformers and 400,000 distribution transformers a year.



ABB is a major supplier to railway networks and trains. High quality, medium-voltage distribution systems and special products like traction transformers ensure reliable power supply for rail transport.

A wide range of ABB products and solutions are used by utilities and industry customers to raise productivity at plants such as this pulp and paper site.



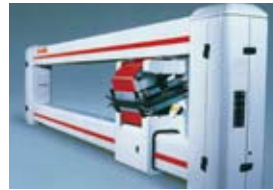
ABB power solutions deliver electricity from the grid to systems throughout the mill, and manage on-site generation of primary or backup power.



Our instruments, control systems and software ensure precision blending of process chemicals and raw materials. They can detect impurities as small as one part in 50 million.



ABB motors and drives provide correct motion and torque for rotating machinery while improving energy efficiency. Our products help to reduce harmful emissions by millions of tons annually.



Our analyzers and quality control systems monitor and adjust product characteristics to meet customer specifications, performing online measurements at up to hundreds of meters per minute.



ABB force measurement systems manage machine tension and balance for smooth operation at varying line speeds. Our first precision force measurement patents date back 50 years.

Our offering

Our automation technology offerings serve the automotive, building, chemicals, consumer, electronics, life sciences, manufacturing, marine, metals, minerals, paper, petroleum, transportation, turbocharging and utility industries. Key technologies include control, drives, enterprise software, instrumentation, low-voltage products, motors, robots and turbochargers. These offerings are supported by field maintenance and asset management services, and are sold both directly and through channel partners.



ABB robots lift heavy loads with precision for material handling, finishing and assembly applications. We have more than 120,000 industrial robots installed worldwide.



Our asset management software constantly monitors plant devices for real-time efficiency and is in high demand across an automation technologies installed base worth more than \$100 billion globally.













ABB logistics services and software help to minimize inventory and track the movement of products and services across the value chain – from the supplier through to end use.



ABB low-voltage devices and energy management systems ensure a comfortable, energy-efficient building environment. We ship more than one million products daily to facility contractors and installers.

ABB industrial products, systems and solutions

	Automotive Industries	Ferrous, Non-Ferrous Metals	Paper, Pulp		
Paint, Robots	Paint Applications & Systems <ul style="list-style-type: none"> Electrostatic atomizers Paint supply equipment Paint robots Various paint systems  1				
	Industrial Robots <ul style="list-style-type: none"> Material handling Water jet cutting Laser cutting Welding Foundry Assembly  2	<ul style="list-style-type: none"> Deburring Cutting  2			
Measurement and Control Equipment	Measurement Equipment <ul style="list-style-type: none"> Torque sensors 3	<ul style="list-style-type: none"> Roll force meters Shape meters Tension meters Strip width gauges Thickness gauges Gas analyzers Flow meters Temperature sensors 3	<ul style="list-style-type: none"> Pressure transmitters Water application analyzers Converters Recorders  4	<ul style="list-style-type: none"> Gas analyzers Tension meters Flowmeters Temperature sensors Pressure transmitters Water application analyzers Converters Recorders  3	
	Control Equipment		<ul style="list-style-type: none"> Industrial boiler, turbine, power generation plant and various process line applications (positioner, actuator) 4		
	Control Systems		<ul style="list-style-type: none"> Production management system (CPM@Metals) SCADA system Process control system Asset optimization Batch control system Telecommunication system 3	<ul style="list-style-type: none"> Safety system Power DCS (substation, load shedding) Power management system (load sharing) 3	
	Low-Voltage Circuit Breakers		<ul style="list-style-type: none"> Industrial power distribution systems OEM installations (breakers, circuit protectors, electromagnetic contactors) 4		
Process Automation	Process Automation Products <ul style="list-style-type: none"> EFD induction heaters  3	<ul style="list-style-type: none"> Electromagnetic control systems Electromagnetic brakes Slag indication systems Strip thickness/width gauges EFD induction heaters  3	<ul style="list-style-type: none"> Paper machines Winders Dryers 3		
	Drives and Motors/Generators	<ul style="list-style-type: none"> Drives and motors for compressors, pumps, extruders, process line drives, etc. High/low-voltage induction motors, high-voltage synchronous motors, high/low-voltage synchronous generators and wind generators High/low-voltage drives (AC inverters and DC converters), traction converter 5			
	Power Electronics Systems	<ul style="list-style-type: none"> High power rectifier Industrial generator control systems (excitation systems, synchronizers, starters) 5			
Electric Power Equipment	High-Voltage Switchgear				
	Transformers				
	Medium-Voltage Switchgear	<ul style="list-style-type: none"> Industrial electrical power distribution 6			
	Substation Systems				
	Distribution Systems				
Protection, Control and Communication	<ul style="list-style-type: none"> Industrial electrical substation equipment (substation automation, protection relay products and systems, high-speed busbar transfer, fault locators) 				

For more product information, please contact:

1 Robotics Division
Painting Applications & Systems
Tel: 03-5784-6230 Fax: 03-5784-6280













2 Robotics Division
Industrial robots
Tel: 0565-26-0770 Fax: 0565-26-0210

3 Process Automation Division
Tel: 03-5784-6261 Fax: 03-5784-6276

4 Automation Products Division
Tel: 03-5784-6220 Fax: 03-5784-6260

5 Automation Products Division
Drive and Machine
Tel: 03-5784-6010 Fax: 03-5784-6260

6 Power Products and Power Systems Division
Tel: 03-5784-6050 Fax: 03-5784-6277

Petroleum, Gas, Petrochemicals	Pharmaceuticals, Life Sciences	Cement, Mining	Other Industries	Transportation (Marine, Rail)
			<ul style="list-style-type: none"> ■ Electrostatic atomizers ■ Paint supply equipment ■ Paint robots ■ Various paint systems 	<p>-----></p> <p>1</p>
<ul style="list-style-type: none"> ■ Material handling ■ Picking ■ Packing 		 <p>2</p>	<ul style="list-style-type: none"> ■ Material handling ■ Welding ■ Foundry ■ Packing ■ Plating <p>2</p>	<ul style="list-style-type: none"> ■ Train cleaning system <p>2</p>
<ul style="list-style-type: none"> ■ Gas chromatograph ■ Mass spectrometer ■ MW photometer ■ Continuous gas analyzer ■ FT-NIR/IR analyzer <p>3</p>		<ul style="list-style-type: none"> ■ Flowmeters ■ Temperature sensors ■ Pressure transmitters ■ Water application analyzers ■ Controllers ■ Recorders <p>4</p>		<ul style="list-style-type: none"> ■ Cylinder pressure monitoring systems <p>3</p>
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		<ul style="list-style-type: none"> ■ Vibrators  <p>3</p>	<ul style="list-style-type: none"> ■ Vibrators ■ EFD induction heaters <p>3</p>	<ul style="list-style-type: none"> ■ Azipod electric propulsion system ■ EFD induction heaters  <p>3</p>
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    <p>-----></p>				
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and recorders, various communication systems) 6 ----->				

Products and systems

For more product information, please contact:

- 1** Robotics Division
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Tel: 03-5784-6230 Fax: 03-5784-6280
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Industrial robots
Tel: 0565-26-0770 Fax: 0565-26-0210

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	Power Generation	Power Transmission	Power Distribution
Measurement and Control Equipment	Measurement Equipment <ul style="list-style-type: none"> ■ Flowmeters ■ Temperature sensors ■ Pressure transmitters ■ Level meters ■ Converters ■ Recorders ■ Continuous emission monitoring system 4 		
	Control Equipment <ul style="list-style-type: none"> ■ Positioners, actuators 4 		
	Control Systems <ul style="list-style-type: none"> ■ Industrial^{IT} (Operate^{IT}, Control^{IT}, Engineer^{IT}) 3 		
	Low-Voltage Circuit Breakers		<ul style="list-style-type: none"> ■ Circuit breakers ■ Circuit protectors ■ Electromagnetic contactors 4
Process Automation	Drives and Motors <ul style="list-style-type: none"> ■ Motors for compressors, blowers, pumps, etc. ■ Drives (AC inverters) 5 		
	Power Electronics Systems <ul style="list-style-type: none"> ■ Generator control system (excitators, synchronizers, starters) 5 		
Electric Power Equipment	High-Voltage Switchgear <ul style="list-style-type: none"> ■ Circuit breakers ■ Disconnecting switches ■ Surge arresters ■ Isolated phase bus ducts 	<ul style="list-style-type: none"> ■ Circuit breakers ■ Disconnecting switches ■ Surge arresters ■ Instrument transformers ■ HVDC ■ Reactive power compensators 	
	Transformers	<ul style="list-style-type: none"> ■ AIS and GIS substations ■ Compact modular systems ■ Power distribution systems ■ Substation systems ■ Flexible AC transmission system (FACTS) 6 	
	Medium-Voltage Switchgear		
	Substation Systems		
	Distribution Systems		
	Protection, Control and Communications	<ul style="list-style-type: none"> ■ Power plant DCS ■ Substation automation ■ Protection relay products and systems ■ High-speed busbar transfer ■ Fault locators and recorders ■ Various communication systems ■ SCADA  	
Cables		<ul style="list-style-type: none"> ■ High-voltage cables 	



ABB Bailey Japan Total Control and Instrumentation Supplier

ABB Bailey Japan, Ltd. is a joint venture company of ABB, IHI Corporation and Kyokuto Boeki Kaisha, Ltd. In keeping with ABB Bailey Japan's philosophy of maintaining a cohesive design concept, all of our hardware and software products are designed for the utmost enhancement of one another and offer the most compatible and ideal unified system possible. In addition to achieving total plant automation, ABB Bailey Japan also offers a line of products that integrate with their software giving maximum compatibility to the automation process such as various types of sensing elements and final control elements such as control valves for high pressure application, control drives, etc. ABB Bailey Japan has created flexible digital control systems, using Industrial^{IT}, that lend themselves to a highly sophisticated control system for power generation and a wide range of industrial applications. ABB Bailey Japan ensures its control systems and instrumentation technologies will perfectly serve market needs in plant automation not only in power generation but also in fields such as Chemical, Pharmaceutical, Food Processing and Environmental Protection.

- Plant control systems:
Control systems, maintenance support tools, operating/supervising stations
- Instrumentation equipment:
Control drives, converters, transmitters/flow elements, control valves for high pressure application, flowmeters, and other instruments

ABB Bailey Japan, Ltd.
Tel: 055-949-3311 Fax: 055-949-1114

Website: <http://www.bailey.co.jp/>



Turbo Systems United Top Support for Marine Turbochargers

Turbo Systems United Co., Ltd. (TSU) is a joint venture of ABB and IHI Corporation, established in October of 1998 to provide marine engine manufacturers and end-users in Japan and Taiwan with the world's finest turbochargers, parts and service. Turbo Systems United also works closely with engine manufacturers from the initial design stage, providing the highest level of engineering and support for the customer through to installation. Zero downtime is the goal for all ship operators. Turbo Systems United's experienced service personnel and an excellent parts procurement system assure efficient preventive maintenance, and quick problem-solving solutions. In addition, the turbocharger cartridge exchange program, in which replacement parts are incorporated within a quick-exchange cartridge, makes for faster, more secure service.

- Sales of ABB-IHI turbochargers
- Complete inspection, overhauls and emergency service from fully-outfitted service centers staffed by qualified service engineers
- Application engineering for turbocharging
- Planning and execution of routine and preventive maintenance of turbochargers worldwide
- Turbocharger cartridge exchange program

Turbo Systems United Co., Ltd.
Tel: 03-5611-5988 Fax: 03-5611-5978

Website: <http://www.turbo.co.jp/>



MSA Advanced Polymer Surge Arrestors

MSA Co., Ltd., a joint venture of ABB and Meidensha Corporation, was established in April of 2004 to bring together the two companies' advanced surge arrester technologies and sales skills, and to expand both in the domestic and global markets. MSA brings together Meidensha, with its extensive experience domestically and internationally as the creator of the first gapless arrester, and ABB, with its world-leading position as the top producer of state-of-the-art polymer surge arrestors. Under technological license from ABB, MSA designs, manufactures and markets surge arrester and related products. MSA meets customer needs quickly and accurately with product supplies, quick delivery and service. In the spring of 2006, MSA expanded its product line through the introduction of large-scale manufacturing facilities. Backed by the strength of Meidensha and ABB, MSA is aiming at the top domestic market share while it continues to build its global competitive power.

- Surge arresters
Substation, transformer, transmission, distribution, low-voltage surge arrestors
- Special-purpose surge arrestors

MSA Co., Ltd.
Tel: 055-929-4300 Fax: 055-929-4399

Website: <http://www.msa-arrester.com>



For more information please visit www.abb.com



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