

100 years

ABB celebrates a century of presence in China

Franklin-Qi Wang



ABB's relationship with China dates back to 1907, when it delivered the country's first steam boiler. Today ABB has established a full range of business activities in China, including R&D, manufacturing, and sales and service, with more than 12,000 employees, 25 joint ventures and wholly owned companies, and an extensive sales and service network across 38 cities. In 2006, total orders in China rose to \$3.1 billion with revenues of \$2.8 billion, turning China into ABB's number-one market in terms of revenues.

PERPETUAL PIONEERING

The ABB Group uses its more than 100 years of experience in electrical engineering to pioneer processes for the power and automation industries. Many ABB companies in China are best in class, setting benchmark standards for their peer groups, while serving a wide range of industries.

In 1974, ABB's China operation was established in Hong Kong. This was followed by its first permanent office in Beijing in 1979. In 1994, ABB decisively moved its China headquarters to Beijing, and in 1995, ABB's holding company, ABB (China) Ltd., was formally established **1**.

ABB's product portfolio in China includes the full range of power transformers and distribution transformers; switchgear technologies for high-, medium- and low-voltage applications; electrical drives and motors; and industrial robotics products. These products are widely used now in industrial, commercial and utility applications.

In China, ABB has participated in many key state projects, such as the Three Gorges power plant and its power transmission to Shanghai, Changzhou and Guangdong **2**; the south-to-north water diversion project; and many projects in connection with a major international sports event in 2008, including stadium constructions **3**, the Beijing International Airport expansion, and substation and metro construction.

In addition, ABB also provided power equipment to Lianyungang Nuclear Power Plant, water quality monitoring and analysis systems to Chinese environmental authorities, and power and automation technology solutions to

Asia's largest petrochemical complex (SECCO) in Shanghai, the Great Hall of the People, Shanghai and Guangzhou Metro, Shanghai GM, Baosteel, and others.

In 2003, ABB was rated one of the top ten employers in China via the survey conducted jointly by Fortune Magazine, Yahoo and other organizations. In early 2006, ABB (China) Ltd. was rated one of the ten "favorite employers" by university students in China.

ABB has committed to helping China achieve its goal of energy efficiency and environmental sustainability.

Localizing operations

With a commitment of long-term development in China, ABB has steadily been transferring more businesses and

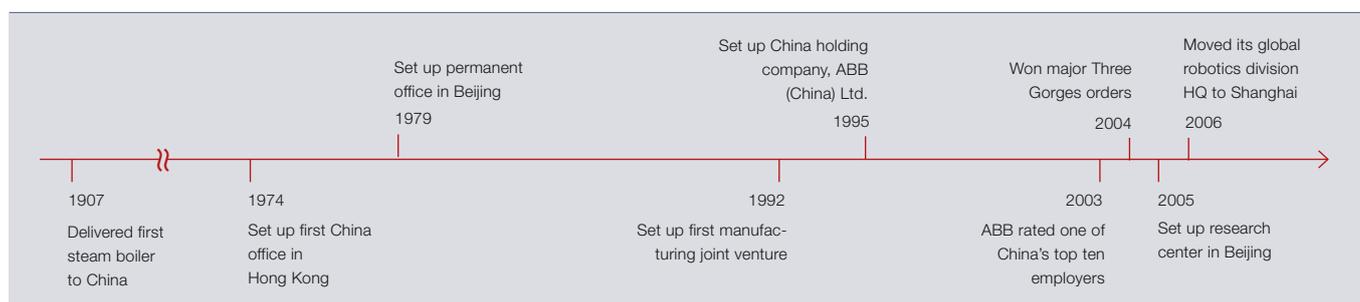
technologies to the country to expedite its localization process and provide products that better meet customer demands, shortening the delivery cycle and improving its technical service capabilities.

In March of 2005, ABB opened a Corporate Research Center in Beijing with a branch in Shanghai, a concrete step forward to understand, foresee and support China's future in the power and automation industry. As an integral part of ABB's global research network, the center in China is focused on power transmission and distribution, manufacturing and robotics. In early 2006, ABB moved the headquarters of its global robotics business to Shanghai, reflecting market trends and the strategic importance of the company's operations in China. ABB has also established research teams in each business division in China to maintain its leading position in the market. In addition, each ABB enterprise in China has a technical team to cater to the needs of local markets.

Three Gorges Lake



1 Timeline of ABB in China



PERPETUAL PIONEERING

2 Three Gorges Dam



At present, ABB's Powertrain Assembly global lead center, ABB Asia Metals, and Center of Excellence for Processing Lines and Tube Rolling Mills are both located in Shanghai.

Over the years, ABB has developed a close relationship with key government ministries and major customers. In China, as well as in the global market, ABB aims to be a supplier that helps customers achieve their business goals. The company's ability to accomplish this derives from the intimate understanding of its customers' businesses, the ability to anticipate changing needs and shifting market demands, and to deliver innovative products and complete system solutions in the fastest possible way, including financing and strong after-sales service support.

Continuous improvement in customer satisfaction has become a way of life. ABB is working to set up more operations in China to provide customers with a broader range of advanced, energy-efficient, reliable and environmentally friendly products and services.

ABB's technologies in China

Energy efficiency is a priority on

China's current agenda. As the world's fastest growing economy, China is increasing its power capacity while using power more sparingly. Its 11th five-year plan highlights the importance of energy efficiency in building a resource-efficient society in China. ABB has committed to helping China achieve its goal of energy efficiency and environmental sustainability¹⁾.

With a commitment of long-term development in China, ABB has steadily been transferring more businesses and technologies to the country.

Efficient power transmission

HVDC (high-voltage direct current), pioneered by ABB in 1954, is a cost-effective and environment-friendly technology for bulk transmission of electricity over long distances with low power losses. In China, ABB has built three HVDC lines, each about 1000 km long. The savings achieved with each line, as compared to AC transmission, corresponds to the con-

sumption of about 160,000 households.

ABB i-bus intelligent installation system

ABB i-bus intelligent installation systems meet the highest requirements for applications in modern home and building control while offering substantial reductions in power consumption. For instance, an ABB i-bus EIB system helped one of Ito Yodado's stores in Chengdu save about \$250,000 on its power bill upon one year of operation.

Cutting-edge turbocharging technology

ABB is the world's leading supplier of turbochargers for large diesel engines used in ships, power plants and locomotives. ABB's turbochargers have raised the bar for engine output and efficiency, thus reducing power consumption and environmental impact. Customers in China and all over the world rely on ABB's first-class turbocharger service provided by a network of more than 86 service stations around the globe.

Energy-saving drives

Energy-efficient drives ensure that motors run in the most efficient way



in each application. ABB's total installed base of AC drives is estimated to save about 100 million MWh of energy per year worldwide. In China, ABB's drives have saved ten million MWh of power in the past ten years –

Factbox Remarkable contracts in China

- \$390 million for the Three Gorges-Shanghai HVDC project, the world's largest power transmission project in 2004
- \$360 million for the Three Gorges-Guangdong HVDC project
- Electrical equipment for metro systems and light rails in Beijing, Shanghai, Guangzhou and Tianjin
- \$40 million to supply process automation, drive, quality control and electrical systems and related services for Asia Pulp & Paper in China
- \$24 million to supply hoist equipment for eight mines of Huainan Mining Group
- \$60 million to supply one 500 kV gas insulated switchgear (GIS) and 12 power transformers for the Right Bank Power Plant at Three Gorges
- \$11 million to supply high-voltage GIS for the Phase II project of Jiaying Power Plant in Zhejiang Province
- \$200 million from Shanghai SECCO Petrochemical Company to provide an innovative propylene process technology that cuts energy consumption and reduces greenhouse gas emissions; it is the first time this technology has been used in China
- \$56 million to provide automation equipment and electrical systems for a high-efficiency steel mill to be built by Zhangjiagang GTA Plate Co.

equivalent to two years' power output from a nuclear power plant.

High-efficiency motors

Electrical motors consume about 65 percent of the total electricity used in industry. The efficiency level of ABB's motors sold in China is 1.5 to 2 percent higher than the average, thus greatly reducing power consumption. ABB's motors help save 1500 MWh of power in China each year.

Advanced marine propulsion system

In Aug 2005, ABB celebrated the delivery of China's first independently designed 3000-ton research and exploration vessel. Equipped with ABB's Compact Azipod® propulsion system, the vessel consumes 10 to 15 percent less fuel than comparable vessels without Azipod®. ABB's Compact Azipod® propulsion system also powers the three vessels in the new train ferry line between Yantai and Dalian with corresponding fuel savings.

Business achievements

ABB's contribution in China has been recognized by the country's important figureheads. In 1999, China's former president Jiang Zemin visited ABB's facilities in Switzerland. In 2004, China's vice premier Zeng Peiyan paid a visit to ABB's Corporate Research Center in Switzerland, and in 2007, Chinese President Hu Jintao visited the ABB Chongqing Transformer factory.

ABB has a long track record in China, having earned a number of remarkable contracts **Factbox**.

The commitment to China

ABB remains committed to China, and

to the long-term sustainable development of the country. Chinese utilities continue their expansion plans at an expected growth rate of eight to ten percent of the Chinese economy. In the period up to 2011, \$335 billion is earmarked for major projects in rail, wind, oil, gas and water infrastructure.

Industrial production also is expected to grow strongly. The steel capacity alone will increase by 45 percent to 600 million tons by 2015. The industrial sector is focusing on energy efficiency, productivity and product quality – a perfect fit of the demand with ABB's offerings.

Rapid urbanization, an increase in the standard of living and the need for country-wide power distribution is another strong market requirement. To serve this rapidly growing market, ABB follows a five-point strategy:

- Strong organic growth of ABB in China
- Major investments in new product lines and factories as well as the formation of more joint ventures
- Taking full advantage of cost migration for ABB
- Continuous support of research and development centers as part of ABB's global network of corporate laboratories
- Develop highly talented and well-educated local talents

After 100 years of business in China, ABB can look back with pride on its contribution of a broad range of products and services to the Chinese market and looks forward to further cooperation to help meet the country's energy efficiency and environmental sustainability goals.

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Footnote

¹⁾ For more information on ABB's work in China, see **Eliasson B., & Lee Y. Y.** (Eds.). (2003). *Integrated Assessment of Sustainable Energy Systems in China: The China Energy Technology Program*. Dordrecht: Kluwer Academic Publishers.

3 Bird nest – a Beijing stadium

