SIEMENS

Background Information

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A Short Biography of Werner von Siemens

Werner Siemens – the “von” was added in 1888 – was born near Hanover, Germany, the fourth of 14 children. The son of a tenant farmer, he left secondary school without a degree in 1834 to join the Prussian army, where he studied science and technology. His three-year training program at the Artillerie- und Ingenieurschule (army’s artillery and engineering school) in Berlin provided a solid foundation for his future work in what was then the new field of electrical engineering.

The Prussian army was particularly interested in rapid, dependable communications. In 1847, Werner von Siemens built a pointer telegraph that was completely reliable and far superior to all previous systems of its type. This innovation was the foundation of the Telegraphen-Bauanstalt von Siemens & Halske, the telegraph construction company that Werner von Siemens and precision mechanic Johann Georg Halske founded in Berlin on October 1, 1847. Within only a few years of its establishment, Siemens & Halske was a leading international company.

In addition to his business activities, Werner von Siemens was intensively devoted to scientific research. In 1866, he made what was probably his most significant contribution to electrical engineering when, building on the work of Michael Faraday, he discovered the dynamo-electric principle and thus laid the basis for the use of electrical energy as a source of power. Heavy-current technology, as power engineering was then called, developed at a relentless pace.

By constantly expanding the technology’s fields of application, Siemens’ inventions played a decisive role in its further development. In 1879, Siemens & Halske demonstrated the world’s first electric railway with external power source at the Berlin Commercial Exposition. Newly developed differential arc lamps from Siemens & Halske were installed for the fair in Kaisergalerie, a shopping arcade built on the Paris and Brussels model in one of Berlin’s central quarters. Three years later, the

Siemens AG
Communications
Head: Clarissa Haller

Wittelsbacherplatz 2
80333 Munich
Germany

company installed Berlin's first permanent electric street lights on Potsdamer Platz and Leipzig Straße. Electric lighting systems for train stations, office buildings, factories and harbor facilities soon followed. In 1880, Werner von Siemens constructed the world's first electric passenger elevator. The next year, Siemens & Halske put into operation the world's first electric streetcar in the Berlin suburb of Groß-Lichterfelde. By the time of Werner von Siemens' death in 1892, Siemens & Halske alone was producing 1,000 dynamo machines a year and generating annual revenue of nearly 20 million marks. The name Siemens had become synonymous with power engineering – a term coined by Werner von Siemens himself.

Werner von Siemens' reputation for progressive entrepreneurship is due not only to his technological innovations and daring business undertakings but also to his numerous social initiatives. Already in 1872, Siemens set up a Pension, Widows and Orphans' Fund – a pension scheme that anticipated the creation of Germany's national pension system by more than a decade.

Werner von Siemens was a political leader as well as a scientist and entrepreneur. From 1862 to 1866, he represented the liberal Deutsche Fortschrittspartei in the Prussian state assembly. He was an enthusiastic supporter of patent protection in Germany. In 1877, he joined the newly established Kaiserliches Patentamt (Imperial Patent Office, today's German Patent and Trade Mark Office). In 1879, he was involved in setting up the Elektrotechnischer Verein, the German engineering society, which encouraged the introduction of electrical engineering departments at technical universities. When the Physikalisch-Technische Reichsanstalt (today's Physikalisch-Technische Bundesanstalt, PTB) was established, Werner von Siemens confirmed his dedication to the sciences by donating funds and land in the mid-1880s for the institute's construction in Berlin's Charlottenburg district.

During his lifetime, Werner von Siemens received numerous honors in recognition of his services to both science and society. These honors included an honorary doctorate from the philosophy department of the University of Berlin (1860), an appointment to the Royal Prussian Academy of Sciences in Berlin (1873) and investiture as a member of the Prussian Order Pour le Mérite for Science and the Arts (1886). In 1888, he was raised to the nobility by German Emperor Friedrich III. Werner von Siemens officially retired in 1890 but continued to exercise an important

influence on the business of Siemens & Halske until his death on December 6, 1892.

For press pictures and further information on Werner von Siemens, please see www.siemens.com/press/200years-WvS

Contact for journalists

Peter Jefimiec
Phone: +49 172 140 1412; E-mail: peter.jefimiec@siemens.com

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