

S I N C E 1 9 0 5

PROFILE 2005



レイボルド株式会社

FOR 100 YEARS BRIDGE TO JAPAN



レイボルド株式会社



Down Town Tokyo Today and 100 years back

ONE HUNDRED YEARS LEYBOLD

1600. Europe was about to be torn in the great battles between Catholic and Protestant powers. Outside of Europe, the white colonial powers were conquering one area after another on every continent.

In Japan, the lords of the country had been battling for domination of the country for a hundred years. White priests were entering the country, Christianity was spreading.

In the struggle for power between the various noble houses, the line of the Tokugawa remained the sole victor, forcing the other lords to accept their oppressive treaties. Radical measures were quickly taken to meet the enemy from abroad: Japan closed itself off, foreigners were expelled, Christianity wiped out. The Tokugawa lords ruled as shogun (military regent), exercising strict dictatorial powers. One window to the outside world remained open; Nagasaki was the site for trade with China and Holland as well as a place to gather information. Agriculture and trades flourished in the country. The arts thrived under the rich merchants in the huge cities with populations of over a million and at the courts of the lords. The nobles and their knights (samurai) followed the virtuous code of chivalry and practiced the arts of war. There was peace in the country, people were poor and modest and thirsting for knowledge; everywhere they felt the heavy burden of a shogun government which regulated everything.

1853. The violence came from the outside. Modern warships from the USA threatened Tokyo (then known as Edo), forcing the country to open its borders to the rest of the world. The other great powers followed quickly: the shogun government had to swallow one one-sided treaty after another, the country raged in its helplessness. The Tokugawa line, which had become weak in 250 years of autarchy, was eliminated. In 1868, a new government under Emperor Meiji took over the reign of the country, and competent samurai from other noble houses were installed as the leaders. The country began to make up for lost time quickly. Highly qualified teachers from all important fields were brought in from all of the leading countries in Europe and from America, a careful selection was made, and an unbiased host of students eager to learn began to soak up the knowledge being offered.

A mere 30 years later, Japan had entered the modern age in most of the important fields. Including the field of the military.

Attacks were initiated on the East Asian mainland, first on Korea. This was another country which had been closed off from the outer world for centuries, living under the protection of China and paying tribute to the Manchu emperors for this service. The Korean king called on China for help in fighting off the invading Japanese. The Manchu army came, met the Japanese in battle and was defeated.





Foreign Settlement Yokohama 1859-1923



The Yokohama Water Front Today 2005

The terms of a humiliating peace treaty forced China to hand the island Taiwan over to the small country of Japan; Korea fell more and more under the heavy hand of the Japanese, Japanese “advisors” gave orders at the royal court, the queen was murdered when she put up strong resistance. The Russians, who had pushed across the Siberian plains to the Pacific during the 19th century, spread through Chinese Manchuria to the Yellow Sea, built the ice-free harbour Port Arthur, constructed a railway, opposed the Japanese in Korea, gave the king protection from his Japanese “advisors”.

In 1904/5, war broke out between the small Japan, which only 50 years before had awakened from its medieval chivalry period, and the great power Russia. Japan first destroyed the Russian naval fleets in Port Arthur and Vladivostok, then the Russian troops in Korea and Manchuria, and finally even the Russian Baltic naval fleet in the famous sea battle of Tsushima (05/27/1905). In the peace treaty, Russia had to cede the southern half of Sakhalin to Japan.

Moreover, Russia had to leave Korea completely to Japan and withdraw from Manchuria. Japan continued to expand. The military successes made its rise to an industrial power an urgent necessity. Its dependency on the USA and England for industrial products was no longer acceptable.

The founders of LEYBOLD – the engineer Ludwig Leybold, born in 1866, self-employed in Japan since 1895, and the owners of the trading company Simon, Evers & Co. in Yokohama, where they had been trading with Japanese products since the pioneer period (before 1868) – jointly founded our company in Tokyo at the beginning of 1905; they expressly stated that LEYBOLD was to serve the industrial development of Japan. Mr Leybold from Augsburg, previously employed at MAN, was just the right man for this job. He had good connections to German industry, and in the years before he had trained a small, but excellent staff of Japanese employees.

Outside of the large cities, the electrification of Japan had only just begun, although it was of course the prerequisite for the establishment of any industrial structure. So LEYBOLD became the builder of small power plants in smaller cities all over Japan. Sometimes energy was produced using a water turbine, sometimes using a diesel engine, depending on the local circumstances and conditions. Imports from Germany which LEYBOLD installed and commissioned, then trained local operators to use. It was important to acquire good references quickly and to build up good relations with the local investors. By doing so, LEYBOLD very quickly became involved with two of the first industries to become established, the textile industry and the dockyards.

Comprehensive know-how was also offered here in addition to the equipping of the facilities with machinery, and often LEYBOLD staff worked alongside their clients over long periods of time. Japan quickly became an extremely large exporter of textiles of all quality levels to the USA and Europe, low-priced and good. This success enabled Japan to pay for its own imports for many years. In shipbuilding, the industry began its steady rise to the top rank of shipbuilding countries,

combined with the build-up of a highly modern trading fleet and a navy of world-class standing.

Unfortunately, Mr L. Leybold died in July 1907 (his grave is in the Foreigners Cemetery in Yokohama), not yet 41 years old; Mr Kurt Meissner of Simon, Evers & Co. in Yokohama took over his position during this important period of establishment.

Now the business with the iron and steel industry became important for LEYBOLD; the first rolling mill for seamless pipe was planned and delivered. LEYBOLD hired top-class advisors from Germany to act as long-term consultants to our customers. As a consequence, business expanded steadily. The building of steel mill furnaces using drawings from Germany was soon a part of the work.

Korea, completely under the rule of Japan from 1910 on, also participated in Japan's industrial boom. Textile factories gave jobs to thousands of hard-working Korean women in rural areas. Our advisors were involved in the pre-planning of gigantic hydraulic power plants in the Yalu river area in northern Korea; the electric power from this plant would later create entire industrial areas in northern Korea. LEYBOLD played a role at every stage of development.

We were responsible for a lot of construction in Japan very early, supervised by our engineers and using drawings purchased in Germany. So we were able to build entire assembly lines at a favourable price; the Japanese subsuppliers remained closely tied to us for decades.

The FIRST WORLD WAR (1914-1918) disrupted this wonderful development; because of its treaties with England, Japan was one of the Allies and took over the German colony Tsingtao in China and the German possessions in the South Seas in brief military actions.

As it was a German company, LEYBOLD was forced to suspend all of its business activities for the entire period of the war. Kurt Meissner was first a soldier in Tsingtao, later a Japanese prisoner-of-war for 5 years in Shikoku. The rebuilding of LEYBOLD could not start until the beginning of 1920.

Japan had benefited from the war, but found itself competing more and more with England and the USA on the world markets and in military affairs. Along the Chinese coast, Japan took an increasingly firm hold; the deterioration of the country into regions governed by warlords encouraged this development, resulting more and more often in conflicts with England/the USA.

Our rebuilding started off well. Our many Japanese friends in industry once again included us in the circle of their advisors and suppliers. Our Japanese employees, left to fend for themselves for many years, quickly found their way back to us. On 09/01/1923, Tokyo/Yokohama were hit by the GREAT EARTHQUAKE. The giant cities were almost completely destroyed, the number of victims very high.

But rebuilding started immediately and became the driving force for the economy. LEYBOLD had been planning and installing heating systems (later air-conditioning systems for winter and summer) from an engineering office since 1911; this office also delivered Japan's first large elevator for the department store Mitsukoshi and Japan's first escalator, imports from Europe, which we also maintained for years.

The machine tool business became really strong in the 1920s; the arming of the Japanese military was certainly one of the reasons for this. Germany, shaken by a series of economic crises, was delighted to have these ongoing large orders from LEYBOLD. We now built plants in Manchuria and China for our Japanese customers and trained Chinese women in doing assembly work. The difference in wages made outsourcing interesting even back then. Moreover, Manchuria was a major source of raw materials. For example, the raw materials for the production of highest quality fireproof refractories were plentiful and could be mined at a very favourable price. This was also the case for iron ore and high-quality coal; the virgin soil of the Manchurian flatland areas produced record harvests, while the long winters with plenty of snow and the great rivers provided excellent irrigation. Top-quality wood came from the enormous forests. LEYBOLD established a number of engineering offices in the Manchurian cities.

In 1931, Japan took over total control of Manchuria, creating a satellite state; the former Chinese emperor became the emperor of Manchukuo, surrounded by Japanese "advisors", and his younger brother married a Japanese princess; it was planned for their descendants to be in line for the throne of Manchukuo.

There was nothing that China, weak and divided as it was, could do to stop this development; the USA and England protested time after time, and relationships worsened.

Beyond a doubt, Japan turned Manchuria into a tremendous industrial area and a record country for agricultural products of the highest quality. LEYBOLD was involved in the construction of the steel mill ANSHAN, supplying a number of state-of-the-art blast furnaces with output capacities ranking among the highest in the world (advised by a blast furnace builder who was at that time presumably the best in Europe and who stayed with us for many years).

In Japan, we supplied the water works with state-of-the-art water treatment plants based on German expertise. This LEYBOLD department alone soon had more than 100 employees, particularly since we built the important chlorine dosing devices ourselves under German licence. Other system parts were built by our subsuppliers according to our drawings.

Our business with Japan's chemical industry also became huge. The expertise for this work came from our partners in Germany, leading engineering companies. Germany was the leader at the time, especially in the field of coal chemistry.

In the middle of the 1930s, LEYBOLD had more than 1,000 employees and held an extremely strong position on the market, with a large engineering office in Tokyo staffed by many creative minds, partners in Germany and top-class subsuppliers in Japan. We were responsible for large projects, including the production of oil from coal, everywhere in the Japanese sphere of power.

But unfortunately the war in China continued to gain in intensity, Hitler's Germany was pushing towards a great war, and the situation between Japan and the USA/England was at its low point.

Kurt Meissner and his employees were forced to watch as all of the constructive work done since 1905 was destroyed piece by piece during the SECOND WORLD WAR from the end of 1941 on. The company's own factories and engineering offices went up in flames during the bombing raids. Everything that had been created in Manchuria fell in the hands of the approaching Russians in the summer of 1945. The great dismantling began immediately; very little was left behind for the Chinese. Many of our employees there were carried off to Siberia.

As we had been such a successful German-Japanese company, the occupation forces in Japan did not give us any opportunities. Once again, all of our business activities were stopped for years.

It was not until the San Francisco peace treaty of 1951 was signed that LEYBOLD was able to begin rebuilding again. As before, Mr Kurt Meissner, now 66 years old, directed the work.

Our best employees returned to us, and we still enjoyed the goodwill of our customers. Japan, largely destroyed and smashed to the ground, was demoralized; the proud empire had never before in its long history been defeated so devastatingly. But the shock also made people realize that completely different standards would have to be applied during the rebuilding. Certain risks had to be accepted so that a giant leap forward could be taken.

We received orders and large advance payments for large machine tools, far better technically than the current state of the art; they had never been built by our suppliers in Germany and existed only in the design drawings. The supplier who was supposed to build the miracle machine tool had only a green meadow instead of a plant; the old facility had been dismantled as war reparations to the victors. Everything was supposed to be completed in 18 months: the new, state-of-the-art facility of our manufacturer would be built, then the miracle machine built and accepted. Then the machine would be sent to Japan and successfully installed and commissioned in our customer's factory. Everything was accomplished in 18 months, and the machine exceeded everyone's expectations.

Word spread very quickly. Starting in 1952, the leading technicians for our most important machine tool manufacturers were in Japan for years at a time.

We even celebrated Christmas with them in Japan. One after another, machines were continuously coming into Japan and had to be installed with the greatest precision and under time pressure, then commissioned.

The tempo in the 1950s and 1960s was truly breath-taking, with rebuilding everywhere and the creation of an entirely new industry.

We experienced every aspect of this process in the completely new automobile and motorcycle industry. Completely new factory buildings and assembly lines rose on green meadows, everything planned ahead of time down to the last detail, with people working day and night. Everything of a size and performance capability never known before. The rise to the world's top ranks began here. The most efficient production method was demonstrated to the world, with record output of the highest quality.

The cheap, bad cars from Japanese companies of the pre-war days were forgotten.

The Japanese steel industry went through a similar process. We were given orders for super-size plants and corresponding performance of the most advanced design, never built before anywhere in the world. A high risk for our manufacturers, and naturally a great challenge as well. Our Japanese subsuppliers were also deeply involved. The plants were commissioned punctually and fulfilled expectations completely. All at once, the Japanese steel industry had become the best in the world at producing high-quality steel at the lowest prices; this has not changed even today.

We saw this huge leap forward at the large Japanese dockyards as well. Completely new, enormous docks and other facilities for the building of large and gigantic ships were built, planned for the distant future. Customers ordered only the most modern, fastest and most precise factory equipment from LEYBOLD, often developed and the patent applied for only a short time before. Our suppliers had to master huge technical problems and took tremendous risks, but they were of course grateful for the trust placed in them and the opportunity to be the first to deliver such a modern product.

We never failed to satisfy our customers and now saw that the Japanese shipyards did not need to fear competitors from anywhere in the world. Nothing has changed today (over 40 years later); only South Korea and China have managed to keep up; they copied the Japanese path to the top completely and work with far lower wages. But Japan is still the leader for high-quality ships and continues to be tops in the world for ship engines and other high-tech installations.

We were also a part of the rebuilding of the ceramic industry at that time. The products were ceramic pipes for waste water, firebricks, insulators, tiles, grinding wheels and porcelain. In every case a long, ground-level assembly line with state-of-the-art equipment and tunnel furnaces of modern design with the latest burner know-how, followed by inspection devices and fully automated packing, etc. World-class performance at extremely high quality level and lowest

production costs, including extreme reductions in personnel. Everything was worked out and coordinated exactly down to the last detail before construction started. The Japanese ceramic industry also jumped to the top ranking in the world.

In addition, we had business with the Japanese national printing office. We delivered a number of complete machine sets for printing bank notes in 2 printing processes to every bank note printing office. This also turned into a tremendous success; we achieved the highest output per time unit with the highest quality worldwide, i.e., with the lowest rejection rate (loss), whereby the Japanese quality standards are certainly the highest in the world. The products were the new Japanese bank notes, generally admired for their beauty and utility as well as for their high security from counterfeiting. The new Japanese bank notes accompanied Japan's post-war rise to an economic great power for decades.

As early as 1954, we delivered the first modern endless form printing machines to Japan; the phenomenal triumph of electronic data processing and office automation had begun.

We were able to resume business relations with the Japanese food industry in many areas. We provided a number of beet sugar factories of the latest design to the sugar beet cultivation areas, thereby helping the agriculture of these areas to develop a cash crop of high quality in areas which were not so suitable for rice cultivation. Follow-up deliveries of new equipment, etc., have kept these factories up to date even today.

In Japan's large vinegar industry, we were able to contribute a decisive improvement for vinegar production by introducing an innovative fermentation process all over Japan. The producers made a better final product, the production process was significantly faster and could be automated, and the customers' staffs were rid of the unpleasant odours once and for all. Since that time, we have been successful with modifications of this procedure in other food operations using fermentation processes and have also become involved in the biological treatment of sewage.

For decades we were the suppliers of high pressure feed water pumps with accessories for high pressure forced through boilers to the Electric Power Companies. These boilers of much improved efficiency and operation criteria were introduced to Japan by licence agreement under our management. This was yet another instance in which LEYBOLD played a major role in the successful market breakthrough of new technology.

For some years now, the surface treatment of materials has been a new field for us; we operate a large laboratory and various testing facilities and have trained a staff of specialists for this purpose. Business opportunities are being constantly expanded. We cooperate closely with leading Know-How owners and supply companies in Germany. Our work in the semi-conductor industry is significant; we deliver and maintain the galvanic baths for environmentally friendly coating and are at the forefront of technological innovation. Another field of work with good

success is our surface improvement by means of metal removal in special baths. We foresee a great future here in many industries.

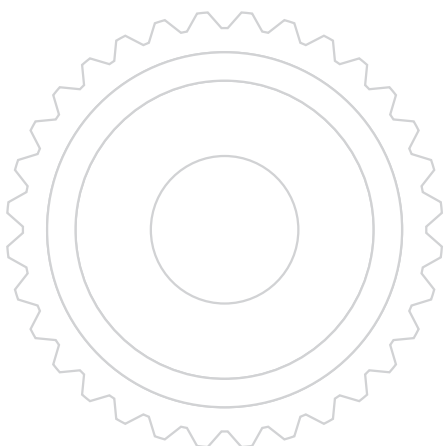
Since years now, we have been cooperating very closely with the manufacturers of special machines for the grinding of optical lenses and deliver production lines for the complete processing of lenses for digital cameras etc. with high and highest throughput performance, yet extremely high precision. The boom has just begun; we foresee growing business abroad as well.

It is clear for us that LEYBOLD must continue to offer the latest in high tech and know-how in new areas and that LEYBOLD must also maintain the closest possible contact to its customers in Japan and its partners in Europe and elsewhere. Our employees remain young and hungry for success and always keep track of the latest developments in their areas of specialization.

Thanks to the intelligent post-war policies of Japan, we have been able to work in peace for most of the latter part of our company's history stretching over a century. The great ups and downs of the years 1905 to 1941 opened up many tremendous opportunities for development and growth for LEYBOLD, but the setbacks were all the greater. The great rebuilding period between 1951 and 1968 will remain unforgotten; we are very proud that the Japanese industry allowed us to contribute to this economic miracle.

We have remained independent for 100 years and wish to serve the further upward development of the Japanese industry in the future.

For LEYBOLD's next century, we look forward with excitement to the many opportunities arising from the ASIAN DRIVE FORWARD which has become more and more apparent in the last few years; tremendous forces for the economic reshaping of our world are in motion from China to India. We are certain that Japan will be at the head of this Asian future and know today that LEYBOLD will make an active and valuable contribution.





Kobe Today
the second big portcity of Japan, likewise originated as a foreigners Trade Settlement in 1868



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