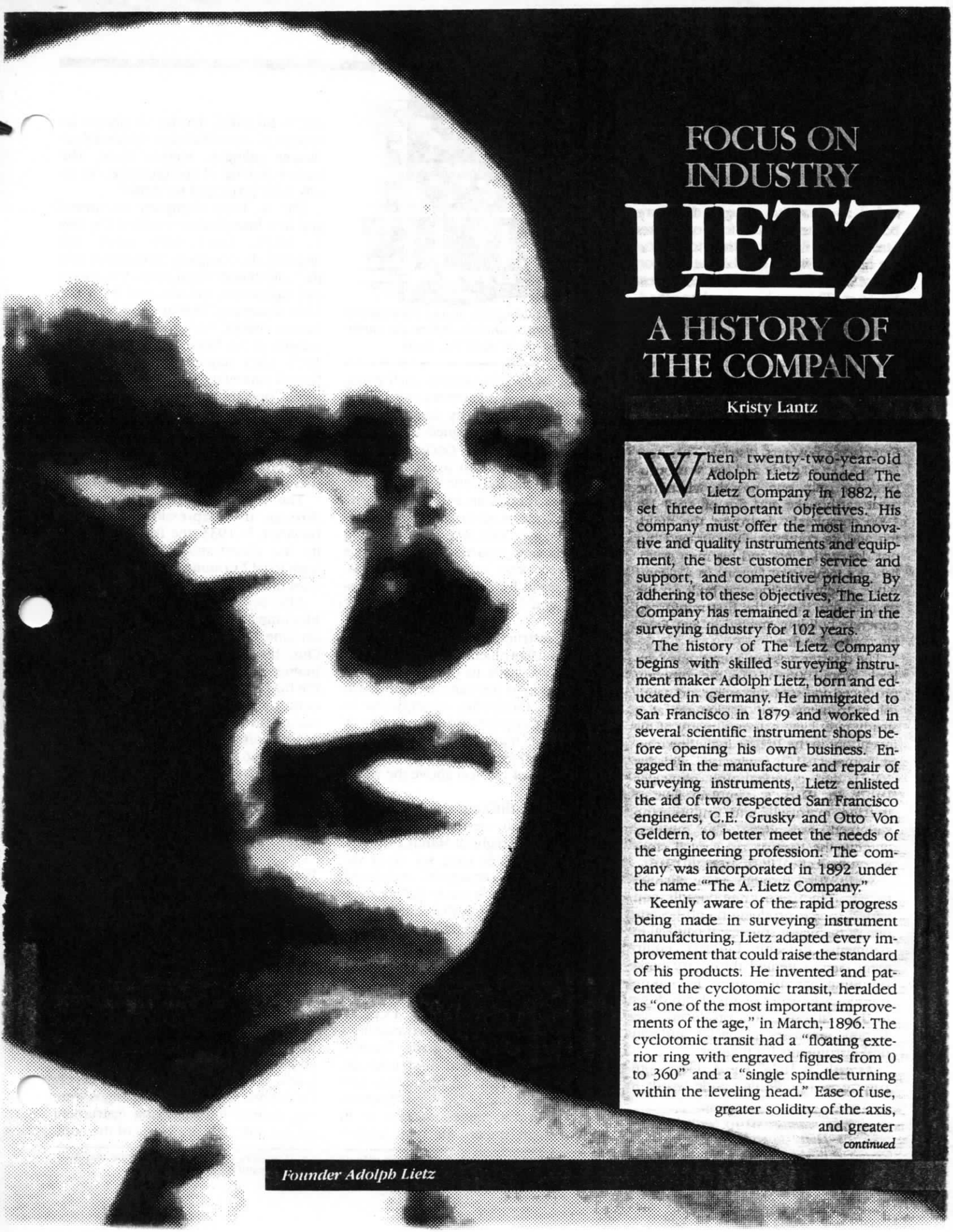

FOCUS ON INDUSTRY

LIETZ

A HISTORY OF THE COMPANY

Kristy Lantz

When twenty-two-year-old Adolph Lietz founded The Lietz Company in 1882, he set three important objectives. His company must offer the most innovative and quality instruments and equipment, the best customer service and support, and competitive pricing. By adhering to these objectives, The Lietz Company has remained a leader in the surveying industry for 102 years.

The history of The Lietz Company begins with skilled surveying instrument maker Adolph Lietz, born and educated in Germany. He immigrated to San Francisco in 1879 and worked in several scientific instrument shops before opening his own business. Engaged in the manufacture and repair of surveying instruments, Lietz enlisted the aid of two respected San Francisco engineers, C.E. Grusky and Otto Von Geldern, to better meet the needs of the engineering profession. The company was incorporated in 1892 under the name "The A. Lietz Company."

Keenly aware of the rapid progress being made in surveying instrument manufacturing, Lietz adapted every improvement that could raise the standard of his products. He invented and patented the cyclotomic transit, heralded as "one of the most important improvements of the age," in March, 1896. The cyclotomic transit had a "floating exterior ring with engraved figures from 0 to 360" and a "single spindle turning within the leveling head." Ease of use, greater solidity of the axis, and greater

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Founder Adolph Lietz

rigidity were cited as advantages of the instrument.

Lietz devoted his life to his flourishing company. Every morning he took the steam train from his home in San Rafael to Sausalito, caught the ferry boat for the trip to the foot of Market Street in San Francisco, then took a cable car to arrive at his shop at the corner of Sansome and Sacramento Streets by 7 a.m. This was his unbroken schedule, six days a week for seventeen years!

Growing business

A steadily growing business rewarded his efforts, and in 1905 a four-story factory was built at 632 Commercial Street, in the heart of San Francisco's business district. This new factory, Lietz's pride and joy, was occupied for only one month when the great earthquake and fire of April 18, 1906 completely destroyed the building and its contents. Discouraged but not defeated, Lietz and his men established a temporary factory in Oakland while a new building was built on the original site. It was the first reinforced concrete building erected in San Francisco after the fire.

The disaster was but a temporary setback. From 1906 to 1916, the company produced and sold surveying and nautical instruments and equipment at a steady rate. Lietz patented many of his inventions in the 1910's, including transit frames (1915), navigators' alidades (1917), and compensating binnacles (1917). In 1916, a complete line of drafting materials and engineering equipment was added. The business outgrew the factory, so a retail store was opened at 61 Post Street in 1916.

World War I brought many changes to Lietz. The factory temporarily converted to war production and became one of the major sources of nautical instruments and ship builders' equipment. Lietz patented the rotary brake sounding machine, used for taking soundings in water of any depth down to 100 fathoms, and produced over 10,000 compasses, binnacles, and nautical instruments for the war.

As early as 1924, The A. Lietz Company began publishing code words in its catalogs for instruments, their parts, and engineering equipment to facilitate customers' ordering by telegram. The code words were assigned by product category, with each category's code word beginning with a certain letter. "Buntline" was the code word for a No. 5E transit theodolite and "Buglehorn" was the code word for a 6¼ inch engineers' transit. Code words for shipping methods were also established; names of flowers were used for these. "Jasmine" stood for "Ship C.O.D. express to . . ." and "Tulip" for "Wire delivery on . . ."

The A. Lietz Company at 632 Commercial Street in San Francisco before the earthquake and fire of April 18, 1906.

Lietz instruments helped build the West. In 1924, Lietz transit theodolite No. 5D was used to control elevation and location of the Carquinez Bridge in Crockett, California. Completed in 1927, the Carquinez Bridge was one of the largest highway bridges in the world: 3,350 feet in length with a clearance height of 135 feet above the water.

Prosperous, difficult times

A fire partially destroyed the store at 61 Post on the night of March 24, 1924. Temporary offices were set up at the factory at 632 Commercial, and the 61 Post operation was ready for business again on May 19th. A flyer announcing the reopening said in part:

"With the reopening of our store we shall continue the same policy which governed our relations with our customers in the past and which was based on three principles: **Quality**. Dependable goods only. (1)Our own manufactured brands of high grade Transits, Levels, and Nautical Instruments, which have a national reputation, and (2)a complete line of Drawing Materials, whose intrinsic values warrant us in selling them under our own label—ALCO BRANDS. **Service**. A sincere attention to our customers which subordinates selling to service. **Price**. The honest pricing of merchandise. To allow a fair profit and no more."

The A. Lietz Company prospered and new branches were added. On May 1, 1925, Lietz took over the Engelbrecht Company, an Oakland firm that sold and serviced Lietz instruments and equipment, and renamed it "The A. Lietz Company, Oakland Branch." Its former owner, Walter Engelbrecht, remained at the helm. On September 1, 1925, Lietz acquired engineer Arthur Ferry's surveying instrument sales and repair operation in Los Angeles, and dubbed it "The A. Lietz Company, Los Angeles Branch." Ferry supervised the business as before, and Fritz Schafer transferred from San Francisco shortly thereafter to become Ferry's assistant.

The A. Lietz Company did not pass through the Depression unscathed, however. In 1933, the Post Street facility was closed and operations moved back to 632 Commercial to alleviate the hard times.

After dedicating 53 years of his life to his company, Adolph Lietz passed away on June 16, 1935. Adolph Lietz Jr. and Otto, his sons, had shared their father's interest in the enterprise, and took over the business as president and vice president, respectively. Business returned to normal in 1941, and crowding at the factory prompted the purchase of a building at 520 Montgomery Street in San Francisco to provide room for an office and showroom. A complete line of hardwood drafting room furniture and artists' tables was added to Lietz's wares.

Wartime production

With the advent of World War II, Lietz stepped up production of its nautical instruments and further served its country by providing drafting room furniture, drawing materials, and engineering equipment to the armed forces and war material-producing factories.

In 1947, The A. Lietz Company opted to concentrate on marketing domestic and imported instruments and equipment. Because Lietz had manufactured nautical instruments exclusively for the war, its tooling and designs were not current for surveying instrument production. The principals of the com-

Advertising manager Kristy Lantz has been with The Lietz Company since 1979.

Editor's Note: This is part of a series of articles written about companies that provide instruments and services to surveyors. We hope that by knowing more about these companies, our readers will better understand the part they have played in development of the profession.

pany decided that a major expenditure for retooling was not feasible, so Lietz ceased manufacturing surveying instruments that year. This was a difficult decision to make, since Lietz had built its reputation for excellence in crafting instruments for 65 years. This decision, however, has paid off handsomely in the years since.

Adolph Lietz Jr. became chairman of the board of directors in 1950 and brother Otto was named president of The A. Lietz Company. In 1951, the office and store at 520 Montgomery was consolidated with the warehouse at 632 Commercial and moved to 840 Post Street for more efficient operation. In anticipation of their retirement, the Lietz brothers turned over their management tasks in 1953 to four long-time Lietz associates: Arthur Ferry, Paul Princelau, Fritz Schafer, and Clark Crocker. Ferry took over as president in 1957 when Otto Lietz decided to serve as vice president until his full retirement in 1963. Ferry operated out of the San Francisco office, and Morris Stone, another long-time Lietz associate, was named manager of the Los Angeles office. Adolph Lietz Jr. passed away on April 21, 1958.

Lietz had been importing drawing materials and equipment from Europe for 60 years; competition and increasing consumer demand made necessary the acquisition of new and varied supply sources. Paul Princelau toured Europe in 1957, establishing new relationships with sources in England, Denmark, Germany, and Italy. Ferry visited Japan in 1960 and made arrangements with Sokkisha Co., Ltd. of Tokyo to purchase distribution rights to Umeco surveying instruments. Once again, Lietz was growing in new directions to better serve the surveying industry.

Attracted by the superior quality of Lietz's drafting supplies, The Frank Paxton Company of Kansas City, Missouri expressed interest in buying The A. Lietz Company. A distributor of fine hardwood lumber products and school supplies and equipment, Paxton saw Lietz as a means of strengthening its school supplies sales west of the Rockies. Arthur Ferry accepted The Frank Paxton Company's offer in July, 1965. Ferry retired on November 1, 1965, and Floyd Miller was appointed president of the company, now known as "The Lietz Company."

Expanding Eastward

Lietz was still a California-based company with local salesmen; the principals of the company wanted to expand its prospering business east of the Rockies. It was determined that surveying instruments were the catalyst for national expansion. Morris Stone, named national sales manager on March 1, 1969, instigated the network of regional sales managers and the regions they served. He helped the sales managers to build a strong following for Lietz instruments and equipment and to establish relationships with customers that continue today. Stone retired on September 30, 1974.

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Robert Hartman, a Lietz associate since 1937, became general manager of Lietz on August 1, 1967. He played a big part in bringing the Sokkisha line of surveying instruments to Lietz; on June 1, 1970, The Lietz Company was appointed the exclusive U.S. distributor for Sokkisha surveying instruments. Sokkisha, specializing in the manufacture of surveying instruments and precision optics since 1920, proved to be an innovative company well-attuned to Lietz's ideas. Lietz discontinued its drafting equipment and school supplies and sold the rights for Lietz templates to Alvin & Company in 1971.

In the early seventies, Lietz began offering new instruments at a pace not equalled since the early years of its history. Sokkisha perfected the magnetically damped compensator and began offering it in Lietz instruments in 1973. The B1 automatic level was introduced in 1973; Lietz's one-second digital-reading theodolite, the TM1A, was introduced in 1974.

George E. Huber joined Lietz in January, 1976 as vice president in charge of sales. He operated out of Ohio to serve the eastern region. Also in 1976, the Los Angeles operation moved to 1124 East Del Amo Blvd. in Carson, California. Steve Carpenter, Lietz's present operations manager, joined Lietz in July, 1976 and worked at the Carson facility.

Mr. Huber was named president of The Lietz Company on January 1, 1978. The general offices moved to Overland Park, Kansas on January 9, 1978. The Carson facility continued to serve the regions west of the Rockies.

The year 1978 was one of many product introductions from Lietz. The first Lietz/Sokkisha electronic distance meter, the RED1, was introduced in April, 1978. Lietz then added the TM6 six-second digital-reading theodolite to its instrument line. The TM6 was the first theodolite of its kind to display horizontal angle readings that are the mean of graduations read from opposite sides of the circle, thus eliminating eccentricity error. The RED1 and TM6 were praised in the industry for their ease of operation and accuracy. The RED1 was upgraded and replaced by the RED1A in March, 1980.

Consolidating repairs

Lietz consolidated all repair parts at the Overland Park distribution center in March, 1979; consistent inventory control, improved customer service, and reduced handling costs were cited as reasons for the move. In September, 1979, the EDM service department was installed at Overland Park; similar facilities were opened at Carson on November 1, 1980.

Otto Lietz passed away in August, 1981.

Bill Steinbrecher joined Lietz in September as national sales manager.

In November, Sokkisha and Carl

Zeiss of Oberkochen, a highly respected German manufacturer of precise geodetic products, struck a cooperative agreement which provides for joint new product development. Lietz supports the agreement, as it gives Sokkisha added revenue to expand its production facilities as well as the chance to make full use of Zeiss's technical and optical expertise.

Two new scale-reading theodolites, the six-second TS6 and twenty-second TS20A, made their debut in December. The ten- second digital-reading TM10E and twenty-second digital- reading TM20H theodolites were introduced in February, 1982.

The Lietz Company celebrated its 100th anniversary in March, 1982. In keeping with Lietz tradition, a new full-line catalog, Catalog 100, was released. To commemorate the anniversary, a brass belt buckle was crafted. Depicting a surveyor sighting on the horizon, the buckle was unveiled at the ACSM-ASP convention at Denver in March. The buckle was an instant favorite with Lietz associates. The last belt buckle was given away in January, 1983.

Also in March, two new EDM were introduced. Replacing the RED1A, the new RED2 set a new standard for EDM in the industry. With its self-checking microprocessor to assure correct readings, coaxial telescope, built-in battery, RS232C serial data output, and light weight (only four-and-a-half pounds), the RED2 fast became a favorite with surveyors eager for state-of-the-art instrumentation. The RED mini, one of the most innovative EDM ever introduced, was the first extremely lightweight yet powerful instrument to enter the market, features a self-checking microprocessor and coaxial telescope.

The first Lietz Builders' Instruments, Equipment and Supplies catalog was released in September, 1982. Targeted specifically to the construction market, the Builders' Catalog features the complete line of Lietz builders' instruments and equipment. The first 25,000 copies were distributed quickly, and a second edition was released in March, 1983.

The latest Lietz/Sokkisha total station, the SDM3E, was introduced in October, 1982. An EDM and digital-reading theodolite combination, the SDM3E provides simultaneous distance and angle measurement with a single pointing. Features include a self-checking microprocessor, built-in keyboard calculator, and RS232C serial data output. Also in October, Lietz introduced the RED3 EDM. The first Lietz/Sokkisha EDM with automatic vertical angle sensing, the RED3 electronically measures and displays the zenith angle. Lietz began advertising its family of EDM as "the RED line."

Signs of recovery

Signs of an economic recovery in 1983 raised hopes for everyone involved in surveying and construction. "Rebuilding America" became a buzz word; millions of dollars were to be

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poured into the rehabilitation of America's infrastructure over the next decade. At the same time, the surveying industry was in transition. Increased consumer demand for state-of-the-art electronic instruments and equipment and decreased demand for classical instruments (theodolites, autolevels, and transits) caused many surveying instrument companies to reevaluate their product lines. Lietz had already adjusted to the changing market conditions; 1983 brought a flurry of new product introductions and announcement of several operations changes.

A two-year warranty on Lietz electronic instruments was announced in March; the SDM3E, RED3, RED2, and RED MINI are backed by one of the best warranties in the industry. The famous Lietz lifetime warranty covers all optical instruments.

In May, Lietz consolidated all operations at the Overland Park general offices and distribution center. Lietz opened its Service Center in May. Adjoining the existing distribution center in Overland Park, the Service Center is a centralized facility for the maintenance and calibration of all Lietz electronic and optical instruments, training of Lietz associates, and new product research and development. The Carson facility was closed on May 15th.

Lietz introduced the Lietz/Sokkisha SDM3ER in June. An enhanced version of the SDM3E, the SDM3ER features automatic vertical angle sensing, a self-checking microprocessor, built- in keyboard calculator, and RS232C serial data output. The SDM3ER is also covered by the two-year electronic instrument warranty.

Lietz was awarded the exclusive U.S. distribution rights to the Planix planimeter line, and the exclusive U.S distribution rights to Rabone Chesterman surveyors and engineers nylon coated steel tapes, in June, 1983.

The Lietz System S3 was introduced in August. The Lietz System S3, a totally-integrated computerized surveying computation system, links field and office functions, providing streamlined surveying solutions. This flexible, upgradeable system consists of the LIETZ/Z-P COORDINATE GEOMETRY PLUS software package, Olivetti M20 16-bit microcomputer, SDM3E/SDM3ER total stations, the SDR1 electronic field book, and Olivetti printer. The software package comprises coordinate geometry, traverse, geometric solutions, and figure routines; data transfer and plotter driver routines are to be released in March, 1984. Because of the system's importance, Lietz formed a new tier of distribution: Authorized Lietz Systems Dealers. The Systems Dealers offer the complete Lietz line. The RED3 and RED2, with their RS232C serial data output, are compatible with the Lietz System S3.

In November, Lietz announced that Sokkisha Co., Ltd. had tendered an offer to The Frank Paxton Company to purchase The Lietz Company. Essentially, the transfer of ownership would make official what has been an evolutionary process: Lietz had sold Sokkisha surveying instruments since 1960; Sokkisha knew that the way Lietz had done business since 1882 was its strongest asset; and Sokkisha wanted to become more closely allied with a marketing company whose name and reputation were highly recognized in the U.S. surveying industry. The Lietz ownership transfer is expected to take place on April 2, 1984. This merger will not affect the way Lietz does business. Lietz managers will remain in their positions and Lietz will continue to function separately as a U.S. corporation.

This year brings more new product introductions from Lietz. The DT20E ten-second digital-reading electronic theodolite, the latest Lietz/Sokkisha instrument of its kind, was introduced in January. The DT20E features dual-display LCD readout, right and left angle measurement, angle repetition, electronic horizontal circle zero reset, and fully enclosed horizontal and vertical circles and encoders, which are completely protected from dust and humidity. The DT20E has RS232C serial data output and is powered by four AA batteries. Also in early 1984, a new line of prisms was announced. Designed by Lietz in conjunction with a leading prism manufacturer, the new prisms are housed in high-impact polycarbonite and feature 0/30 millimeter offset mounting in tilting or non-tilting mounts.

Lietz is constantly improving its products and services by aniticipating the needs of surveyors and engineers, and putting the customer first. Everyone at Lietz is a dedicated professional that believes strongly in the company motto: "It's easy to do business with Lietz!" Adolph would be quite proud to see his company today. **PS**