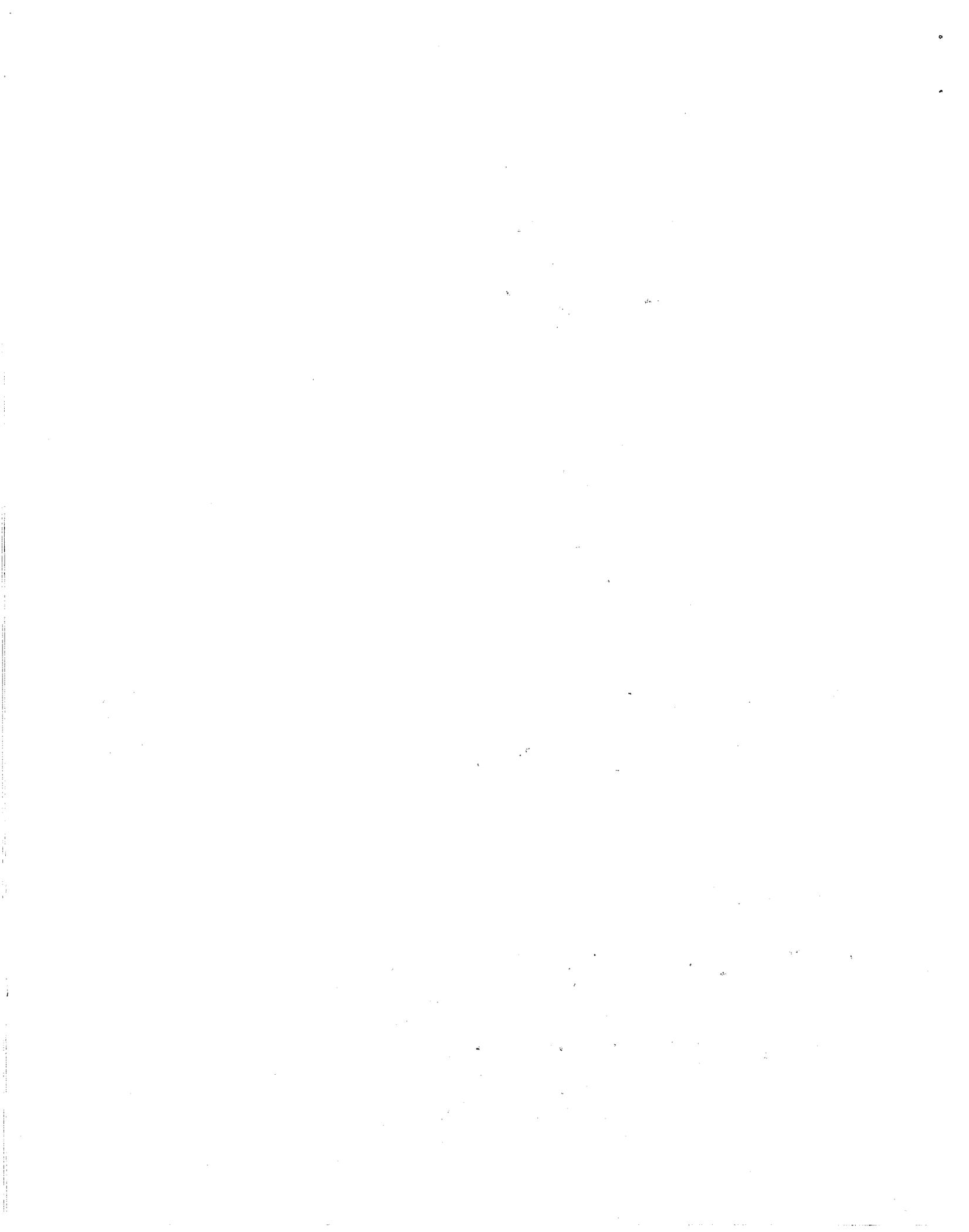


The History of

Kearney & Trecker Corporation



THE HISTORY OF KEARNEY & TRECKER CORPORATION

1898

Kearney & Trecker Corporation, one of the nation's leading builders of machine tools, was founded as a partnership on May 17, 1898 by Edward J. Kearney and Theodore Trecker. The two men, 30 and 29 respectively, had been employed by Kempsmith Machine Company, a general machinery builder founded ten years earlier in 1888. Kearney was a machine design engineer and Trecker a machinist. Both possessed a common trait for perfection in their work, and their knowledge and skills were highly complimentary.

Their decision to form their partnership had hinged upon the successful outcome of the Spanish-American War, which they felt would initiate a period of economic prosperity and industrial growth in the United States. Such an environment could create and stimulate a demand for productive machine tools, and would be a timely opportunity for Kearney and Trecker to combine their engineering and manufacturing talents to build such tools.

Therefore, Admiral Dewey's success at Manila Bay, against the Spanish Armada, signaled the beginning of the Kearney & Trecker enterprise. Both men focused their efforts on the design and production of a milling machine of the "highest quality and reliability," identified with "Milwaukee," a city already associated with the best of

American-made beers. Little did they know that MILWAUKEE milling machines were destined to achieve the same recognition in metalworking industries the world over, for their innovation, productivity and performance.

It all started in a modest, two-man machine shop, housed in a small store front building along the Kinnickinnic River, at 271 Lake Street. This 1200 square foot (60 X 20 feet) facility became both a small job shop business, which Kearney and Trecker worked to support themselves, and a larger engineering and parts-making establishment, which both men used to produce their first milling machine.

1901 Within three years, in 1901, this small building became too limited in space for Kearney & Trecker's growing business and the company moved "out West" to the City of West Allis, an expanding industrial community catering to a variety of manufacturing industries. Allis-Chalmers Manufacturing Company, an internationally-known producer of agricultural equipment, cement, mining and metal systems, and other industrial products, had already established itself in this area.

Kearney & Trecker chose a three-acre site at South 68th Street and West National Avenue. The acreage cost the young partners approximately \$2000 an acre. A small downpayment of \$750 was accepted by the landowners in order to enable the enterprising machinery manufacturers to finance the the construction of a factory. Under terms of the agreement,

ground was to be broken within 60 days and the building was "to cost approximately the sum of \$5000." Twenty dedicated employees relocated with Kearney & Trecker, all walking a half mile to work each day over the farm fields which separated the plant from the end of the street car line at South 62nd Street and West National Avenue.

It was at this site in 1901 that K&T built the revolutionary, all-g geared feed drive milling machine, Kearney & Trecker's first milling machine, which won the attention of industry. Orders for this machine reached an "amazing" average of four a month.

The years that followed were prosperous ones. In 1902, Kearney & Trecker developed the world's first milling machine with an all-g geared speed change transmission and automatic flood lubrication of internal parts. This patented design represented a revolutionary improvement, and allowed K&T to gain a firm position in the fast-growing metalworking industry. Constant improvements in design and performance brought even greater acceptance of these milling machines. Kearney & Trecker grew.

A national sales organization was established in 1903.

1910

Enlargement of Kearney & Trecker's West Allis facilities took place between 1909 and 1910, almost tripling the original plant area. Floor space was expanded, a sawtooth bay was added and a second shift began.

Employment reached approximately 150 steady workers. Machines were sold abroad - in England and Australia - for the first time. By 1910, the company was represented in seven foreign countries.

The first milling machines with double overarms - a Kearney & Trecker trade and product mark - appeared and was patented in 1912. The double overarm provided the high rigidity necessary for machining precision parts.

Nineteen Hundred and Thirteen marked the first year when honors were given to K&T at an international exposition. This first award singled out Kearney & Trecker milling machines at the Belgian Universal and International Exposition.

During World War I, when the payroll reached a peak of 650 employees, the company continued to expand, adding a new 480-foot-long assembly floor. In addition, a small two-story building was erected in 1915 and augmented in 1918 with an addition to the rear.

After World War I, and despite the Depression, the machine age moved on. Kearney & Trecker's innovation, quality, performance and growing reputation saw them through the hard times. Motor vehicle production began to soar. Industries, comparatively new - aircraft and parts, electrical machinery, radio, petroleum refining, agricultural machines, office machines - took an increasingly important place in the American industrial scene, providing work for millions and calling for more and more high-production

tools.

The years soon became decades and in the quarter century from 1898 to 1923, the little two-man machine shop born on Lake Street became a thriving West Allis industry, turning out hundreds of milling machines annually.

1922 In 1922, a third floor was added to K&T's facilities.

A dramatic and sophisticated development occurred in 1923 when the first motor-in-base milling machine was introduced by the company. These machines obsoleted overhead belt drives.

In 1928, a three-floor wing was built on the east side of the K&T facility. The sales and engineering departments had outgrown their shoplike and oftentimes, shop-shared quarters. They needed new and separate quarters for the "paper side of the business.

Finally in 1929, Kearney & Trecker pioneered the machining of cast iron through the application of tungsten and tantalum carbide milling cutters to cast iron.

1934 Then tragedy struck. Edward Kearney, then secretary-treasurer of K&T, died in 1934. Mr. Kearney's daughters and son-in-laws took over the co-founder's share of the company.

Between 1934-1938, Kearney & Trecker made several contributions to milling machine design which improved standards of performance, including the three-bearing spindle and the totally enclosed motor drive.

In 1939, the principle of rotary head milling was

perfected by K&T in a machine capable of transmitting any geometric shape from blueprint directly into metal. This method materially simplified the making of tools, dies, molds and production parts requiring multiple radii and intricate shapes.

It was also in 1939 that World War II began, and the French government awarded the company a \$10 million contract for several thousand machines. It was the largest single order in the company's history and necessitated the building of a big bay onto the west end of the K&T plant. The addition increased space by 30 percent.

1941 During World War II, Kearney & Trecker achieved an annual production rate of approximately 800 milling machines a month. In fact, in 1941, the unprecedented demand for standard machine units to meet the country's needs for national defense helped Kearney & Trecker become the first company to establish an assembly line technique in the manufacture of machine tools. The system worked so well, that it was permanently adopted with some modifications for peacetime production. This feat won K&T the coveted Army/Navy E Award.

In 1942, Kearney & Trecker Corporation went public. Maintaining little interest in the machine tool business, the Kearney family sold its shares in the company. However, Trecker family ties remained.

With the war still going full force in 1942, a new building containing 162,000 square feet of plant and office space was constructed on behalf of the Defense Plant

Corporation. The building was attached to K&T's present buildings and covered three acres of land. Kearney & Trecker leased this plant and its equipment for additional production of its machines, requested by the government. Significant engineering developments in special machines were designed to increase output. Several hundred women, now trained in machine shop skills, were working in place of men who had joined the services. In addition, more than 100 plants began performing machine and part subcontracting work for Kearney & Trecker.

As the exceptional war demand for machine tools lessened toward the end of 1942, K&T ceased to subcontract work to other plants. In fact, to assure a steady flow of production, the company went into the subcontracting field itself. This business was so good that a wholly-owned subsidiary, the "Kearney & Trecker Products Corp.," was formed to facilitate the handling of associated milling machine products, accessories and subcontract work.

In 1943, K&T pioneered the application of tungsten carbide milling cutters to the machining of steel. This application was hailed as a major contribution to the war effort and K&T was awarded the White Service Star from the U.S. government for continued excellence in war production. At this time, Kearney & Trecker also began an advertising campaign. The company sponsored a radio program on WTMJ, during which customer companies and employee activities were featured.

K&T received yet another White Service Star from the government in 1944, for excellence in the production of machine tools, war material and subcontract parts. K&T was now producing transmissions for heavy-duty and lift trucks, army tank retrievers, and "land and water" fighting vehicles. The company also supplied parts for the B-29 Boeing Superfortress airplanes, and wing and fuselage parts for the famous Thunderbolt fighters. In addition, in an effort to expand its research and development in 1944, K&T entered into a contract with an engineering firm in Worcester, Massachusetts. This firm, Controls Laboratories Inc., operated as a subsidiary of Kearney & Trecker.

1945 The long awaited end of World War II came in 1945, and with it came the end of war contracts. Kearney & Trecker made the smooth switch over to peacetime production, concentrating on customers satisfying the great postwar demand for consumer goods. Jobs were created for returning veterans. K&T continued to manufacture power transmission equipment on a subcontract basis. The company also reentered the export market and expanded its engineering, research, and product design and development, particularly in the area of special purpose machine tools for high speed mass production. One machine placed on the market at this time was the MILWAUKEE Model C Autometric Precision Boring Machine.

By 1946, Kearney & Trecker was producing several other machine tools including: K&T Model 20 CSM Vertical Milling Machine, K&T Model 2K Automatic Cycle Vertical Milling

Machine, K&T Model 30 CSM Plain Automatic Cycle Milling Machine, K&T Model No. 3 Model T Precision Milling and Boring Machine, and K&T Model No. 3 Model TT Precision Milling and Boring Machine. In addition, with business booming in the industrial communities of Detroit, Cleveland and Pittsburgh, Kearney & Trecker opened direct factory sales, engineering and services offices in these areas.

In July, 1947, Theodore Trecker, then president of K&T, retired. Succeeding Theodore was his son, Joseph L. Trecker, a man highly respected both for his role as special advisor to the Secretary of War during World War II, and for his work with World War II machine tool committees. Tragically, Joseph died suddenly in October of a heart attack. Francis J. Trecker, another son of Theodore, was elected to the presidency in November of that year.

It was also during 1947 that Kearney & Trecker began to experience a fall in business. Inventory was high and the cost of retooling and manufacturing was rising. The export market was unsettled and the government was flooding the market with surplus machine tools. To absorb the burden and overhead, K&T continued in the subcontracting field, manufacturing canning and bottle-filling machinery, and printing presses. The company also increased their study of new designs and improvements for milling machines, and expanded into other machine tool fields which included precision boring machines and rotary head milling machines.

Economic times were still tight in 1948. However, machine tool inquiries had increased substantially and firm orders were on the horizon. Kearney & Trecker purchased the Defense Plant Corporation, along with its machinery and equipment, from the U.S. government, which had used the plant for war time production since 1942. In July, K&T purchased the complete facilities of another business, Walker Turner Company of Plainfield, New Jersey. This company, operated as a division of Kearney & Trecker, manufactured a line of light metal and woodworking machine tools for industrial and home workshop applications. In addition, the English firm, C.V.A. Jigs, Moulds, and Tools, Limited, was licensed to manufacturer K&T machine tools. This opened up a new overseas market for Kearney & Trecker, and helped offset European competition and foreign exchange problems.

In 1949, K&T continued to improve their machine tools and broaden their base of operation in other markets. Products introduced during this year included: Kearney & Trecker heavy machine tools - Model CSM Duplex Bed Type Milling Machine, Three HP Model 24-AC Swivel Head Vertical Milling Machine, Three HP Model 24-AC Plain Milling Machine and Model CSM Simplex Bed Type Milling Machine; and Walker-Turner Light Machine Tools - 12" Tilting Arbor Saw, 1½ HP Radial Saw, 12" Band Saw, Vertical Spindle Shaper, 6" Jointer and 9" Tilting Arbor Saw.

1950

Looking at the need for future expansion and construction

of facilities, K&T purchased a 38-acre tract of land at the west end of Milwaukee County in West Allis in 1950. Research and product development again constituted a major activity, with special emphasis on the design and construction of special machine tools for industries requiring highly productive, single-purpose equipment. Products introduced during this year included: Kearney & Trecker's No. 5 Plain CK Milling Machine and Model CK Vertical Milling Machine; and Walker-Turner Division's 10" Tilting Arbor Saw, 3 HP Radial Saw, 12" Tilting Arbor Saw, 16" Woodworking Band Saw and 16" Metal Cutting Band Saw.

The postwar period of gradually declining tool sales ended abruptly in late 1950 and 1951 with the U.S. government's announced policy relating to the Korean War: to contain Communist aggression, rebuild the country's military strength, and render aid to friendly nations. The immediate effect of these decisions was the release of hundreds of orders for machine tools that producers of civilian goods had hesitated to place between 1948 and 1950. Consequently, K&T's production facilities were immediately overburdened, despite prompt attention to the full capacity permitted by available machines and manpower.

In 1951, in an effort to increase production, Kearney & Trecker reestablished a subcontracting division to again search out and work with subcontractors producing K&T parts. An extensive training program was undertaken to combat the blossoming labor shortage of skilled and

semi-skilled operators, and \$1,229,000 was spent on machine tools to update the K&T West Allis plant. In addition, 40 acres adjacent to the 38 purchased in 1950, were bought to satisfy all foreseeable future requirements for new facilities. The new Model AC-24 Swivel Head Vertical Milling Machine with fully automatic controls, along with several special machines, were introduced by Kearney & Trecker. The Walker-Turner Division came out with the following models: 15" Bench Model Drill Press, 20" Bench Model Drill Press and Power Feed, 15" High Speed Sensitive Drill Press with Side Slotted Tilting Work Table, 20" Floor Model Drill Press, and 15" Floor Model Drill Press.

In 1952, K&T recognized the need for much larger machines to build modern American jet and commercial aircraft, requiring non-riveted airplane wing skins. To accommodate this larger machinery and other special purpose machine tools, the company began building a Special Machinery Division, utilizing its 70 acres of land purchased in 1950-51.

The special machinery plant was completed and in operation in 1953, equipped with over 2,500,000 of the finest machine tools available. With this new plant on line, K&T continued to introduce innovative special and standard machinery. Most significant among new standard products in 1953 was a line of electronic tracer controlled knee type milling machines registered as Opticopy. In addition to their capabilities for accurate tracer milling

in the horizontal plane, these machines could be used for conventional milling operations within their full range of travel in longitudinal, cross and vertical directions.

A Tool-Lease program was started by Kearney & Trecker in January, 1954. This program produced excellent results. Rentals of standard machines rose steadily and outright sales, developed from Tool-Lease activity, totaled several million dollars. Also in 1954, C.V.A. Jigs, Moulds & Tools, Ltd., K&T's licensed manufacturing associate in England, expanded its production facilities for special machine tool manufacturing. In addition, The Royal Aircraft Corporation, a wholly-owned subsidiary of K&T, was formed to assemble and distribute a twin-engine, amphibian airplane. This airplane, the Royal Gull, was the only twin-engine craft of its type available in the United States, with equal versatility on land or water. New machine tool products introduced during this year included Kearney & Trecker's Model CE Milling Machines, TRI-D Milling Head, Exclusive Compudex, Station Automatic Transfer Machine, and Spindle Drilling and Tapping Machine.

1955

In 1955, Theodore Trecker, co-founder and former president of Kearney & Trecker, passed away at the age of 87. The death of Theodore Trecker marked the passing of one of America's business pioneers who did much for the industrial development of the Milwaukee area. His faith in himself, his employees and the free enterprise system, helped take Kearney & Trecker Corporation from

humble beginnings, through troubled and difficult times, to significant stature in the American machine tool industry.

During 1955, K&T also experienced a decline in profits. Machine tool shipments were down and the cost of new tooling, processing and machinery development was high. Despite these drawbacks, K&T introduced sixteen new milling and precision boring machines at the 1955 International Tool Show including the: MIL-WAUKEE-MIL Bed Type Milling Machines, TF Series Standard Knee Type Milling Machines, TK Series Deluxe Knee Type Milling Machines, and the Gantry-Type Wing Skin Tracer-Controlled Milling Machine.

In 1956, Kearney & Trecker produced the first numerically-controlled milling machines for Air Force and commercial wing skin panels. The Royal Aircraft Corporation, whose name was changed to Trecker Aircraft Corporation, had sold and placed in operation several Royal Gull amphibious crafts throughout the United States and Canada.

It was also in 1956 that K&T enlarged its program of scholarships and college training in the engineering and technical fields. For example, a unique arrangement between Marquette University and K&T enabled senior mechanical engineering students to take part in an accredited course at the company's plant, utilizing company personnel and equipment. This program was thought to be the first of its kind in the country, at the undergraduate level.

However, 1956 marked the end of Kearney & Trecker's Walker Turner Division. K&T disposed of this division, which manufactured light metal and woodworking machine tools for industrial and home workshop applications.

Incoming orders were substantially down in 1957 and Kearney & Trecker adjusted its production schedule to a lower level. In an effort to enlarge its position in the export market, however, K&T purchased controlling interest in C.V.A. Jigs, Moulds and Tools, Ltd., the English manufacturing firm associated with Kearney & Trecker since 1948. K&T also extended their leasing agreement with this English manufacturer through 1968. At the same time, Trecker Aircraft Corporation focused on design improvements in its present amphibious planes and began developing a new model.

In 1958, K&T once again made machining history with the introduction of three, revolutionary products. The most significant of these was the Model II MILWAUKEE-MATIC, the first machining center featuring numerical control, automatic tool-changing and workpiece positioning. The MILWAUKEE-MATIC made it possible to manufacturer complete parts, requiring milling, drilling, boring, reaming and tapping, in a single set-up. In the ensuing ten years, Kearney & Trecker delivered over 1,000 of these MILWAUKEE-MATICS and developed a complete line of complimentary larger-range machining centers including the Model III, II-III, and V MILWAUKEE-MATICS.

K&T also reintroduced their standard knee type milling machines in 1958, this time operated automatically through numerical control - a first in the industry. In addition, a fully-automatic, tape-controlled flexible transfer line was publicly displayed during this year by Kearney & Trecker, in cooperation with Hughes Products. The introduction of these products was accompanied by expanded programs for personnel and customer training and development. By 1966, K&T training schools and workshops had graduated over 3,500 registrants, representing more than 300 companies using K&T products.

1960

Despite industry interest in K&T's automatic and numerically controlled machine tools in early 1959, the company's unit shipments declined to their lowest levels in 20 years. Only in late 1959 and early 1960 did the tempo of domestic inquiries and orders accelerate slightly. K&T introduced the S-12 Series Standard Knee Type Milling Machines, while they continued the transition from a single product organization, to one offering a more diversified product group, embracing standard, special and NC machine tools.

Trecker Aircraft Corp., the wholly-owned subsidiary formed in 1954 to assemble and distribute planes for business use, was dissolved and its assets sold in 1961. At the same time, a Rebuilding or Renewment Division was established to enlarge the market potential of new, trade-in and used machine sales. Kearney & Trecker C.V.A. in England enjoyed an

extremely profitable year, maintaining backlogs in almost all product lines. In addition, construction was begun on a 280,000 square foot addition to the special machinery division, consolidating all K&T office and manufacturing facilities under one roof in a modern manufacturing facility. The entire consolidation program, completed within a year, reduced total facility area from 725,000 to 450,000 square feet, from a three-plant operation to a single integrated plant, without sacrificing any productive capacity.

In 1962, Kearney & Trecker pioneered the "Cash-Flo" sales-financing plan, helping customers take advantage of a new federal tax credit law and liberalized depreciation guidelines. This plan was a key factor in stimulating new machine sales and rentals.

Sixteen new standard knee type milling machines, the S-14 Series, were introduced in 1963. Output and efficiency rose and K&T's backlog reached its highest level in six years. In addition, during this year K&T began a private air transportation program to bring customers to K&T, the "Home of the Metalworking Revolution." Operating two aircraft, having a total capacity of 30 seats, year-round schedules were maintained covering all 27 sales territories in the U.S. and Canada. These visitations resulted in a volume of orders in excess of those averaged through conventional sales calls in the field.

The MILWAUKEE-MATIC Ea NC Machining Center came out in 1964.

1965

In 1965, the MILWAUKEE-MATIC Eb NC Machining Center was introduced at the International Tool Show in Chicago. Foreign sales rose. Kearney & Trecker's shipments of numerically controlled machines during this year represented over 57% of the company's total sales. It was also during this year that K&T began to license manufacturing companies under its automatic machining center patents. Royalties from these sources helped K&T recoup their research and development expenses.

In 1966, K&T was operating at an all-time peak level as manufacturing firms throughout the U.S. and Europe continued modernizing their facilities with Kearney & Trecker machines. Modernization helped these firms offset spiralling labor and material costs, increase manufacturing efficiency and achieve a more competitive position in world markets.

It was also in 1966 that Kearney & Trecker installed, at a cost of 1.3 million, a temperature control system covering the entire manufacturing facilities. This installation, an industry first, increased K&T's capabilities to manufacture more complex, sophisticated and accurate machine tool products. In addition, at this time K&T increased its interest in K&T C.V.A. in England from 66% to 99.7%.

The MILWAUKEE-MATIC Series III-B, K&T's 12th model in its expanding line of fully automated numerically controlled machining centers, came out in 1967. The first

MILWAUKEE-MATIC machining center built at Kearney & Trecker C.V.A., Ltd. (England) was shipped. It was also during this year that NC shipments represented 62.3% of an all-time sales record of \$81 million for K&T, and K&T started customer financing of sales under KTIC (installment contracts).

In early 1967, Kearney & Trecker acquired Gorton Machine Corporation and Cleereman Machine Tool Corporation. Gorton in Racine, Wisconsin, and Cleereman in Green Bay, Wisconsin, had 74 and 50 years experience respectively, in the machine tool business. K&T aggressively pursued modernization programs at these plants along with their plants in Milwaukee and England. In fact, in anticipation of Gorton's expanding needs, ground was broken during the summer of 1967 for a new 160,000 square-foot plant to consolidate Gorton's manufacturing and assembly operations. This project was completed in 1968, the same year Gorton celebrated its 75th, and Kearney & Trecker celebrated its 70th anniversaries.

It was also in 1968 that President Francis J. Trecker was elected chairman of the board and chief executive officer of the company. Executive Vice President John S. Randall was named president and chief operating officer. By this time, K&T offered the world's broadest and most complete line of automated machine tools. Sales for this year reached another all-time high of \$84.8 million, with K&T operating its West Allis plant at a level nearly

twice its planned capacity. In addition, to relieve congestion, particularly in the area of material handling, and to ensure more efficient control of inventories and machine tool planning, the construction of a \$1.5 million, numerically controlled warehouse was approved for this plant. Completed in 1969, the warehouse provided over 800,000 cubic feet of storage capacity.

Kearney & Trecker established a manufacturing sales organization in Japan with the incorporation of Kearney & Trecker Toshiba Company in 1969. Partners with Kearney & Trecker in this new company were Toshiba Machine Company, Ltd., Japan's largest machine tool builders, and Mitsui Trading Company, one of the world's largest marketing exporting firms. This venture significantly enlarged the company's foreign market potential in the Far East.

It was also in 1969 that Kearney & Trecker Ltd. in England opened a 90,000 square foot addition to their manufacturing complex. They won the Queen's Award to industry for outstanding export achievement, and a gold metal citation at the Brno (Czechoslovakia) Machine Tool Fair for the outstanding technical exhibit at this show, an English-built Series Ea MILWAUKEE-MATIC.

In addition, K&T introduced several new machines and systems during this year:

SYSTEM GEMINI, which enabled computers to be linked to factory-wide manufacturing functions. SYSTEM GEMINI was the beginning of today's flexible manufacturing systems;

The MILWAUKEE-MATIC TURN-12, which featured automatic tool changing and had the unique numerically controlled capability of performing the work of a lathe, besides milling, drilling, boring, reaming and tapping operations;

GORTON H-60 MILWAUKEE-MATIC, which was numerically controlled and included automatic tool changing and offered nine basic model variations for varying workpiece machining requirements;

The MILWAUKEE-MATIC MODU-LINE, another numerically controlled machine tool which, through its innovative modular design, permitted users to specify a machining center precisely tailored to their individual metalworking requirements; and

The GORTON TAPEMASTER 3-48, a versatile, large capacity, three-axis numerically controlled contouring machine.

1970

During 1970, Kearney & Trecker felt the severe recessive impact of the U.S. government's fiscal policies to cool the economy and combat inflation. Capital spending by industry was abruptly curbed. Machine tool orders declined substantially. Consequently, operations of the Cleermen Division in Green Bay, Wisconsin were relocated and made part of the Gorton operation.

However, 1970 foreign business and Kearney & Trecker activities abroad remained somewhat bright. Kearney & Trecker Ltd. in England developed a substantial backlog despite a mild downturn in the English economy. A 36,000

square foot plant was completed near Tokyo for the Japanese manufacturing operation of K&T Toshiba Machine Co., Ltd. To expand foreign sales opportunities, K&T formed a world-wide sales/service organization with headquarters in Europe called Kearney & Trecker International Sales. By 1971, though, foreign economies followed the United States' declining course and K&T's English and Japanese subsidiaries endured low level, unprofitable operations.

John Randall resigned as president of Kearney & Trecker in 1972 to enter the management consulting profession. Russell A. Hedden then joined Kearney & Trecker as president & chief operating officer. Prior to joining K&T, Mr. Hedden has been president of the Industrial Group of Bendix Corporation. Under Mr. Hedden's leadership, Kearney & Trecker finally began a slow climb out of the deep economic depression of preceding years, but not before suffering great losses. K&T was forced to reduce its workforce. In addition, it consolidated Gorton's administrative and marketing functions with those at Kearney & Trecker West Allis.

Business at Kearney & Trecker Toshiba Machine Co., Ltd. and Kearney & Trecker Limited in England in 1972 also remained at low levels. In fact, K&T sold half its ordinary shareholdings in Kearney & Trecker Ltd. to W.E. Norton Ltd. in order to cut losses.

Finally by year end, K&T's backlog of unfilled orders

had doubled. The introduction of two new products accounted for almost half of this backlog. One of these products was the MILWAUKEE-MATIC 200, a computerized, numerical control machining center, the first priced under \$100,000. The other was the Flexible Manufacturing System, a computer-controlled parts conveying and machining complex, which enabled manufacturers to take maximum advantage of the production capabilities of their numerically controlled machine tools.

Kearney & Trecker's 75th year was a critical one - a turnaround year. Overseas, K&T's commitments and investments underwent significant reorganization. In Japan, Kearney & Trecker sold 80% of its 50% equity in Kearney & Trecker Toshiba Machine Co., Ltd., reducing its equity to 10%. In England, negotiations resulted in the acquisition of Marwin Machine Tools Limited, a British manufacturer of NC machine tools, by Kearney & Trecker Limited from Marwin (Holdings) Limited. The merger, resulting in Kearney & Trecker Marwin Limited, also reduced K&T's equities in this corporation.

At home, Francis Trecker relinquished the chief executive responsibilities and the firm's board of directors elected Russell Hedden to this additional position. K&T's sales organization was restructured into a product manager concept of responsibility to assist marketing planning and customer relations. Finally by year's end, despite a tight supply of manufacturing manpower

and material, the company's incoming order picture brightened dramatically with a 54% increase in sales. To combat the skilled labor shortage, Kearney & Trecker's Training Center began two-shift, ten-week training courses.

Kearney & Trecker entered 1974 with reinforced initiatives and objectives that resulted in the highest sales and earnings achieved by the company since 1969. While the demand for machine tools leveled off during this year, it did so at a relatively high point with K&T's share of the machine tool market again increasing. It was during 1974 that K&T introduced its Diagnostic Communication System (D.C.S.) for remote location (customer plant site) diagnostics.

Also during this year, still plagued with a shortage of skilled labor, the company continued its Training Center courses, graduating 160 students. In addition, Kearney & Trecker again took action to reduce its corporate investments. Because of its unsatisfactory level of profitability, K&T phased out its Cleereman and Gorton manufacturing operations in Racine, Wisconsin. A major portion of the Gorton line was brought to West Allis and contracted out for manufacturing. The company also further reduced its management and financial responsibilities for Kearney & Trecker Marwin, Ltd.

1975

In 1975, Kearney & Trecker reached the highest

dollar volume in the company's 77-year history. During this year K&T also introduced a Digital Readout System* and an Inch/Metric Dual Dial. These products, placed on new machines and retrofitted on existing machines, allowed machining in either inch or metric dimensions.

As part of a move to eliminate products considered non-essential to the continuing development of K&T milling machines and machining centers, the company sold its Cleereman drilling machine line in 1976. At the same time, Kearney & Trecker introduced a number of new products. They included:

The MILWAUKEE-MATIC 100, a CNC machining center designed for the production of small to medium-sized workpieces;

The MILWAUKEE-MATIC 800, a large CNC machining center accepting production pieces up to approximately one meter cube;

The Unmanned Machining Center, capable of operating virtually unattended for hours under the guidance of a K&T computer control;

An electronic probe, enhancing the remote capabilities of Kearney & Trecker's Diagnostic Communication System;

A Manual Data Input (KT/MDI) control, designed to convert a swivel head, turret-type vertical milling machine into an automatic, two-axis positioning or straight-line milling machine;

A Five-Axis MILWAUKEE-MATIC 200 Machining Center,

allowing low milling, drilling, boring, reaming, tapping and contour milling of parts having compound angular surfaces, in a single setup;

The Mark II Computer Numerical Control (KT/CNC); and

A revised and updated series of MODU-LINE MILWAUKEE-MATIC Machining Centers, capable of heavy-duty machining on a wide variety of part sizes and shapes.

In 1977, K&T continued to expand its order levels and backlogs, recording improved shipments and higher profitability levels. During this year, the company introduced its DATA-MILL 700 Milling Machine for high horsepower cutting on workpieces weighing as much as five tons. Kearney & Trecker also established an Electronic Products Division in 1977, committing K&T to the further design, development and manufacture of computerized numerical controls. In fact, two additions, one 24,000 square-foot in 1978, and another 30,000 square-foot in 1979, were built to house expanded electronic control manufacturing.

During its 80th year of operation, 1978, K&T's net income order backlog and sales were the highest in the company's history. Kearney & Trecker totally divested itself of its interest in K&T Toshiba Machine Company, Ltd. in Japan, and introduced the highly successful MILWAUKEE-MATIC 180 Horizontal Machining Center for a variety of machining requirements in the most useful part size range: the 20-inch cube.

In 1979, Kearney & Trecker, The Cross Company and Roberts Corporation merged. The result was the formation of the Cross & Trecker Corporation, a holding company of K&T, Cross and Roberts. Cross & Trecker became an umbrella for: Kearney & Trecker's computer numerically-controlled machining centers, milling machines, and computer-controlled multiple-machine Flexible Manufacturing Systems; Cross Company's special metalcutting, assembly and testing machines and integrated manufacturing systems; and Roberts Corporation's special automated systems for the foundry and power-generated industries. With this merger, Russell Hedden became president and chief executive officer of Cross & Trecker Corporation. George C. Marakas, executive vice president and a member of the company's board of directors, was elected president and chief operating officer of Kearney & Trecker.

1980 Under the guidance of Mr. Marakas and as part of Cross & Trecker's \$65 million expansion program, in 1980 Kearney & Trecker constructed an 86,700 square-foot plant designed for the machining of major machine tool components. The plant, Georgetown Manufacturing Corporation, was constructed on a 13-acre site in Georgetown, Kentucky. Georgetown Manufacturing Corporation allowed Kearney & Trecker to free additional plant space and capacity for assembly and to become more competitive on machine deliveries with shortened lead times.

In 1981, Kearney & Trecker's growth, research and

constant concern for the needs of industry stimulated another product development, the MILWAUKEE series of MILLING CENTERS and Machining Centers. The series included: The VB-2 Vertical MILLING CENTER, VB-2 Vertical Machining Center, VB-4 Vertical MILLING CENTER, VB-4 Vertical Machining Center and HB-4 Horizontal MILLING CENTER. These machines stressed simplicity above gadgetry.

Today, Kearney & Trecker has approximately 2,000 employees, four major operating divisions and a modern 500,000 square-foot production facility at its headquarters in West Allis, Wisconsin. K&T also has dealer representatives throughout the world with ten direct factory sales offices, eight in the U.S., one in Germany and one in Sweden. Mainstays of the Kearney & Trecker product line are numerically controlled machines, electronic control systems and special machine tools for industries including those in aircraft and aerospace, construction equipment, metalworking, and general industrial and energy-related products.

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