



"When you reach for the stars, you will never come up with a handful of mud."

-George H. Grove



A TRADITION OF EXCELLENCE

since 1907 by Michael A. Mallwitz

8200 North Faulkner Road • Milwaukee, WI 53224 | P: 414.362.7300 | F: 414.362.7319 | BuschPrecision.com



BUSCH PRECISION 105th Anniversary

The Tradition of Excellence

JULIUS C. BUSCH (1907 - 1942)

he J.C. Busch Company was the culmination of a young German immigrant's dreams and hard work. Julius Busch was born in 1873. Several years later, his family moved to Milwaukee, WI. In 1879, the family was granted citizenship.

ARTHUR G.

MOERSCHEL

President

1942-1969

Many German immigrants came to Milwaukee with purpose, skills, determination, and a strong desire to provide a better life for their families. They built houses and planted gardens. They worked, shared trade services, and supplied products. Tanning was one of early Milwaukee's three major industries. It provided employment for many—especially Germans—who knew the trade from "home". Meat packers sold animal hides to tan, while farmers brought grain to be milled into flour and barley for malting; thus the evolution of the three major German-owned industries: tanning, milling, and brewing.

Due to the immigration, Milwaukee was a major manufacturing frontier, as well as the most "German" city in America during the 1880s and 1890s. The city was blessed with many talented industrialist visionaries. They would develop many new machinery ideas that would ultimately create efficiencies in time and labor. This period was clearly marked by the end of the Industrial Revolution. Only the Wright Brothers' airplane in 1903 and Henry Ford's Model-T automobile in 1908 were key inventions that occurred following the Industrial Revolution.

After graduating from high school, Julius Busch went to work for

AUDREY E. GROVE *Owner/Vice President* 1969-2012 Concurrent **GEORGE H. GROVE**

Owner (2012 Concurrent)

CEO (2010-2011)

President (1969-2009)

MICHAEL A. MALLWITZ President 2010-2012

Concurrent

GROVE CEO 2012

BARBARA S.

Concurrent

several Milwaukee companies to develop his considerable machining skills. These experiences led to his achievement of becoming a Master Machinist.

In 1907, Julius C. Busch founded the firm bearing his name in order to offer machine shop services. The facility was located at 162 South Ferry Street in Walker's Point (Milwaukee's early industrial center), now known as the Historic Third Ward. The machinery was belt driven from a coal-fired, steam-powered engine. A key component to the initial success of the company was highly-skilled machining. Equally

important was the design, manufacture, and sale of precision equipment. The major items were precision, tight tolerance "Milwaukee" surface plates, straight edges, and angle plates. Many of these original items are still sold today.

Julius developed close working relationships with pioneer industrialists like Alonzo Pauling, Henry Harnischfeger, Ed Allis, Ole Evinrude, and candy-maker George Ziegler. He enjoyed an especially close friendship with Evinrude, renting him space in his shop

JEROME C. WILLIAMS

BOBBY R. NICHOLS

DAVID J. CHMIELEWSKI Machine Repair Technician 5/30/11

DOUG J. PATRYKUS Quality Manager 2/29/12

Quality 8/08/11

Associates not shown:

CURTIS J. LORD Production Manager (10/10/88)

BRIAN C. NOWAK Machinist (10/19/01)

JEFFREY O. CARSON Machinist (2/28/11)

BRENT C. ALLRED Machinist 9/12/05

JOSEPH B. WIEMILLER Customer Service Manager 3/01/06

ANTHONY M. VENTIMIGLIA Machínist 4/09/08

ANDREW E. ERENYI Machinist 5/19/08

where Evinrude designed and developed the original outboard marine engine. Busch assisted Evinrude with the manufacturing of parts, assembly, and promotion of

this wonderful invention. In fact, Busch bought one of the first ten motors for himself. Julius, his wife Minnie, and son Clarence enjoyed many boat rides from Pewaukee Lake up to their Clam Lake Summer home in the northern end of Wisconsin.

Busch recalls (in an excerpt from the *Old Fellows* magazine): "I went around town telling everyone I saw about Ole's motor. I took orders for Ole. I trusted him. He never forgot me. I'll never forget him."

In 1910, there was a shortage of skilled labor, so J.C. Busch Company became one of the first companies to participate in a state sponsored apprenticeship program. That year was also marked by a major political change; Socialism began in Milwaukee. It made Milwaukee not only the first, but also the most enduring Socialist city in the country. By 1913, a new progressive income tax was implemented that taxed the wealthy at a higher rate than those of more modest income. This had an adverse effect on the entrepreneurs. Consequently, the J.C. Busch Company became a corporation on December 22, 1913. The original Board of Directors/Shareholders were Herman Freutzel (President), Julius Busch (Vice President/Treasurer) and Chas Dowdy (Secretary). World War I began shortly after this incorporation was completed. From 1914 to 1918, the J.C. Busch Company was a major contributor to the U.S. Government's war effort. In 1915, the company developed and began marketing the Milwaukee Sprue Cutter (shown left) to assist foundries in cleaning up their castings.

On January 11, 1922, after completing his Army Tour of Duty in France, future Owner/President Arthur Moerschel joined the J.C. Busch Company as a bookkeeper, engineer, and Secretary for the Board of Directors. Moerschel's engineering background proved to be a real asset in the improvement, expansion, and increased sales of the precision equipment line of products. This expertise also led to the development of a complete line of J.C. Busch cranes and hoists. In 1925, Julius' son Clarence was made a Board of Directors member. Julius Busch viewed Clarence as his heir apparent. When the offer to succeed his father as President in 1933 was made, Clarence broke his father's heart by saying he

DEAN A. KATZKA Assembler 1/12/09

AARON M. LIEDERS Machinist 3/15/10

MURRAY D. BECKFORD Outside Sales 9/01/10

IATTHEW J. ZIMMEL Machinist 2/21/11

BUSCH PRECISION... a Proud American Company

BUSCH PRECISION IS AN AMERICAN COMPANY WHO APPRECIATES THE MEN AND WOMEN WHO SERVE OUR COUNTRY AND MAINTAIN OUR NATIONAL FREEDOM. WITHOUT THEM, BUSCH PRECISION WOULD NOT BE THE SUCCESS THAT IT IS.

GOD BLESS AMERICA

Milwaukee Building History

162 South Ferry Street - Historic 3rd ward

185 South Barclay Street - Historic 3rd ward

6060 West Douglas Avenue - NE Milwaukee

8200 North Faulkner Road - NE Milwaukee

J.C. BUSCH CRANE

had no future interest in the business. As a result, J.C. Busch left the Board of Directors on June 3, 1933. He remained the company President until 1942. J.C. Busch sold Art Moerschel the company that featured his name. Although this arrangement wasn't his first choice, J.C. Busch felt he left the company to a man who would continue to run the company with the same tradition of excellence he established in 1907.

35 Years of Excellence!

ARTHUR G. MOERSCHEL (1942 - 1969)

fter a twenty year career with the company, Arthur Moerschel began his Presidency in 1942. His wife Meta provided him with important office

and banking assistance for the next 20 years. Right in the middle of World War II, Moerschel not only had to continue to assist the U.S. Government with the war effort, but also complete the many projects he had engineered.

With the completion of the war, Moerschel and his team of engineers aggressively

developed and began marketing a series of "Busch Machines" to assist the industrial community:

Coil Takeoff and Tilt Machine

- Milk Turner •
- Paper Stack Inverter
- **Roof Paper Cutter Machine**

In addition, Moerschel continued to expand and aggressively market the Precision Equipment line. By the end of 1951, it was clear that the limited size of the Ferry Street plant was inadequate for the post-World War II growth of the Busch Company. In 1952, Moerschel began an intensive search for a larger property in the Cream City District of Walker's Point. He located and purchased land to build a 14,000 square foot Cream City Brick building, located at 185 South Barclay Street. The move into the new facility was completed in 1953. In recent years, it was occupied by Barclay Gallery and Garden Café, an upscale restaurant, that closed down in 2008.

Moerschel designed, engineered, and produced an aluminum stereo plotter table that was used by the military for interpreting aerial photographs during the Korean War.

In spite of the magnitude of the new building prospect, Moerschel kept looking for ways to serve Milwaukee's industrial community. He hired skilled mechanics to repair or rebuild milling machines and metal stamping presses-this was a strategic success! Companies not only needed their machines repaired, but also needed new or repaired machine parts. This greatly increased the volume of machining work.

In 1954, business was so strong that Moerschel realized he needed a trustworthy assistant if the company was going to continue to grow and flourish. Wishing to change his career from a school teacher, Milt Rusch applied to the company's employment ad. According to Rusch, right from the start (June 14, 1954), Moerschel had a positive feeling about working with him. Milt assumed the duties of Bookkeeper, and was entrusted with managing the Precision Equipment line. Freeing up time in these two key areas allowed the newly named Professional Engineer, Art Moerschel, to complete and apply for a patent on a lightweight honeycomb surface plate design on December 14, 1955. His hard work, imagination, and patience paid off. On February 18, 1958, the first and only patent in company history was awarded. This was the crowning jewel of Art Moerschel's long and distinguished engineering career.

Three of the key shop floor hires of Moerschel's tenure were Art Sharp, Art Wilhelm and Robert Wolff. They each made significant contributions to the growth and success of the Busch Company. Unexpectedly, but equally important, was the hiring of a young Yugoslavian immigrant, Tony Artnak, on January 22, 1957. Tony brought a renewed sense of quality European craftsmanship and would later play a key role as Plant Manager at both the Douglas and Faulkner facilities. The next five years were very successful as the machine repair/rebuilding department continued to grow

THANK YOU

BUSCH ASSOCIATES FOR... MAINTAINING A TRADITION OF EXCELLENCE

MARK WAHLEN

ROBERT A. KRANSKI

ROBERT K. BEHNKE Machíníst 10/16/89

Facílity Maintenance 5/24/99

ROBERT J. HEINZ Shipping & Receiving 7/10/95

MARK S. GROTH

-

DEBRA A. BRODESSER

GARY T. NORTON VP & Facilities Manager 7/31/98

KAREN L. MALLWITZ

Advancing Operations with NEW MACHINERY

s sales increased, more employees were added to the company and Busch made an investment to buy new innovative machines to produce the best quality product and ensure deadlines were met.

Zeiss Computer Manufactured Machine

and prosper. In 1962, Art Moerschel began to realize that after 40 years, it was time to begin positioning the company for the future. He had extensive talks with his son-in-law, George Grove, about joining the company.

George Grove was enrolled at Northwestern University when he was drafted. Grove proudly served in the Navy in World War II. He was eventually assigned to Sipan, Japan as part of the aircraft bombing unit that used atomic bombs to end the war.

After completing his military obligations, Grove finished his senior year at Northwestern University. He earned his B.A. in Business in 1943. More importantly, he met the love of his life and future bride, Audrey Moerschel (Art's daughter), who also earned a B.A. in Business at Northwestern the following year. They were married on May 27, 1944, and George moved to Milwaukee to work as Office Manager at the Square D Company. After 12 years at Square D, he was hired by George Downing (owner of Downing Box Company). Ultimately, he became Downing's right hand man learning important leadership skills. His writing skills proved invaluable in crafting key business letters and promotional pieces. After six wonderful years, this seemed to be the perfect career opportunity for George, but Art Moerschel had other plans. Regular discussions occurred early in 1963 regarding how George could learn from the ground floor up about this very successful 56-yearold business from an experienced professional like Art Moerschel. After much soul searching, the excitement of such an immense challenge inspired George Grove to join the J.C. Busch Company on June 10, 1962.

The learning period was incredibly intense for George. Not only did he need to learn about the various products and services the company offered, but he also needed to master the marketing and sales of Precision Equipment. Sales Manager, Milt Rusch, offered a kind and supportive hand. Contrast this approach with the very demanding style of Art Moerschel and the foundation of George Grove the leader was molded—a fair, but very demanding leader of not only himself, but other employees of the company. His engaging personality and quest for knowledge served George very well with local customers. His passion to promote

Mighty Viper VMC

MILWAUKEE HISTORICAL TIMELINE

KEY YEARS IN HISTORY

- 1907 The Joseph Schlitz Brewery reached its pre-prohibition peak of 1,500,000 barrels of beer
- **1910** Milwaukee Motor and Manufacturing Company opens to produce and market automobiles
- **1927** The Milwaukee Journal sponsors the first radio program on the first radio station, WAAK
- 1943 Due to World War II, women filled more than 25% of Milwaukee industrial jobs
- 1947 First licensed television station signed on, WTMJ
- **1953** City finally got a Major League team the Milwaukee Braves
- 1968 Summerfest opens for the first year
- **1970** More than 406,000 cars in Milwaukee County, one for every 2.6 people
- **1971** The Milwaukee Bucks win the World Basketball Championship
- **1980** A number of Milwaukee's manufacturing companies were ranked on the Fortune 500 list
- 1993 Thousands became ill as a result of Crytosporidium in the water supply
- 1999 Companies spend billions of dollars in anticipation of the "Y2K bug"
- **2003** Harley Davidson celebrates its 100-year anniversary
- **2006** AirTran makes first bid to merge with Midwest Express
- **2007** Busch Precision celebrates its 100-year anniversary
- 2011 Milwaukee Brewers win central division

and develop the Precision Equipment product line was definitely his key to earning the respect of Art Moerschel, who engineered, developed, and marketed these products for over 40 years. George made numerous trips around the country to educate and motivate the company's industrial distributors. He also used his considerable writing and promotional skills to assist Moerschel with a new promotional program called "Checkmates"—a checkerboard layout of the Precision Equipment.

In an effort to solidify the office and accounting operations, Audrey Grove joined the company on October 10, 1964. Milt Rusch was made responsible for managing the Precision Equipment inventory, and assumed the majority of the accounting tasks, while Audrey oversaw payables and receivables. The restructuring freed Art Moerschel to more effectively manage the company and better mentor George Grove for the next four years.

Early in 1969, Moerschel became very ill and asked the Board of Directors for a temporary leave of absence, which was granted. Unfortunately, Moerschel's health declined rapidly. As he was nearing death, Art Moerschel summoned George Grove to his bedside and asked him to take over and carry the company forward. Art advised George that the machinery would need to be replaced in order to compete in the modern machine shop marketplace. This emotional plea, along with George's tremendous passion for the business, allowed him, after major discussions with Audrey, to say "yes". Shortly after Art Moerschel received this peace of mind answer, he passed away in April of 1969. Art Moerschel truly was the man responsible for building a solid foundation and future for the J.C. Busch Company.

47 Years of Excellence!

GEORGE H. GROVE 1969 - PRESENT

AUDREY E. GROVE 1969 - Present

MICHAEL A. MALLWITZ 2010 - PRESENT

BARBARA S. GROVE 2010 - PRESENT

n April 21, 1969, George Grove officially became President and Treasurer, Audrey Grove to Vice

President and Secretary, and Milt Rusch was named Assistant Secretary. Recalling Moerschel's recommendations to modernize the company and better serve its customers, two new lathes and a drill press were purchased and installed by June 1969. These purchases clearly established the Grove philosophy of "continuous/ ongoing improvement" that was to be the centerpiece for the next 38 years of success at Busch Company.

In 1970, a much needed used Hydraulic Planer was purchased and installed to cut the costs of producing Precision Equipment. This move was necessary to hold down costs after the introduction of cheaper Japanese competitors. It was also used effectively to remachine stamping press rams and gibs. In spite of having ten accomplished machinists, Grove faced a skilled labor shortage due to a tight labor market.

It was a good news/bad news period from 1970-1973. There was an increased demand for machining, machinery repair,

and rebuilding services, but the facility was too small for badly needed modern machinery (large swing lathe, VTL and tool grinder) and major rebuilding

Gary Norton to Vice President/Facilities Manager, and daughter Barbara to company Treasurer. For the previous 30 years George had been Mike's mentor. Both men wholeheartedly believe in the philosophy of "continuous/ongoing improvement." The key to Mike moving Busch Precision successfully forward was building a cohesive management team, strong customer service driven sales force, and an ever learning and improving work force. In addition, significant networking and maintaining a modern operation were major prerequisites.

On March 22, Busch Precision achieved ISO 9001:2008 certification. WMEP was hired to complete a SWOT survey and marketing analysis in order to determine Busch Precision's strengths, weaknesses, opportunities and threats. Due to the recommendations, two outside salesmen and an inside salesman were hired, and a sales process was developed and implemented. The increased sales allowed and necessitated an expanded cross-training program for many machinists. Six additional machinists were added to the staff in 2010. As part of the recruiting process, Busch Precision was part of a radio remote program with local station WHQG - Bob and Brian Go to Work. As a result of this, Busch was able to attract a machinist who was later hired. Also, a charitable appeal was made to collect many hats and gloves for needy local children. Busch's participation at the Dallas Wind Exposition, rebuilt website and strategic partnership with Nalani Marketing & Sales, and initial results of the salesmen resulted in a return to sales levels that mirrored those of 2008.

The year 2011 was very aggressive for Busch Precision. In the beginning of the year, Busch purchased and installed a Mighty Viper Vertical Machining Center and significant training was completed. This machine was purchased to serve the needs of generator producers, mining, and wind manufacturers. Due to increased business, and more demanding requirements from its customers, Busch Precision hired nine machinists and two mechanics. A significant amount of time and money was invested to ensure this new staff would be fully productive by the end of the year. In Busch's efforts to improve the marketing message, a first time video tour was added to the website. Two *Lunch and Learn* programs added business to the CMM inspection department as well as precision tooling sales and recalibration.

As a whole, 2011 produced similar results as 2010, but definitely was an important major step for the longterm growth of the company. At the end of the year, George Grove retired as CEO and maintains ownership status only. Extreme optimism for 2012 exists among the leadership at Busch Precision. The significant investment

Mike Mallwitz, LIVE on Bob & Brian on 102.9 The Hog

in quality machinery, sales/marketing, and skill training, the past five years serve Busch Precision's customers in a major way in its 105th year of existence. The company is no longer merely a job shop. Founder Julius Busch would be very proud of the world-class technologically advanced manufacturing facility it has become.

On behalf of the entire Busch team, thank you for your interest in our story. Please take comfort in knowing we are your Precise. Proven. Partner. Our major goal can be summed up in George Grove's favorite credo said by St. Jerome:

"Good, better, best. Never let it rest. 'Til your good is better and your better is best"

Gratefully,

Michael A. Mallwitz

United States of America State of Wisconsin, Co All to Whom Chese Presents Shall Come, Greeting. 1.1.5. Donald, Secretary of State of the State of Wincomin, do hereby certify that the original Articles of Organization of the ... J. C. Basels Company A. D. 1013, accepted and filed in the Department of State. In Testimony Whereof, I have hereanto set my hand and affired my official seal at the Capitol, in the city L'S Magler

MILWAUKEE MAYOR, TOM BARRETT AND WI GOVERNOR, JIM DOYLE, WITH BUSCH ASSOCIATES

the company. President George Grove went to parttime status. Business was strong for the entire year and outpaced 2006. The installation and training completion on the new 145" CNC Giddings & Lewis (G&L) Vertical Turning Center and 5" CNC Giddings & Lewis Horizontal Boring Machine were major accomplishments. The ongoing efforts to modernize the office and shop operations included the purchase, installation, and training of the new E2 software installed on new computer hardware. October 5th was marked by a very special Open House celebration for customers, key suppliers, and vendors. Clearly, 2007 will be remembered as a year of extreme pride among the associates who were part of a very historical milestone.

The year of 2008 was one of major struggle due to the declining national economy. In an effort to secure large boring and vertical turning work, Busch Precision participated in the Atlanta Cast Expo. Although this effort generated new sales, unfortunately, the year ended horribly. By December, national job losses were the worst since 1974.

The National Recession worsened through the first three guarters of 2009. The US economy was marked by heavy layoffs and extreme tightening of bank financing. To counteract these major obstacles, a major commitment was made to investigate and fully implement an ISO9001:2008 Quality Program. In addition to this, Busch Precision upgraded its website by offering users and customers easier navigation and greater visibility. Due to the weak economy, two very important machines, the 4" G&L Boring Bar and 7" G&L Boring Bar were removed from production in spring sea designed to replace the slower steam-driven system).

October 21, 2009 was a red letter day for the company. Hosted by Busch Precision, WI Governor Jim Doyle, Milwaukee Mayor Tom Barrett, Dr. Michael Townsend (President, Milwaukee Area Technical College-Mequon), a Broadstar wind representative, and the Executive Board of the Tool, Die & Machining Association of WI participated in a summit to develop ideas for a better partnership between

Government, education, and manufacturing. Vice President, Michael Mallwitz, organized and hosted the event. This meeting was an important foundation for future government and technical college relationships with Busch Precision. To satisfy customer quality requirements and attract additional challenging projects, the purchase and installation of a Zeiss Prismo CMM and climate-controlled room occured in December. While 2009 was a very disappointing year, it ended on an extremely high note.

In a wave of optimism, 2010 opened with a slew of changes. George Grove became CEO and promoted Mike Mallwitz to President,

and thoroughly rebuilt.

After a summer of horrific

sales, September began a

run of four very positive

months. For three months,

teams of Busch associates

participated in the

reconditioning of bearings

for the nuclear reactor

at Cook County Nuclear

Plant in Michigan. At the

end of September, Busch

was awarded a two-

year commitment by a

naval supplier to provide

machine components

for the EMALS program.

(EMALS is an aircraft

launching system/

electrical generator

system on-board ships at

WI GOVERNOR, JIM DOYLE, **OBSERVING THE EVINRUDE** MOTOR IN HISTORICAL SHOWCASE ROOM

projects. In 1973, a comprehensive search was undertaken throughout Milwaukee for an up and coming industrial park in which to build a new, state-of-the-art facility.

George and Audrey selected a very convenient site on the rapidly growing Northwest side of Milwaukee at 6060 West Douglas Avenue. Coincidentally, Evinrude Motor Company was located one block to the west of the new property. In 1974, construction began on the beautiful, 40,000 square foot facility, complete with overhead cranes. Business remained strong in both 1974 and 1975 due to the major demand for machine shop work. By mid 1975, the move to Douglas Avenue began and by the end of the year, it was complete. George, Audrey, and Milt definitely breathed a collective sigh of relief after completing such a major-league project to ensure the company's future.

The new challenges of 1976-1977 included increased machining demands and restructuring of casting, steel, tooling, and fastener storage. However, the number one problem George faced was finding skilled machinists and mechanics. This problem was compounded with the retirement of several key long-time machinists. To combat this looming crisis, George reinstituted the apprenticeship program. The Milwaukee Public High Schools and Milwaukee Area Technical College became key partners. To nurture this new group of employees, George appointed Tony Artnak as Plant Manager. Both years produced modest sales growth compared to 1975.

George knew that instilling a total commitment to precision and quality was essential. Tony Artnak had completed a very rigorous apprenticeship in Yugoslavia prior to fleeing the communist regime. Tony was trained to the highest standards, which made this decision a no brainer. To ensure that the increased demand for keyseating was satisfied, a Mitts and Merrill Hydraulic keyseater was ordered in November. Nineteen-seventy eight was definitely a year of promises and challenges. Although business sales volume was up over 25%, the year presented two major issues; 1) the continued shortage of skilled labor and 2) extremely high inflation. This made retaining employees very difficult and the hiring of experienced machinists and mechanics nearly impossible.

The year 1979 was basically a carbon copy of the previous year; sales were up 25%, with continued labor shortages

BEFORE & AFTER REBUILT LANDIS GRINDER

and increasing inflation. One major difference was that George Grove reached the point in the company's history just like Art Moeschel before him, when he felt compelled to hire and mentor an inexperienced assistant to learn the operation from top to bottom. Recent UWM graduate, Mike Mallwitz, began his employment on October 1, 1979. He was immediately thrust into the day-to-day customer service of many of the key local customers. One of his duties included the pickup and delivery of all jobs and quotations. Another key area of his initial indoctrination was the purchasing function; finding and establishing relationships with companies who could save Busch Precision time and money in these very inflationary times without sacrificing quality. George continued this quest to improve the

company by developing shop capabilities literature, a new precision equipment catalog, and exploration of which machines would be needed in the next two to three years.

A major recession gripped the United States as 1980 ushered in a new decade. The overall effect of this period was a trend towards longer lead times for accounts receivable, thus a continual examination of all expenditures was required. Fortunately, the demand for large machinery rebuilding grew steadily throughout the year. This growth resulted in a severe space problem. George began investigating a building expansion. The company also purchased a 40" swing TOS engine lathe along with an overhead crane to address material handling deficiencies. In addition, George completed the prototype design of a new machinist straight edge as well as launching a promotional campaign that included new literature.

To combat the space problem, a 10,000 square foot building expansion began in May 1981 and was completed in September. In November, a used slotter was purchased and installed. The recession continued throughout the entire year, making new hires easier to come by.

The recession had a very profound and negative effect in both 1982 and 1983. The Great Lakes Region became known as the "Rush Belt". Both years were signified by cost cutting measures and a slight decrease in sales from 1981.

After 30 years of full-time service, Milt Rusch decided to semi-retire and only work two to three days a week, while remaining on the Board of Directors. Retaining Milt parttime was a vital move since he was able to continue to oversee the office functions, as well as provide training for the sale of Precision Equipment.

The momentum from the previous year continued in 1985. Sales were strong and the number of employees reached 22. Barbara Grove, daughter of George and Audrey, joined the Board of Directors as Assistant Treasurer. To ensure that the company would not become landlocked as a result of future growth, 1 3/4 acres of land adjacent and north of the existing property was purchased. Storage improvements and tooling expansion capped off a very successful year.

Coming off back-to-back successful years, George was faced with many important decisions in 1986; planning for future space requirements, building a new generation of Busch machinists and mechanics, and the modernization of the machine tools. With continual strong demand for machining and machine repair, four apprentices were added. Two new state-of-the-art Harrison engine lathes were purchased and installed early in the year. Sales were aided by an increase in Precision Equipment sales. Nineteen-eighty-six was marked with increased overall sales and the beginning of modern technology at J.C. Busch Company.

To combat the increased demand for large machining, a new Giddings & Lewis boring bar was purchased and installed in the first quarter of 1987. This represented the most expensive machinery purchase to date in the company's history. To solve a growing storage problem due to increased sales in large machining and machine rebuilding projects, a major expenditure was made on storage racks. Sales improved for a fourth consecutive year.

Having completed over 20 years of successful leadership, George and Audrey Grove were challenged

with the most important decision in the company's 80 year history. Entering 1988, space concerns coupled with the need to upgrade machinery with new, more expensive replacements were huge challenges facing the company.

The easy answer was to sell the company and let someone else worry about it and enjoy retirement. After many sleepless nights, the Groves decided to step up to the table in a major way on behalf of the customers, the employees, and the honor of the company's storied past.

In July, an offer was made and accepted by the Milwaukee Department of City Development for a 7.5 acre site in the new Bradley Woods Business Park on Milwaukee's northwest side. Construction began almost immediately on a 140,000 square foot state-of-the-art facility at 8200 North Faulkner Road. This location was extremely important so the company could continue its Milwaukee heritage.

Meanwhile, 1988 was a very

successful year in terms of sales. Five new employees were added, bringing the total to 31, an all-time high. A new Precision Equipment Catalog, which included several new items, was completed and distributed. Demands for machining services grew as well as overall sales. Preparation for moving began, accompanied by a tremendous sense of excitement.

With a September move on the horizon, preparations for the move, along with increased production hours, consumed the first eight months of 1989. Three additional employees were added to the staff. A strong

and dedicated effort starting in September by the entire company allowed the move of all machinery and equipment to be completed by mid November. In spite of all the disruption, 1989 was a very successful year. As if the move wasn't impressive enough, the ordering of a new Danobat Surface Grinder was the frosting on the cake. While Douglas Avenue had served the company well, a new decade of challenges required a much larger home.

The decade of the 1990's was ushered in at a sprinter's pace. The fine tuning of the plant was completed in the first quarter. The Douglas Avenue facility was sold to Starline Manufacturing, a high-quality foundry

100TH YEAR ANNIVERSARY Employee & Customer Open House

EVENT HIGHLIGHTS

Thursday, October 4, 2007 - Busch hosted an employee family/friends Open House where the employees shared what they do on a day-to-day basis by having a plant tour and also, enjoying a catered dinner. The evening was a success and an enjoyable time! 40+ were in attendance.

Friday, October 5, 2007 - Busch invited its key customers and vendors to tour the facility. The event included a barber shop quartet, a pianist, a Milwaukee artist, quality food, and a professional photographer. 60+ were in attendance. of brass castings. New promotional materials were completed and distributed. An expanded sales effort was pursued aggressively by George and Mike. Seizing a fantastic opportunity to improve Busch's welding

capabilities, the welding machinery of Automatic Weld and Machine Company was purchased after its owner decided to retire.

The modernization of the office began with the installation of computers. To better serve one of the major customers, a computer-controlled Schenck Trebel balancing machine was added. Personnel grew to 44, and sales continued to increase all year. It was inherently clear to George that the 1990's would be a decade of major machinery upgrades in order to survive in a new global marketplace.

As luck would have it, a mild recession gripped the United States. While sales slowed slightly, 1991 was a very exciting year for Busch's "continuous improvement" policy. The following machinery was purchased, installed, and outfitted with the necessary tooling and

accessories:

- Used 7" Giddings & Lewis Boring Bar with rotary table (rebuilt by the machine repair department)
- Like-new 54" Bullard Vertical Turning Lathe
- Used Fosdick Jig Borer
- New Mori Seiki CNC Lathe
- New Granite Surface Plate for inspection and quality control
- New Danobat Surface Grinder

On April 25, 1991, the corporate name was changed to Busch Precision, Inc. This was an effort to describe the company's type of work, honor the founder and end the confusion over the first two initials (J and C). The year ended on a strong note with the ordering of a new Kobe Diesel Vertical Turning Lathe.

The delivery and installation of the Kobe Diesel VTL in the first quarter of 1992 got the sales of larger machining off and running. To keep the sales momentum up, the following equipment was purchased and installed:

- Rebuilt 74" Bullard Vertical Turning Lathe (shown above)
- A used 4" Giddings & Lewis Boring Bar
- New welders and accessories

George completed the redesign and prototype of the Aluminum Straight Edge line (adding lightening holes, which reduced weight considerably). The initial marketing was a major success. The year was fair in terms of total sales compared to the previous several years.

The ongoing recession caused 1993 to parallel the previous year in terms of sales. Major hurdles would exist for the forseeable future due to increased government regulations and a shortage of skilled labor. George and Audrey stayed true to their goal of building and maintaining a modern, technologically superior facility. The following purchases were proof of their resolve:

- New TOS Engine Lathe
- Rebuilt 54" Bullard Vertical Turning Lathe
- New patterns and aluminum castings to introduce the new, lightweight precision ground Straight Edges (2 to 16 feet in length)

In anticipation of the delivery of the aluminum straight edge castings, a second Danobat Surface Grinder was purchased and installed in early 1994, which would ensure immediate completion of this important new product. Another new product line was soon to be added; replacement parts of zinc, aluminum, and magnesium die cast machines. After completing the repair of a housing called a gooseneck for a local die caster (which was a firsttime project), Mike received a call several days later from another local die caster. They heard about the success Busch had repairing the gooseneck. Likewise, they sent in a gooseneck that was successfully completed. Several weeks later, Mike received a phone call from the head of a sales representative agency in Ohio who had heard throughout the industry that Busch Precision had success repairing goosenecks, and wanted to have his agency represent Busch Precision in the die cast community. After thorough investigation of the industry, it was determined that since World War II, over 50 manufacturers of die cast machines were still in use. There were only two very active suppliers of goosenecks and mating parts for these machines and their quality was very substandard. As a result, a meeting with George, Mike, and the sales representative agency was held. A discussion of their possible representation of Busch Precision, as well as providing key suggestions for which components to stock and possible design improvements took place. All the meeting objectives were achieved due to the collective effort of the sales representatives, production manager, engineer, pattern maker, several foundries, and the collective marketing/purchasing effort of George and Mike. Busch Precision was now an important resource to die cast companies. To support the manufacture of die cast replacement components, a new Danobat Cylindrical Grinder was purchased and installed in November.

For the year, sales were up over 20%. It appeared the recession had ended.

To build on the momentum generated in 1994, George made 1995 a very aggressive year by purchasing the following machines:

- New Giddings & Lewis Ram 630 Machining Center
- New Giddings & Lewis 5" CNC Boring Bar
- New Bridgeport EZ Trak Mill
- New Danobat Surface Grinder
- New Mori Seiki CNC Lathe
- New Bridgeport CNC Vertical Machining Center
- Reconditioned 64" Bullard Vertical Turning Lathe

The expansion of the die cast inventory throughout the year made the sales reps very effective. An important addition to the staff in May was Pete Gies. He brought considerable machining skills to the table to use on the new 5" Giddings & Lewis CNC Boring Bar as well as strong management skills to assist the Plant Manager. Sales for the year finished higher than 1994 and the company had fully embraced CNC Machining Technology.

The following year can best be described as a training year after the massive investment in new, state-of-theart CNC machinery in 1995. Sales declined slightly for

the year.

The company's 90-year anniversary in May 1997 proved to be a very successful presentation to the major customers of how the company had modernized and could better serve their needs. The first trade show presence at the Minneapolis Die Cast Exposition gave the new product line a much needed major public exposure. The machining department continued to improve performance on the new CNC machinery. Unfortunately, in the area of sales, a major customer drastically cut their business with Busch Precision, though several new accounts were added to offset this loss in sales. Nevertheless, a large investment was still made in tooling and accessories for the machinery.

The next year opened immediately with the disappointing and unexpected resignation of the Plant Manager. In January 1995 he opened his own machining shop, thus explaining the previous year's drop in sales of a major customer. Shortly after he departed, five other associates left to join him. This clearly was a hurtful betrayal to George, Audrey, and the entire Busch staff. After the initial shock wore off, George acted quickly in establishing Pete Gies as Production Manager. Pete had an extensive supervisory background. He used 1998 as a year to develop his style of individual growth. The high-quality standards that had eroded at the end of 1997 were quickly restored. A second important player was added to the Busch team on July 31. As a former regular customer whose company closed, Gary Norton immediately improved the customer service presence to every customer who brought in an order to the plant. George made a very strong effort to hire skilled machinists and apprentices to replace the defectors. A new, positive management approach was apparent. Employment reached an all-time high of 50. Increased promotional efforts coupled with stronger direct sales contacts definitely contributed to major sales increases for 1998. This resulted in the purchase of the following items to aid the machine shop and service departments respectively:

- New Bonel Vibratory Stress Relieving System
- New 4 ft x 8 ft Climax Portable Milling Machine

The closing of the century was marked by the death of Milt Rusch on January 29, 1999. His patience, kindness and most of all, his dedication was a huge loss to his beloved wife Ruby, as well as any Busch associate, past or present, who knew Milt.

George gave sales a real boost in the first half of the year with stream-lined service bulletins. In order to continue to be an effective modern facility in a global economy, Pete and Mike did intensive market research with their large component customers to determine how they could be better served. Almost unanimously, their recommendation was to add large diameter CNC Vertical Turning machines. After a year-long investigation, it was determined that Giddings & Lewis still produced the best machine tools to serve Busch customers.

George reviewed and approved the purchase of two new Giddings & Lewis VTCs (84" diameter swing/180" diameter swing) late in 2000. This was truly an impressive way to open the next century of business.

Due to a yearend stock market dip in 2000 and worldwide economic downturn, there were massive layoffs in both manufacturing and the high tech sectors of business-2001 started off slowly. This proved to be minor in comparison to the unbelievable tragedy that resulted from the fall of the Twin Towers and the damaged Pentagon on September 11. Not only were many lives needlessly lost, but economically, Busch Precision, like

so many companies, was deeply hurt for the remainder of 2001 and all of 2002. The negative ramifications and uncertainty of world terrorism put the business world in a psychological state of gridlock.

Knowing that 2002 was going to be a difficult year, George made a very astute business decision; rather than layoff workers like many other companies were doing, time and money was invested on cross-training machinists on several machines. All necessary repairs on equipment were made in preparation for a 2003 comeback. In November, George promoted Mike Mallwitz to Vice President/General Manager and Gary Norton to Facilities Manager to oversee the day-to-day operation of the company. A cost-cutting program for the end of 2002 and all of 2003 was implemented. Sales fell short of expectations in 2002.

As if George had had a crystal ball, 2003 opened with much stronger sales, which continued throughout the year. Cost

cutting measures, well-maintained and machines, versatile machinists maximized the year's potential as he had envisioned.

"The terrorists did not defeat the United States or Busch Precision!"

With a strong feeling of optimism, 2004 opened in a very positive manner. This improvement led George to approve the purchase and installation of another 96" Giddings & Lewis CNC Vertical Turning Center. The closing of a local manufacturer's plant allowed Busch Precision to greatly expand its capabilities at an attractive price:

- 6" Giddings & Lewis CNC Boring Bar
- Carton Drill Press

BUSCH PRECISION BOOTH AT THE ATLANTA CAST EXPO IN 2008

- Harris Freezer
- Assembly base with stands
- Oil tank with heater for assembly projects
- Tap extractor

This plant closing resulted in the outsourcing of a significant volume of machining and assembly work to Busch Precision. To replace an aging fleet of vehicles, George approved the purchase of three new GM vans and three new Chevy pickup trucks to continue timely and quality service for all Busch customers. These events made 2004 a successful year for sales and ongoing improvements.

The 2005 economy was extremely strong. The internet was now a very vital part of the business. Significant time and money was invested into the design and launch of a first-class website. To quickly process the growing number of drawings sent with orders and quotation requests, an OCE Wide Format machine was purchased. To produce professional proposals, a color Konica copier with a scanner for photos was added. Busch Precision truly became part of the information age in 2005. A new large swing Nardini engine lathe was added due to improved sales over 2004.

The strong US economy continued in 2006 at Busch Precision. Sales remained strong throughout the entire year. Due to the increased world demand for energy and the need for infrastructure in third and fourth world countries, large machining requests and long-term partnership opportunities were abundant throughout the year. As they've done so many times in their distinguished careers, George and Audrey approved the purchase of a new generation 145" CNC G&L Vertical Turning Center and a new 5" CNC G&L Horizontal Boring Machine to continue the improvement of Busch Precision to better service its