

WESTERN MASSACHUSETTS NTMA MEMBER LEGACY LIVES ON

WMNTMA makes an educational contribution through the Larry Maier Memorial Fund. — p. 3

BIG KAISER GIVES TO NRL WITH YOUR PURCHASE

Build your shop for 2017 and your purchase will help build your workforce for years to come. — p. 7

PROTECT YOUR INSTITUTIONAL KNOWLEDGE

What your company knows is one of your greatest assets. Here's one way you can protect it. — p. 11

JD MACHINE NAMED MANUFACTURING HERO

This NTMA member company's educational programs caught the eye of Grainger leading to a special distinction. — p. 27

OFF AND RUNNING!

CONFERENCE ATTENDEES PAUSE FOR A QUICK PHOTO OPP BEFORE LINING UP FOR THE INAUGURAL 5K RACE AT THE NTMA FALL CONFERENCE. SEE ALL OF THE CONFERENCE HIGHLIGHTS ON PAGES 14 - 19



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WELCOMES
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LaOtto, IN 46763

XOMETRY

General
Mr. Tom Kurke
7951 Cessna Ave
Gaithersburg, MD 20879



MANUFACTURING AMERICA'S FUTURE

UPCOMING NATIONAL EVENTS AND TECHNICAL SEMINARS

February 8th, 2017

Plant Managers Roundtable, Boston, MA

February 19th - 21st, 2017

Chapter Leadership Summit, Austin, TX

March 8th, 2017

Employee Management & Benefits Roundtable,
Chicago, IL

March 22nd - 25th, 2017

The MFG Meeting, Amelia Island, FL

April 5th, 2017

Sales & Marketing Workshop, Cleveland, OH

April 6th, 2017

How To Be A Top Shop, Cleveland, OH

April 24th - 26th, 2017

Emerging Leaders Conference, Denver, CO



PRESIDENT'S UPDATE

DAVE TILSTONE / NTMA PRESIDENT

As we approach the end of the year and reflect on 2016, most would concur that it has been a challenging year. Many business owners have told me that the uncertain and unpredictable business climate prevented them from making investments in equipment and people. Like many who follow our industry, our members attributed the whip saw business climate of 2016 to the strong dollar, the continued effects of low oil prices, the agriculture, heavy off road and mining equipment manufacturers seeing double digit declines, the general weaknesses in the world economies, and of course the presidential election. Personally, I'm glad to have 2016 in the rearview mirror. All of the above factors also affected the NTMA's ability to grow membership, attendance at conferences and regional workshops, and sponsorships from our partners. However challenging the economy, we significantly grew NTMA-U and the NRL-- investments in our future.

NOW FOR THE GOOD NEWS:

The election is over! I have heard the presentations of four highly respected economists over the past 30 days and they are all forecasting growth in manufacturing for 2017. They also predict GDP growth in all of the major world

economies! In summary, U.S. industrial production growth for 2017 is expected to be two percent with inflation remaining low. Additionally, growth is forecasted through the first half of 2018. The growth industries continue to be aerospace and medical.

Because of the number of new car models being introduced in 2018 and 2019, tool and die should continue to see good growth with one caveat-- many of these new models are low volume with shorter life cycles and therefore will put more pricing

pressure on tooling suppliers. OEM's will be producing more "specialty" models (less than 100,000 units per model year) so amortizing tooling over fewer cars means less profit for the auto makers.

Light vehicle production is estimated to grow two to three percent as a result of the new models and replacement of older vehicles (the average age of a car in the US is still over 11 years old).

Our major competitors in Europe are dealing with Brexit, significantly higher energy prices, and negative population growth. Regarding China, a quote from Alan Beaulieu at the AMT Global Forecasting and Marketing Meeting summed it up: "China will fake it until they make it." He also added that their

banking industry needs major repair, and as a result of their now defunct one-child, one-family rule, demographics will also impact their ability to fill manufacturing jobs. Another economist noted that the cost of manufacturing in the U.S. is only five percent more than in China.



Capacity utilization statistics in the US also support growth for 2017. More capital goods will be purchased so production can keep up with demand, and in some market segments inventories will also need to be replenished putting additional pressure on current capacity.

2017 looks very promising for NTMA members. Perhaps the best way to capitalize on the growth opportunities forecasted for next year is for me to summarize how NTMA members grew their businesses in 2016:

- Differentiated their companies from their competitors
- Invested in more efficient machine tools and processes
- Explored opportunities outside their region and the U.S.
- Introduced and utilized automation
- Invested in their people with technical

CONTINUED ON PAGE 5



THE RECORD

OPERATIONS & EDITORIAL

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Molly West, Editor

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- and management training
- Increased their focus and resources on marketing and sales
- Utilized the data they collect from their shop floor to be more efficient and drive metric based decision making
- Learned best practices from other NTMA members and partners of NTMA

NTMA provides opportunities for its members to accomplish all of the items listed above. Please take advantage of your membership in 2017 to help your company prosper and grow!

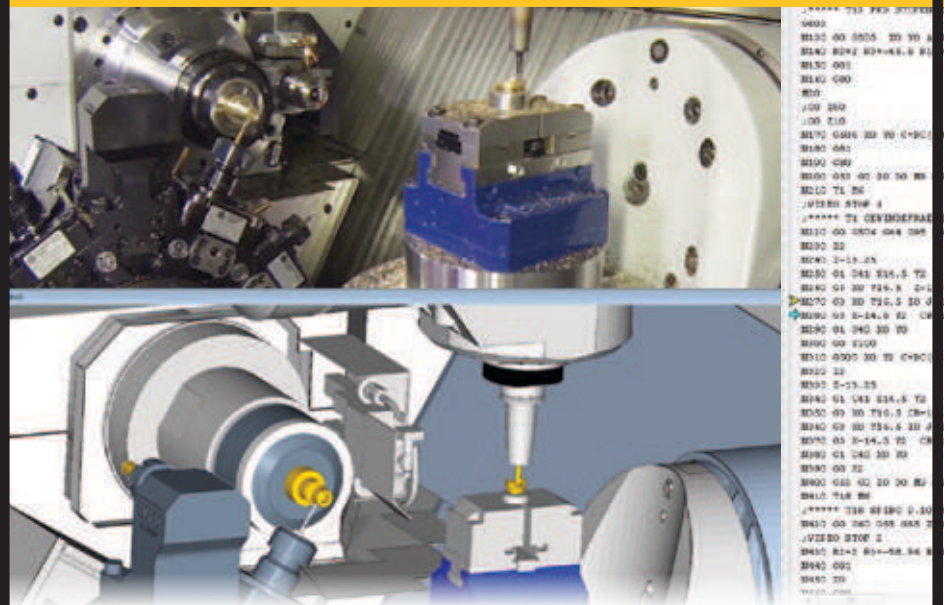
In closing, on behalf of the Executive

Committee and the NTMA team, we wish you a safe and happy holiday season. Let us help you realize the potential 2017 offers you and your company. Thank you for your membership!

DAVE TILSTONE / NTMA PRESIDENT



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LAST PLANT MANAGERS ROUNDTABLE OF 2016 WAS A GREAT SUCCESS!



Plant managers, general managers, engineering managers and others gathered on November 16 in Englewood, Colo. for the last NTMA Plant Managers' Roundtable of 2016. Reata Engineering and Machine Works opened their doors to welcome this NTMA group. These roundtables are growing in popularity thanks to focused material and great networking. If you're interested in manufacturing plant operations, this is the place for targeted information and discussion. **IF YOU WEREN'T ABLE TO MAKE IT TO THE NOVEMBER SESSION, HERE'S WHAT YOU MISSED:**

- When Do I Need Metrology Equipment vs. A "Universal" CMM led by Eric Oberg, ZEISS

- New Trends in Milling Technology: Outperforming Overseas Competition led by Wade Anderson, Technical Centers and Product Specialist Sales Manager, Okuma

- Lean Manufacturing led by Mark Lilly, Partner and Director of Sales & Marketing, Synergy Resources

- Collaborative Robotics: The Future of Manufacturing led by Troy Sather, FANUC

- Grady Cope, Reata Engineering and Machine Works, moderated the afternoon's roundtable discussion.

Additionally, attendees had the opportunity to tour Reata Engineering. While the majority of attendees were from the Colorado area, we also had registrants from as far as Pennsylvania.

The next Plant Managers' Roundtable is slated for February 8 at Modern Industries in Phoenix, Ariz.



NOW ACCEPTING NOMINATIONS FOR THE NTMA TECHNOLOGY EXCELLENCE AWARD

The NTMA Technology Excellence Award is designed to recognize and share excellence shown in technology fields and strengthening the precision contract manufacturing industry. We are currently accepting nominations for the Technology Excellence Award.

The Association for Manufacturing Technology's (AMT) Technology Issues Committee (TIC) is a proud sponsor of this award and has underwritten the NTMA Technology Excellence Award in the amount of \$5,000. Each award recipient receives \$2,500 (less trophy and shipping, etc.).

The Technology Team focuses on two award categories: Technology and Business/Cultural Practices. Each focus is broken down into two subcategories:

TECHNOLOGY: ADVANCED DEVELOPMENT AND/OR INTEGRATION:

Advanced manufacturing technologies are strategically targeted or developed in order to achieve improved results in



Nathan Byman – Owner, Wolfram Manufacturing. 2016 Technology Excellence Award – Category 1 and 2

the following core fundamentals; market developments, throughput, scrap, and/or safety. Proven technologies are integrated with pre and post processing technologies in ways that improve core fundamentals. Technologies developed or adapted are innovative and "rare." Technologies are used to elevate the work of people through growth, not replace people.

SEE "TECHNOLOGY" ON PAGE 21



LIMITED TIME OFFER: YOUR PURCHASE FROM BIG KAISER RAISES FUNDS FOR THE NRL!

BY DANA SUPER, BIG KAISER

NTMA National Associate Member, BIG KAISER is offering a win-win for NTMA members. Build your tooling while building your future workforce.

Now through December 31, 2016, choose best-in-class cutting tools, tool holders and workholding products from BIG KAISER and the company will donate two percent of every order from an NTMA member company directly to the National Robotics League (NRL).

"This is a way for us to support our customers and members in the NTMA, and to promote workforce development and STEM programs through the National Robotics League," explains Chris Kaiser, President/CEO of BIG KAISER.

THERE IS NO ORDER MINIMUM OR MAXIMUM. To take advantage of the offer, you must meet these two requirements:

1. When you place your order through your local distributor, request "drop-ship from BIG KAISER."

2. Reference "BK-NRL" as a line item on your order so that every dollar counts toward the donation to NRL.

"We have helped many NTMA members reduce set-ups and cycle times, improve part finishes, and reduce costs through longer tool life. We hope this year-end offer will encourage those who haven't tried our products yet," says Kaiser.

For those who aren't familiar with BIG KAISER, there are nine product lines of precision tooling, workholding, and tool management systems aimed at reducing both the overall process time and the cost per part. Popular products include face mill holders, end mill holders, collet chucks, angle heads and tapping adapters. The world-leading BIG KAISER Boring System, high performance Sphinx Drills and Unilock Workholding systems are also available, as are CAT, BT, HSK and BIG CAPTO systems. If your machine is equipped with a BIG-PLUS® spindle,



remember that BIG KAISER is the official licensed provider of BIG-PLUS® tool holders in North America. To view or download the latest product guide or find your local distributor, visit: www.bigkaiser.com.

Be sure to place your order before December 31, 2016 to benefit the NRL!



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MFG DAY EVENT IN NORTH TEXAS

SUBMITTED BY KARLA CHANDLER, NTMA NORTH TEXAS CHAPTER

For the first time, North Texas NTMA members worked together to host MFG Day events at two separate locations to celebrate Manufacturing Month in 2016. NTMA volunteers hosted guests at Richland College, a Dallas County Community College Program; and Lincoln School of Technology. Manda Machine and Applegate EDM also invited students to tours and presentations at their shops. Nearly 150 students and educators representing eight different school districts attended.



National Chairman Herb Homeyer with St. Louis Chapter's 2016-17 Board of Directors at their November installation: (L-R front row) Micki Vandeloo, Pat Walsh, Tim Wetzel and Chapter President Mark Bockerstett. (L-R back row) Brian Gesme, Darrel Keesling and Jason Quinn. Not pictured: Darrell Songer and Mike Wente.



ST. LOUIS
CHAPTER

ST. LOUIS NTMA KEEPS ANNUAL FIRST TUESDAY TRADITION

As is the tradition, the St. Louis Chapter held their board of directors' installation on the first Tuesday of November. Board members were sworn in for 2016-2017 and members received an industry update from the National Chairman Herb Homeyer at their annual meeting.



YOU'RE INVITED: LA/NTMA INDUCTION DINNER

The LA/NTMA will host their annual induction dinner at Tommy Bahama Restaurant in Newport Beach, Calif. on Saturday, January 28 where 2017 officers will be sworn in. The fun evening celebrates the association's achievements from the past year and outlines 2017 board initiatives. All members and industry members welcome. Email Kaity Rosengren, Los Angeles Chapter Executive, for more information: kaity@lantma.org.



WMNTMA DONATES 3D FILAMENT AND \$1,000 TO LOCAL TECHNICAL COMMUNITY COLLEGE IN HONOR OF THE LATE LARRY MAIER

INFORMATION PROVIDED BY JAMES DANKO, MEDIA RELATIONS, SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

Western Massachusetts Chapter of the National Tooling and Machining Association (WMNTMA) donated filament for 3D printing and a monetary gift of \$1,000 to the Springfield Technical Community College Foundation this fall for the Mechanical Engineering Technology and Robotics programs at the college. The donation comes from The Larry A. Maier Memorial Fund, named for the late owner of Peerless Precision in Westfield, Mass..

During his lifetime, Larry Maier was very involved with the WMNTMA and worked to make sure the younger generation received a proper education to pursue a career in precision manufacturing, according to his daughter, Kristin Carlson, vice president of the board of directors of the WMNTMA and president of Peerless Precision.

"When he passed away in 2012, my aunt suggested we start a scholarship fund in his name to keep that legacy going. We started the 'Larry Fund' in October 2012. The board of directors at NTMA was completely behind it," Carlson said.

Each year, the WMNTMA holds a pig roast to raise money for the Larry A. Maier Memorial Fund. Carlson said a colleague brought 20 rolls of leftover filament for 3D printing to this year's



From left to right: Dr. Adrienne Smith, Dean of the STCC School of Engineering Technologies and Mathematics; Debbie Maier, CEO, Peerless Precision, Inc.; Kristin Carlson, President, Peerless Precision, Inc.; Gary J. Masciadrelli, Department Chair of Mechanical Engineering Technology, STCC.

roast.

"He said I'd like to donate this to the Larry Maier Fund and the NTMA, and I'd like you to find a good home for it," Carlson said.

The 20 rolls of filament for 3D printing in a variety of colors went to students in the Mechanical Engineering Technology Program and the \$1,000 donation will be split between Mechanical Engineering

Technology and Robotics. Steve Grande, president of the WMNTMA and a member of the STCC board of trustees, said he welcomes the donations.

"I think it's terrific. We need to support every effort in the region to develop our workforce. STCC does a terrific job at that," Grande said. "This gives them an opportunity to get materials free of charge... With state money being short, I think every little bit helps."

Springfield Technical Community College was founded in 1967 and located on 35 acres of the Springfield Armory National Historic Site. STCC is a major resource for the economic vitality of Western Massachusetts.



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PROTECT YOURSELF AGAINST THE LOSS OF INSTITUTIONAL KNOWLEDGE

BY BILL PADNOS, DIRECTOR OF YOUTH ENGAGEMENT



Over the past 3 ½ years, I have developed a passion for manufacturing workforce development. I want for students to recognize that manufacturing is a rewarding career option that will provide them with opportunities to grow and prosper.

While I am able to recite all of the statistics about the current and future status of the manufacturing workforce, I am clueless when it comes to understanding the industry lingo. I marvel at seeing a 5-axis machine in use, but have no idea what all of the buttons and flashing lights mean on the CNC panel. I remember being at the New Mexico NTMA Chapter event and seeing a survey. Manufacturing companies in the area stated they would like for the students to have a better understanding of Feed & Speed. Since I was a guest, I did not want to raise my hand to ask that meant. Instead, I set up a meeting with Ed Frieze at Stellar Precision Components to ask him to explain Feed & Speed to me. Ed not only gave me the description, but he told me how his company increased their profit on a project because they were able to increase the speed with which a component was made.

I am amazed when Greg Chambers of Oberg Industries explains that tolerances need to work within 1/100 of the width of the piece of paper. I can visualize how minute that is, but I have a hard time understanding how they do it. Maybe this is why I have such a passion for promoting manufacturing careers, because I truly admire the highly technical skills that machinists need to possess.

This was more evident during a Pittsburgh Chapter NTMA event at KPM Herkules in Ford City, PA. We were

able to learn about the company and walk through their facility. I was both lost and completely enthralled listening to the description of their operations and hearing the conversations about their capabilities. It was like trying to follow the fifteenth episode of "24" when you have never seen one before. It is cool seeing how Jack Bauer survives the shoot-out, but you have no idea why he always seems to be this close to death.

When we entered the quality control room, it finally hit me. There was so much institutional knowledge in that room (minus me) and that information

company's shared set of key concepts, experiences, expertise, processes, internal structure and overall collective understanding is transferred to the next generation?

The NTMA understands your predicament. The NRL program encourages member companies to bring students into their facility and have them work with your employees throughout the school year to design and build their Bot. Your workers become mentors to the students, and this starts the transfer process of their valuable knowledge and insights. Then, you have the opportunity to wit-

ness which students pick up this knowledge and target them to be your next generation of workers. This investment in time is nothing compared to letting this knowledge just walk out the door.

This is why the NRL is one of NTMA's manufacturing workforce development programs. Institutional knowledge is an essential element of building a successful organizations and it important to conserve this knowledge and transfer it to

the next generation. With the accelerating rate of baby boomer retirements, are you making the investment in your time and resources to protect your company. The NTMA has made the investment in the NRL program to provide you with an avenue to transfer this knowledge. Are you utilizing it?

For more information about how to invest your time in securing your future workforce talent, contact Bill Padnos, NTMA Director of Youth Engagement, at bpadnos@ntma.org.



will soon be lost. Every NTMA member company is risking its future if it does not have a plan in place to preserve and transfer institutional knowledge. Greg Chambers told me about a series of machines that they have at Oberg where the machinist listens to the component being fabricated to see if it is right. That is not a skill that someone learns at school, it must be taught in the workplace.

Institutional knowledge is a part of your company's intellectual property. It takes time to learn. This knowledge base is part of the unique culture and shared language of the company. The mass exodus of the baby boomers is inevitable. What are you doing to ensure that your

THREE BOYS IN A CAR

ORIGINS OF MASTERCAM CAD/CAM SOFTWARE

BY LYNN GORMAN

As a business organization comprised of entrepreneurial companies, NTMA companies enjoy learning about how firms begin, especially highly successful and familiar ones to us. One of the enterprises that has had a significant influence on the advancement of manufacturing technology and is a common product in many of our member companies is CNC Software, Inc., developers of Mastercam® CAD/CAM software. According to CIMData, Inc. Mastercam has the most installed seats on the planet at almost 225,000. That's almost double the amount of its closest competitor. How did it begin? What was the creative spark?

"The spark happened on a vacation in 1983," said Brian Summers, one of the founders and currently vice president. "It was just my two older brothers – Jack and Mark – and me on a road trip out west. We drove up the California coast from San Diego. I recall early discussions on that trip about the possibility of a software company that could exist to solve a basic problem and fill a basic need."

Besides the coincidence that the young men were passing through what would become known as Silicon Valley when the conversation occurred, there were other aligning factors in the family at that time. Mark Summers, the oldest brother at 25 years-old, worked for Compumachine, the company that first retrofitted CNC DynaPath controls on manual knee mills. It was while working there, training customers on how to program these machines using trigonometry and a calculator, that he identified the "basic need" to make programming these computer controls easier and faster. Jack Summers, the middle brother, was completing his graduate degree at MIT. Brian Summers, the youngest, was earning his associate's degree at Hartford State Technical College. The boys' father, John Summers, worked at Gerber Systems Technology helping development of the IDS-80 CAD/CAM system that ran on a main-frame computer.

"So we had background in this field right at the emergence of CNC machines and early versions of design software and room-sized computers," said Brian. "In fact, before he went to Compumachine, Mark worked as a machinist for Barre Precision in Manchester, Connecticut, and helped them select their first CNC machine – from Compumachine."

Shortly after that California vacation, Mark orchestrated the start of a rudimentary program at his kitchen table in Wilmington, Massachusetts with three roommates – engineers who were instrumental in the early development and who also pooled together \$4000 to purchase the first development computer – an Apple 2E. Development was slow and was more like a hobby until Jack joined Mark and the roommates in November 1983, close to the time of Jack's graduation from MIT. Jack's unlimited energy and his computer and math skills made up the solid core of the business and the product.

"One day they were able to create a line, then shortly after that an arc and portions thereof, then a fillet. I'll always remember the day of the fillet and Jack saying how Mark made about a hundred fillets on lines, amazed because to make an arc that is tangent to two different lines by hand would take calculations on every single one. To simply click on two lines and create a nice, smooth transition between them instantly was stunning."

1983 included two life-changing events for Mark: his devotion to a new business and software product and the birth of his first daughter, Meghan. So enamored was he with his baby girl that he named his other baby, the CAD/CAM product, Meghan also. Jack continued developing the software and building the necessary postprocessors for various CNC controls while Mark focused on sales and marketing. At this point he was still working part time on the new business



The history of CNC Software in company's museum. first name of the software was Meghan, after Mark's daughter. It changed to Mastercam the next year



Here is Mark, left, and Jack, right, in the early days of CNC Software

and full time at Compumachine, thanks to his generous boss Dave Shaby. Dave Shaby was instrumental in the success of the business in many ways including the investment of time, funding, business connections and encouragement.

"We will always be grateful for Dave's kindness," said Brian.

In 1984 the company moved into Brian's bedroom in their parent's house in Vernon, Connecticut.

"There was my bed and chest of drawers among a desk, credenza and two computers – an IBM AT and an IBM XT," said Brian. "We switched from the Apple to a PC platform, determining that for industry at least, the PC was the way to go. We quickly outgrew my bedroom and as we started moving the office furniture to the next bedroom over, I quickly realized that it was my bedroom stuff that we should be moving. So, we put back the credenza and moved my bed instead."

They also switched the name from Meghan to Mastercam.

"We felt we needed a name that reflected what the software actually did," said Brian, "So we'd sit around and talk about it, and it was Jack who said, 'How about Mastercam?' We liked it immediately because it worked on so many levels and could grow with us."

The company released Mastercam V.1 that year.

Brian earned his degree from Hartford State Tech in 1986 and joined his brothers in the business full time just as they were moving into their first building. They leased 1500 sq. ft. of office space in Vernon, Connecticut and brought in a Shizuoka CNC machine tool purchased from Compumachine to help with the software development and testing.

"We'd get a phone call in my parent's



Above: The original computer that the first Mastercam lines, arcs, and fillets were created on — an Apple IIe — resides in the company's museum. Right: Jack is pulling Mark and Brian in a wagon in the front of their parents' home with the caption, "Our First Sales Call"



home and mom would yell down the hall, 'Boys, you have a business call and lunch is almost ready!'" said Brian. "It was a poignant moment when we moved out of the house."

Another fortuitous alliance for CNC Software was a neighboring company in Vernon called CadKey, which developed one of the first successful CAD software packages available in a PC format. CadKey introduced the brothers to several resellers and customers and Mastercam started catching on as customers quickly realized dramatic

time-savings and improved toolpaths using Mastercam. Brian's role quickly merged into training in addition to sales and working with resellers. Mark had a broader reach into setting up resellers beyond the northeast, and Jack continued to work on the product development. CNC Software at one point started to use CadKey's 3-D database when customers presented difficult 3-D parts, however the company soon developed its own 3-D database — sorely needed for the next phase of its growth.

Sales of Mastercam grew quickly in the late 80s. By then, more customers had installed PCs and the brothers attended trade shows and secured resellers in France, Italy and Japan. Jamie Summers, Mark Summers' wife, handled the books and answered the phone. They also hired their first non-family employee, Janet Locke, and then a national sales manager. They soon doubled the size of their space and moved to a 3,000 sq. ft. facility in Tolland, Connecticut. The company also established departments in the organization, such as marketing, development and accounting. By 1991 they moved again to even larger space in Tolland and hired Gary Hargreaves to expand Mastercam further into Europe, South America, and the Scandinavian kingdoms of Denmark, Norway and Sweden.

Although there are obviously more chapters and highlights in the Mastercam story, those are its origins — all starting with three brothers on a road trip talking about an idea for a software company that could fill a basic need. Here's a postscript we can't resist, though: That baby girl Meghan? She is now president of the company.



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The GROB G-series – for the most versatile machining possibilities.



FALL CONFERENCE 2016—IT'S IN THE BOOKS! IF



- **BIG KAISER** welcomed everyone to Charlotte at the kick-off “regiception.” Arriving attendees had an opportunity to register for the conference and then relax with cocktails in the **BIG KAISER** studio.
- **NTMA** hosted its first annual **NTMA 5K** – a meandering route at dawn through downtown Charlotte—thanks to our sponsor **Aerotek**. Congratulations to our winners: **AJ Fitzsimmons** of **Aerotek**, **Nick Mosey** of **Mosey’s Production Machinists**, and **Todd Bello** of **Blandford Machine & Tool Co.**
- **Mark Roberts** and his **Kennametal** team welcomed guests to the **NASCAR Hall of Fame**. After guests enjoyed crab legs, oysters and mussels they moved upstairs to the **Paulo moonshine** tasting room. Attendees joined the pit crew and got behind the wheel of the **Okuma Nascar** simulators.
- Attendees explored substantial business savings opportunities with **NTMA Affinity Partners** **Staples** and **APPI Energy** in the **Affinity Partner Lounge**. It was also a great place for attendees to relax, network, meet and greet presenters, and catch up on emails. The “**Hour of Power with 5ME**” was an opportunity for members to enjoy margaritas and **Cryogenic** cocktails at the end of a content-packed day.
- **Tech Day Sessions** welcomed presenters: **Blaser Swisslube**, **Zeiss**, **machinometrics**, **LillyWorks** and **Mazak**. These sessions were a deep dive into technology and ways to improve attendees’ businesses.
- The **Franklin Partnership** provided an updated forecast for one of the most unique U.S. elections in history.

YOU WEREN'T THERE, HERE'S WHAT YOU MISSED...



- The communications experts from Bracewell broke down political advertisements and social media posts to give insights into races in key battleground states.
- Breaking between high-energy sessions, conference goers enjoyed beverages and snacks at the Knowledge Bars. Knowledge Bar Sponsors: Okuma, BIG KAISER, +GF+, and Kennametal.
- Guests enjoyed the Tech Team Workshop, Emerging Leaders sessions and roundtables.
- Some NTMA members took a break to tour the Queen City on bicycle while others tackled an escape room challenge.
- PBS's Chuck Underwood delivered an insightful closing keynote on the dynamics of the generational workforce.
- The closing event – Cheers to Charlotte – provided attendees with the opportunity to sample local craft beers, sip fine wines or roll their own cigars. Thank you to our sponsor, Makino.



AND THANK YOU TO ALL OF YOU WHO MADE IT AN EXPERIENCE TO REMEMBER!

**MARK YOUR CALENDARS FOR NEXT YEAR:
OCTOBER 24-27, 2017
SAN ANTONIO, TX**



COMPANIES MARKING NOTEWORTHY ANNIVERSARIES:

The following companies were recognized for milestone anniversaries at this year's Fall Conference. Thank you for your membership.

65 YEARS

Dayton Progress Corporation
Omega Tool, Inc.
Tosco Tool Specialty Company

60 YEARS

Arkansas Tool & Die, Inc.
Industrial Grinding, Inc.

55 YEARS

R S Precision Industries, Inc.
Ultra Tool & Manufacturing, Inc.

50 YEARS

CDM Tool & Mfg. Co., Inc.
Pioneer Tool & Die Company
TomKen Plastic Technologies, Inc.
TomKen Plastic Technologies, Inc.
VersaTool & Die Machining & Engineering

45 YEARS

Alfred Manufacturing Company
B & B Machine & Grinding Service
Dura-Metal Products Corporation
F M Machine Company
H & H Machine Shop Of Akron, Inc.
H. H. Mercer, Inc.
Hubbell Machine Tooling, Inc.
L H Industries
Lunar Tool & Mold, Inc.
Micro Surface Engineering, Inc.
O E M Industries, Inc.
Obars Machine & Tool Company
Pennsylvania Tool & Gages, Inc.
Stevens Manufacturing Co., Inc.
Talbar, Inc.
Thaler Machine Company
Tool Mate Corporation

40 YEARS

A & S Tool & Die Company, Inc.
Armstrong Mold, Machining Div.
Bachmann Precision Machine Products Corp.
Bahrs Die & Stamping Company, Inc.
Diversified Tool & Die
Emmert Welding & Manufacturing, Inc.
F N Smith Corporation
Grind-All Precision Tool Co., Inc.
J D Kauffman Machine Shop, Inc.
N E T & Die Company, Inc.
Norman Noble, Inc.
R & D Tool & Engineering
Rockford Toolcraft, Inc.
TCI Precision Metals

35 YEARS

Abbott Tool, Inc.
Alloy Metal Products
Anoplate Corporation
Ash Machine Corporation
Axian Technology
Continental Tool & Mfg. Inc.
Dynamic Group
Dynamic Tool & Design, Inc.
Gatco, Inc.
General Machine-Diecron, Inc.
Grind All Inc.
H & H Machined Products Co.
Juell Machine Company, Inc.
Kimberly Gear & Spline, Inc.
Mueller Machine & Tool Company, LLC
Perry Tool & Research Inc.
Ridge Machine & Welding Company
Trec Industries, Inc.
UMC, Inc.

30 YEARS

Bechler Cams, Inc.
Boyle, Inc.
Burton Industries Inc.
Hans Rudolph, Inc.
Jenkins Machine, Inc.
Laser Tool, Inc.
Mittler Brothers Machine & Tool, Div
Mittler Corp
O'Keefe Ceramics
Superior Gear Box Company
Thiel Tool & Engineering Co., Inc.

25 YEARS

A & A Industries, Inc.
Able Wire EDM, Inc.
AccuRounds, Inc.
Allen Randall Enterprises, Inc.
Arc Drilling Inc.
Boyce Machine, Inc.
FRB Machine Inc.
Golis Machine, Inc.
Horizon Industries
Kuhn Tool & Die Co.
Mac-Mold Base, Inc.
Manda Machine Company, Inc.
Morlin Incorporated
Myers Precision Grinding Company Inc.
O-D Tool & Cutter Inc.
Proficient Machining Co., Inc.
Profile Grinding, Inc.
R. W. Smith Company, Inc.
Systems 3, Inc.
Treblich, Inc.
Ultra Stamping & Assembly, Inc.
Valv-Trol Company



COMPANIES IN ATTENDANCE RECEIVING AWARDS FOR THEIR ANNIVERSARIES

Left: 50 Years - VersaTool & Die Machining & Engineering – Beloit, WI – Matt Baker

Right: 30 Years - Mittler Brother Machine & Tool – Foristell, MO – Mike Mittler



Celebrating 25 years of NTMA membership

Kuhn Tool & Die Co.
Meadville PA – Bonnie & Ken Kuhn



Myers Precision & Grinding Company
Warrensville Heights, OH



O-D Tool & Cutter, Inc.
Mansfield, MA – Kevin O'Donnell



BIG KAISER RECEIVES NTMA DISTINGUISHED SERVICE AWARD

The National Tooling and Machining Association recognized Chris Kaiser, President/CEO of BIG KAISER at this year's Fall Conference with the 2016 NTMA Distinguished Service Award. The annual award recognizes an associate member or partner for their exceptional



Chris Kaiser, President/CEO of BIG KAISER was awarded the 2016 NTMA Distinguished Service Award. Kaiser and VP Engineering Jack Burley are avid supporters of NTMA local and national events.

support of the association, and leadership in the manufacturing industry.

"Chris has demonstrated a tireless commitment to manufacturing advocacy," said David Tilstone, President of NTMA. "He supports work-force development through the company's apprenticeship and internship programs, STEM initiatives like National Robotics League (NRL), and the Northern Illinois G-CAMP manufacturing partnership. He is a strong supporter of many regional and national NTMA events, as well as international Technology Tours for our members."

Originally from Zurich, Switzerland, Mr Kaiser moved to the U.S. to attend Babson College near Boston. After graduation, he started his career working for a tooling distributor and calling on machine shops door-to-door. In 2003, he launched Kaiser Precision Tooling in Illinois. Under



Chris Kaiser accepted the Distinguished Service Award

Chris' leadership, the company has grown to become part of the global BIG Daishowa Group, with manufacturing facilities in the U.S., Switzerland and Japan.

BIG KAISER is a worldwide leader in high-precision tooling systems and solutions for the metal cutting industry that guarantees extreme accuracy and repeatability. As a member of the BIG Daishowa Group (Osaka, Japan), BIG KAISER has grown into a well-recognized global tooling provider, with manufacturing facilities in North America, Europe and Asia.



GREG CHAMBERS WINS WILLIAM E. HARDMAN AWARD FOR EXCELLENCE IN TRAINING

Pittsburgh's Greg Chambers of Oberg Industries is this year's recipient of the prestigious William E. Hardman Award for Excellence in Training. This award is reserved for an individual or member company who has demonstrated consistently strong support and active participation in structured training for the Precision Custom Manufacturing Industry.

Chambers is the Environmental, Health, & Safety (EHS) Manager and 33-year employee of Oberg Industries, a \$125 million manufacturer of precision components headquartered in Freeport, PA. Chambers has overseen Oberg's apprentice program as well as the health and safety of Oberg's employees, but he has also been instrumental in promoting manufacturing as a successful career choice among youth both locally and nationally. Chambers served as past President of the National Institute of Metalworking Skills (NIMS) as well as the past President of the American Apprenticeship Roundtable. Chambers continues to use his knowledge and skills to help

improve metalworking training standards for the industry.

Chambers is a valuable member of a local and progressive association group that was instrumental in bringing the BotsIQ program to Southwestern Pennsylvania. He serves on the Executive Committee and oversees all safety issues for the regional student robotics program. Chambers has also been an active leader of the Precision Machining Competition at the annual Skills USA National Leadership and Skills Conferences for the past decade and spends much of his free time involved with community affairs including his participation as a recruitment liaison and guest speaker with many high schools, colleges, universities and business organizations in Western Pennsylvania and throughout the U.S.A.

"When I think of dedication to training and our industry there is no one more deserving of the highly regarded William E. Hardman Award than Greg Chambers," said Dave Tilstone, president of the NTMA. "He's not only a leader in the education of employees at Oberg

Industries, but his leadership as chairman of NIMS and the tireless support

he provides to the Pittsburgh BotsIQ program is unparalleled. On behalf of the Executive Committee of NTMA and the entire NTMA community, congratulations Greg and we are very proud to call you a member," said Dave Tilstone, president of the NTMA.

The William E. Hardman Award for Excellence in Training is named for William E. "Ed" Hardman, past president and chief operating officer of the National Tooling and Machining Association in Washington from 1966 until he retired in 1986.

Chambers is the third Pittsburgh Chapter NTMA member to be honored with the Hardman award. Jim Gilmore, past apprentice coordinator for the Pittsburgh Chapter NTMA and Phyllis Miller of Hamill Manufacturing are past recipients.



CONGRATULATIONS 2016 STAR CHAPTERS!

The Star Chapter designation is awarded to recognize Chapters, their leaders and staff for outstanding achievements in advancing the NTMA and the manufacturing industry.

Star Chapter status is determined by achieving a high score on the annual Chapter Organizational Questionnaire conducted in the fall of each year. This survey measures a chapter's level of organizational excellence, local influence and engagement with NTMA on a national level.

Akron Chapter
Arizona Chapter
Boston Chapter
Cleveland Chapter
Connecticut Chapter
Indiana Chapter

Kansas City Chapter
Los Angeles Chapter
Michiana Chapter
New Mexico Chapter
North Texas Chapter
Northern Utah Chapter

Philadelphia Delaware Valley
Pittsburgh Chapter
Rocky Mountain Chapter
Rock River Chapter
Tri-State Manufacturing Association Chapter
Western Mass Chapter



Most Improved Chapter
Western Lake Erie

Star Chapters of the Year
NW PA & St. Louis

THE MAKINGS OF A STAR CHAPTER:

We asked this year's Star Chapter of the Year winners to tell us a little bit about what makes their chapters run efficiently and effectively. Here, they share some best practices.

ST. LOUIS NTMA

BY SALLY SAFRANSKI, ST. LOUIS NTMA CHAPTER EXECUTIVE

Tami Adams and Sally
Safranski with their Star
Chapter of the Year Awards



The St. Louis Chapter's membership is strong today because of a long history of individuals with vision and leadership – all whom value the NTMA tradition. The 56 member companies are diverse in scope and focus of their businesses across most of the precision manufacturing industry: aerospace, defense, automotive, medical, manufacturing, etc. NTMA legacy firms have been members since NTMA's inception; others include young companies who see NTMA networking and membership benefits as part of their growth strategies. The challenges of having a large, geographically diverse membership means that some members travel a couple of hours for chapter events and for chapter leadership responsibilities. Two

national chairmen have come from St. Louis: Mike Mittler (2006-2007) and Herb Homeyer (2014-2016), with St. Louis as host cities for Fall Conference in their respective years.

Local involvement is the focus of many members' NTMA activities, with strong participation in learning and networking at chapter meetings as well as more fun events like golf, sporting clays and social events. St. Louis members benefit from NTMA benchmarking programs – some say that's their primary reason for membership, as they rely on benchmarking data for business decisions such as wages, benefits and operational expenditures throughout the year. Missouri is referred to as "The Show Me State" – so members can show

you why they take advantage of the membership benefits across the board – but will echo what is heard most commonly – networking!

The chapter's current strategic focus is workforce development. Under the leadership of President Mark Bockerstett, a concerted effort has been made to grow the chapter's commitment to scholarship, the inaugural BotsStL (NRL) competition in spring 2017, a brand new Emerging Leaders program, an NTMA-U portal and engagement in MFG Day. Members benefit from the presence of good community college training programs – hiring graduates, serving on advisory boards, supporting scholarship and hosting events at the schools. All this giving St.

Louis member companies the opportunity to build their workforce as businesses expand and their aging workforce retires.

I joined the chapter as the executive director in 2009. The board of directors initially described my role as that of "herding cats" but I am most inspired by members' passion and commitment toward their businesses' and the industry's growth and success.

To share the 2016 Star Chapter of the Year honor with NW Pennsylvania is an honor.



NORTHWESTERN PA STAR CHAPTER

BY TAMI ADAMS, NORTHWESTERN PA CHAPTER EXECUTIVE

The Northwestern PA Chapter was pleasantly surprised to be named Star Chapter of the Year at the NTMA Fall Conference in Charlotte, N.C. Since the inception of the award, the chapter has strived to maintain organizational best practices outlined in the Chapter Organizational Excellence Survey. The Northwestern PA Chapter was the inaugural recipient of the award in 2011 and 2012. Over the past six years, the bar has been raised as more Chapters are participating and striving to achieve Star Chapter status. To share the honor with the St. Louis Chapter is particularly meaningful to NWPA Chapter. Sally Safranski, St.

Louis Chapter, and I started working with our respective chapters at about the same time. We have shared ideas and best practices over the years. I appreciate Sally's professionalism and insight at the chapter level and through our work together on the Chapter Executive Team.

The Northwestern PA Chapter's list of best practices includes a strong committee structure. The chapter is very proactive and involved in many activities to promote our trade and provide business growth opportunities to our members. Organizationally, the chapter has one full time and on part-part employee and the board of directors is 15 members strong.

The reach of the chapter is extended exponentially through our committees. Throughout a year, over 50 individuals volunteer with the Northwestern PA Chapter committees and activities. Our board's focus on engaging individuals from various positions within member companies as well as the next generation of leadership has helped grow our volunteer base.

Our board's commitment to employ a dedicated executive director has also factored into the chapter's success. Having a full-time director provides more opportunities for the chapter to partner with other organizations in the region, stay connected with committees, and maintain open communication with members and NTMA. Having a central point of contact has helped to reduce the duplication of efforts, streamline resources and drive activity.

"During my participation on the Board and now as president, I certainly see the outstanding contributions to our membership and community that the Northwestern PA Chapter provides," said Chapter President Craig Mullen. "Tami Adams, thank you for your leadership guiding the Chapter and a job well done. I appreciate everyone's efforts on the board and the great volunteers that help us to achieve this success."

It is truly the commitment of the board and the membership of the Northwestern PA Chapter that has earned the Star Chapter of the Year.

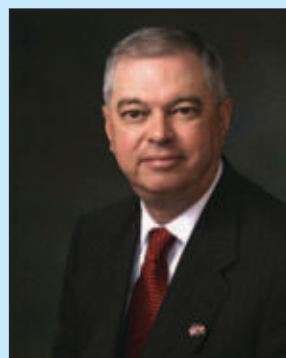


St. Louis Chapter and Northwestern PA Chapter Executives receiving the Star Chapters of the Year Award



INTRODUCING OUR MOST RECENTLY ELECTED NTMA EXECUTIVE COMMITTEE MEMBERS:

THE NEWEST NTMA EXECUTIVE COMMITTEE MEMBERS WILL BEGIN THEIR DUTIES IN JANUARY 2017.



Samuel Griffith
National Jet Company
Cumberland, MD



Tom Sothard
Konecranes, Inc
Dayton, Ohio

GLOBAL SHOP SOLUTIONS CELEBRATES 40 YEARS OF SIMPLIFYING YOUR MANUFACTURING

BY KATHRYN HOSFORD, COMMUNICATIONS SPECIALIST

Global Shop Solutions, a leading developer of enterprise resource planning (ERP) software, and an NTMA national associate member, is celebrating its 40th anniversary. Founded in 1976 by Dick Alexander, the family owned business has grown from a small local company to a global enterprise serving thousands of discrete manufacturers around the world. A recognized industry leader, Global Shop Solutions is known worldwide for its product quality, customer service, and family-business values.

"We make ERP software by and for manufacturers," says second-generation owner and company president Dusty Alexander. "But we also serve as a trusted partner and advisor to our customers, helping them refine their business processes to compete more effectively in today's global manufacturing markets. The ability to develop long-term business relationships with

our clients has resulted in 40 years of stable ownership and steady growth, which we are very proud of."

From humble beginnings using punch cards and a rented mainframe computer, Global Shop Solutions has evolved into a sophisticated ERP software package that is fully compatible with today's Windows operating systems, SQL database, .net framework, and network technologies. By listening to its customers, the company has grown from a handful of clients to a global customer base of more than 1,300 manufacturing companies and 30,000+ users. Global Shop Solutions software can be found in companies throughout the U. S., Canada, Latin America, and Asia, ranging from small job shops to very large enterprises like Frito Lay,



The Founding Family of Global Shop Solutions – The Alexanders. Pictured from left to right: Dick Alexander (Founder), Kathie Alexander (Founder), Andrea Alexander (Wife of CEO/President), Dusty Alexander (CEO & President), Erica Klein (VP of Research & Development), Barry Klein (CFO), Adria Keeney (Daughter of Founder), Jayland Keeney (Director of Human Resources)

Pepsi, EMC, Cisco, Boeing, Caterpillar, John Deere, Eaton, & Timken.

A RECIPE FOR SUCCESS

Family owned and operated, Global Shop Solutions has built its success around strict adherence to four guiding principles:

- Hire the best talent
- Listen to the customer
- Never stop improving the product
- Give back to the community

Global Shop Solutions has one of the



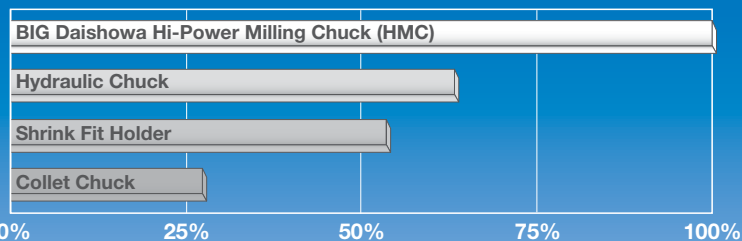
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Optimal End Milling Performance — HMC vs. Others



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A PROUD NATIONAL ASSOCIATE OF NTMA



Above: All 225+ employees at Global Shop Solutions who simplify manufacturing. Right: A rendering of Global Shop Solutions new 10,000 square foot state-of-the-art training facility, set to open in Spring 2017. This is the third building at Global Shop Solutions' headquarters in The Woodlands, Texas. Right: The founders and first few employees at Global Shop Solutions formerly known as Infisy in the late 70s.



highest employee retention rates in the industry, with an average tenure of nearly eight years. It also has a long history of community involvement, including ongoing programs to support the homeless, Toys for Tots, youth programs, and veterans. The company's most recent charitable activity involved building and donating bicycles to Children's Safe Harbor, a nonprofit organization that provides services to abused children.

"The keystone to our four decades of success has been ongoing improvement of our products," adds Alexander. "We constantly add new features and capabilities to keep

our customers ahead of the technology curve. And even though we serve a global market, we're also proud to say that we continue to design, develop and support our proprietary software products here in the U.S."

In keeping with its commitment to family ownership, Global Shop Solutions recently completed a successful transition from first- to second-generation ownership. The company is now 100% owned by second-generation family members. Headquarters in The Woodlands, Texas includes a state-of-the-art R&D facility and their Global Shop Solutions University training center.

Through its offices in the U.S., Mexico, Indonesia, Singapore, Australia, and New Zealand, it maintains its place of prominence in the ERP manufacturing software industry.



"TECHNOLOGY" CONTINUED

TECHNOLOGY: LEAD TIME REDUCTION THROUGH FLOW, SAFETY, AND ORGANIZATION:

Plant-wide efficiency is measured through reducing internal lead times, safety improvements and addressing physical changes and design standards. Effective training and awareness, thorough incident investigations, re-design and layout ensures an orderly, efficient and safe workplace. Everyone routinely adds to a safe working environment through programs such as 5S/6S organization. Value stream analyses provide a road map; non-value-adding steps in the manufacturing and administrative processes are gradually eliminated; a "pull" strategy is used where warranted, product flow is increasing.

BUSINESS/CULTURAL PRACTICES: LEADER/ASSOCIATE PARTNERSHIPS-- WORLD-CLASS PERFORMANCE

Leaders and employees have found new ways of defining their roles and function as a partnership to meet company objectives and goals. Senior management is committed to developing highly effective leaders. All levels of plant leadership provide effective

coaching, training and mentoring to subordinates. Plant communication is excellent, morale and job satisfaction are high and the shop floor goes "above and beyond" to achieve world-class performance.

BUSINESS/CULTURAL PRACTICES: RESULTS BASED PERFORMANCE THROUGH GOAL DEPLOYMENT AND VISUAL MANAGEMENT SYSTEMS

The organization establishes key performance indicators (KPI) in all areas of the operation, developed at the operating level and tied to plant goals. The process is dynamic and engages the entire organization, and there is a clear "line of sight" between individual/team effort and plant performance. Visual management practices such as scoreboards, etc. are in use throughout the plant for measuring, controlling and improving operations. Operational status information is presented accurately and in "real-time" to anyone who needs it. Individual and team efforts are recognized and rewarded for meeting targeted improvements.

HOW IT WORKS:

- Precision manufacturers who demon-

strate advanced application of a technology or business practice that results in improved business performance are eligible to be nominated for this award.

- Nominations submitted to the Technology Team by NTMA members, the Chairman, chapter executives, and associate members.

- Winners are selected by the Technology Team with input considerations from AMT's Technology Issues Committee as judged against selection criteria: business impact, innovation, longevity, etc.

- Winners will be presented at the MFG Meeting in Amelia Island, Fla., on March 22-25, 2017.

- Recipients will present a brief description of their awarded technology or practice at the MFG Meeting following the NTMA general assembly.

Nomination deadline is January 15, 2017. For more information, contact Pam Wightman at pwightman@ntma.org.



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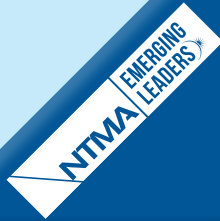
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www.morrisgroupinc.com

OPEN POSSIBILITIES





EXEMPLIFYING AUTHENTIC LEADERSHIP WITH SIGNIFICANCE TO COMPANY, COMMUNITY AND INDUSTRY

BY KELLY KASNER, MIDWESTERN MEMBERSHIP & CHAPTER SERVICES EXECUTIVE

Criterion Tool & Die was founded in 1953 by Tanya DiSalvo's grandfather, Mike Ondercin in Brook Park, Ohio. Her mother and father, Lorri and Dennis Ondercin, took over company management in the early 1980s and led the company in its move into medical machining. Although growing up in a job shop family made her familiar with many aspects of the business, DiSalvo spent a year working on the shop floor before assuming responsibilities in sales, then operations manager, and now as an emerged leader to president and owner. She is active in the NTMA, the NTMA Emerging Leaders initiative, and a director, past trustee and past president of the NTMA Cleveland Chapter. The NTMA is honored to have Criterion Tool as a member since 1958.

DiSalvo's wants to attract young women to the industry and create gateways to opportunities-- it is all part of her larger effort to attract more young people to manufacturing. Criterion Tool actively supports student robotics teams and promotes metalworking apprenticeship programs in the local area. As proudly displayed on the company's website home page -- "Criterion Instrument is a female owned, non-union

shop where continuing education is encouraged and funded. The management team, office staff, apprentices, journeymen tool-makers and precision machinists strive to remain current in the latest technologies and continue to develop their skills."

DiSalvo received the prestigious Manufacturing Institute's STEP (Science, Technology, Engineering and Production) Award in 2014. The award is given each year to women in the manufacturing industry who demonstrate excellence and leadership in their careers.

DiSalvo is also active in the media to promote manufacturing, workforce development and leadership. She has appeared in Modern Machine Shop, Medical Manufacturing, Velocity Scheduling System Blog, Speaking of Precision Blog, Polaris Career Center episode, Council of Small Enterprises (COSE), BioOhio Annual Conference, NTMA Emerging Leaders 'We Are Manufacturing' and many more.

Criterion Tool/Criterion Instrument is an FDA Registered, ISO 9001 & ISO 13485 Certified precision machine shop specializing in close tolerance Swiss turning, CNC turning and CNC 5-axis milling of precision components from prototype through



production quantities. Some applications of Criterion's work include components for small bone trauma, fixation, medical diagnostic instruments, orthopedic devices, surgical instruments and kits, implantables and dental instruments.

Thank you, Tanya DiSalvo, for your continued efforts to promote our industry, association and initiative to the next generation of leaders.



THIRD GENERATION LEADER TAKES THE HELM AT WAGNER MACHINE, INC.

BY HEIDI BANEY, WAGNER MACHINE, INC.



Effective October 1, 2016, Courtney Wagner is the president of NTMA member, Wagner Machine, Inc. Wagner Machine, Inc. is an ISO/AS9100 certified custom job shop, producing quality parts since 1957 located in Norton, Ohio. Wagner is a machining and fabrication shop specializing in both small and large parts, repair parts, prototypes and R&D projects. The company also specialize in heavy fabrication

of parts and machinery up to 30,000 lbs., using certified welders.

Wagner is the third generation to lead the company. She began her career with Wagner Machine, Inc. in 1994. She completed her initial training at Akron Machining Institute, an NTMA training facility in 1998. She obtained her BSBA from The University of Akron and her MBA from Hult University in London, UK. Wagner has worked in various departments at Wagner Machine, Inc. including scheduling and purchasing. Since 2006 she has been the company's controller.

Wagner is actively involved in the community and the manufacturing industry. She is a graduate of the JoAnn Davidson Ohio Leadership Institute, is currently the Akron Chapter NTMA president and has been serving on the board of the Akron Chapter since 2014. Wagner has a passion for manufacturing, specifically small to mid-size multi-generational facilities and breaking the glass ceiling for women leaders everywhere.



Search Machines Smarter.

Envelope: Turning

Max. Chuck Dia:

Max. Bar Dia:

Max Turning Length:

Machine Type: Turning

☐ Bar

☐ Chucker

☐ Universal

☐ Swiss

Specifications:

of Main Spindles:

Spindle Direction:

Mill/Drill Function:

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MASSACHUSETTS MANUFACTURING CAUCUS AWARD PRESENTED TO ACCUOUNDS, INC.

BY NANCY HUNTER, ACCUOUNDS

In late October, Massachusetts Legislative Manufacturing Caucus at the State House presented NTMA member, AccuRounds with a prestigious award. The award, presented “for Exemplary Efforts in Promoting and Educating Our Youth on the Value of Manufacturing” was presented by Representative Bill Galvin who nominated the company.

The Manufacturing Caucus is comprised of over 50 Massachusetts legislators and provides legislative support for training initiatives and funding to help provide opportunities and increase the competitiveness of the manufacturing sector in the state. In addition to Education, other award categories are Workforce and Jobs, Sustainability, Products, and Innovation.

AccuRounds was recognized for actively promoting advanced manufacturing and STEM. The company participates in community outreach events and partners with local schools. AccuRounds welcomed 225 visitors on Manufacturing Day 2016 for tours of its facility.

“Our company is dedicated to raising the profile of manufacturing amongst young people, as well as parents and educators,” said Michael Tamasi, President and CEO of AccuRounds. “We are involved in an array of different programs to support this effort.” Programs include STEAM in the Canton school system and sponsoring robotics programs at neighboring schools. “We are honored to be recognized by the state with



Pictured at Manufacturing Award Ceremony at the State House is left to right: Rep. John Fernandes, Rep. Bill Galvin, Michael Tamasi, AccuRounds President and CEO; and Secretary Jay Ash.

this award,” he added.

AccuRounds, founded in 1976, is an advanced manufacturer that machines and assembles precision turned components for a variety of industries including aerospace, defense, medical and oil and gas.



BUILDING A COMPANY AND A LONG LASTING NTMA CONNECTION

BY RON WOSEL, C&R MFG

C & R Mfg was founded in Ron Wosel's basement-- the classic beginnings of a machine shop as many who have started before and after us. The shop was assembled during the mid-70s to machine parts for my outboard boat racing hobby. We applied for a sales tax number in 1979 and that becomes the company's actual start date.

I was introduced to the NTMA in the mid-1980s by a shop owner friend and I im-



mediately joined the organization. My first annual meeting was in Acapulco, Mexico in 1988. The business content was very good, and it was also held someplace warm in the winter, and I'm sure that's what kept us coming back all these years. We felt a little out of place being the youngest family there by many years, until we met Steve and Vicky Hasty who became our lifelong friends. Steve

has recently sold his business and retired, but we keep in contact.

At the local chapter level, we started as the newest member and have progressed to being an old-timer active member. We still enjoy supporting our local chapter and networking with everyone.

I have only missed a few annual meetings over the years, and usually regretted doing so. I have made many friends and acquaintances over the years and also enjoy seeing and visiting with everyone at the conferences. I am proud to have been a part of NTMA for 30 years now.

So how did NTMA make us successful and why do we come to all the meetings? I tell everyone that there are two reasons for our success, in no particular order.

One reason is the caliber of speakers and presenters at the NTMA conferences, as well as the roundtables. My wife and two children have accompanied me at every annual meeting. Our goal is to bring back business ideas that we can use to make our company more efficient, which offsets the cost of the meeting. I admit there have been times I've returned home with information I'm not sure what to do with, only to have it become applicable at a later date.

The other reason is the great information in Modern Machine Shop magazine, it is our metalworking bible. In 2011, we were honored and proud to receive Modern Machine Shop's first Top Shop award. With Modern Machine Shop's close association with the NTMA, it only makes sense that these two things have worked hand-in-hand for our business.



My daughter Andrea and my son Brian are the next generation of C & R. I'm sure you'll see them at future conferences as part of the Emerging Leaders group. NTMA has become a family tradition.





Past Ahaus presidents (from left) Galen Miller, Loren Ahaus, Butsy Ahaus, William Ahaus (portrait on wall), and Rick Ahaus

This year, Ahaus Tool and Engineering of Richmond, Ind. celebrates 70 years in business, a true American success story. Operating out of his red two-car garage, William Ahaus and his son, Irvin, started the firm as Ahaus Tool Company in November of 1946. During the 1950s and '60s, research and development was integrated into the company's services and remains an invaluable part of the business today.

In the 1970s and 1980s, Ahaus introduced NC and CNC milling technology to the shop floor and the company began manufacturing core builder, radiator assembly and heat exchanger equipment. Ahaus's unique engineering capabilities and abilities to meet close tolerance requirements led to many notable successes. One such success: Ahaus developed special equipment and the process to attach plastic tanks to an aluminum radiator assembly for the Ford Motor Company. This achievement expanded Ahaus's opportunities to engi-

SEVENTY YEARS OF AHAUS: A STORY OF AMERICAN MANUFACTURING GROWTH AND ADAPTATION

neer, design and build heat exchanger equipment for a variety of manufacturers throughout the world.

To broaden its opportunities, especially in the design and build sector, Ahaus Tool and Engineering purchased land and constructed a new facility in Richmond's Eastern Industrial Park where the company resides today. Following further land purchases and new additions to the facility, the plant increased in size from its original 18,000 sq. ft. in 1979 to its present size of 65,000 sq. ft. The continued growth in the design and build sector prompted the development of an engineering department, which was initiated in 1983 and remains an instrumental element to Ahaus's success.

Along with the expansion of computerized machining services and CNC milling equipment, Ahaus has ventured into new opportunities over the last 20 years, including alternative energy source research. Ahaus manufactures components for nuclear fusion research with the goal of using sea water as the fuel to generate electricity.

It's been a year-long celebration of this monumental anniversary. Guests enjoyed a summer afternoon party with contests and dinner and there will be another celebration



Rodney Keener represents the blue team and Brian Fyke represents the maroon team in the corn hole tournament in September at the Ahaus 70th Anniversary Tailgate Party.

dinner at the company's annual holiday party. Richmond residents may want to keep a watchful eye out for a special recognition billboard this month.

Ahaus works with customers through conceptual design, engineering, service and support to meet their specific requirements, offering a broad range of custom products and services categorized as: automation equipment; workholding solutions / workholding fixtures; machining services / machining fixtures; heat exchanger equipment; and power generation equipment.



GRAINGER NAMES JD MACHINE "MANUFACTURING HERO"

JD Machine is a 37-year-old family-owned machine shop where they do a lot for the industry. Their business practices caught the eye of Grainger, who just recognized the NTMA member company as a Manufacturing Hero.

Grainger recognizes customers who contribute greatly to the culture of American manufacturing by bringing the celebration to them – literally. Grainger asks their sellers to recognize organizations that are building



America by challenging them to find customers who are "Manufacturing Heroes." This is an opportunity to recognize customers genuinely engaged in building the manufacturing community in this country.

ACCORDING TO GRAINGER, "MANUFACTURING HERO" COMPANIES MAY BE:

- Working around the clock to build their business
- Dedicated to keeping employees safe and healthy
- Supporting work study programs at a high school or college to help build the next generation of manufacturers
- Asking employees to make sacrifices or concessions to keep doors open
- Creating a culture of giving within their communities

...OR ALL OF THE ABOVE!

Aaron Casebolt, Grainger account manager noticed big things at JD Machine.

"They are connected with many of the local colleges where they offer full apprenticeships where the college student can get on the job paid training while they learn and work." Said Casebolt. "As they do this, they will also earn 2 years' worth of college credit. When the college student graduates they should be a journeyman machinist. This not only helps the college student it helps get more machinists out in the industry."

Matt Wardle is the owner of JD Machine as well as an executive committee member of the NTMA. His daughter (who also works at JD machine) is the Chapter Executive of the Northern Utah chapter of the NTMA. They both give back to the industry by sharing their time and knowledge to help others that are part of the NTMA. They love this industry and their passion shows.



NATIONAL TOOLING & MACHINING ASSOCIATION

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MANUFACTURING AMERICA'S FUTURE

THE RECORD

*Happy
Holidays!*

WARM WISHES FOR THE HOLIDAY SEASON
FROM THE EXECUTIVE COMMITTEE AND STAFF OF THE

