

THE RECORD

Published by the National Tooling and Machining Association

INSIDE THIS ISSUE

Going Back to the Basics
with AMPED - pp 8-9

Helping Fill the Skills Gap - pp 10-11

Streamlined Communication at
Focused on Machining - p 14

2020 Spring Conference - pp 18-19

and so much more...

WHAT'S IN STORE FOR 2020



NATIONAL TOOLING AND MACHINING ASSOCIATION

NTMA MEMBERS

Optimize Your Machine Tool Performance, Productivity and Profits with Royal Products!



For over 70 years, Royal Products has been helping manufacturers squeeze every last drop of performance out of their CNC machine tools. Our broad range of tooling, workholding, automation, and mist-control products help reduce setup times, increase throughput, improve part accuracy, and enable unmanned production. Optimize your production today with Royal Products.

Royal Quick-Grip™ CNC Collet Chucks



- Ten-second collet changes
- Ultra-precision accuracy – 0.0002" TIR or better
- Industry-leading gripping range – 0.062"
- Superior rigidity, gripping torque, and tool clearance

Royal I.D. Workholding Systems



- Internal gripping offers full machining access to the entire length of the workpiece O.D.
- Parallel expansion for optimum accuracy and gripping torque
- Custom systems available – up to 25" diameter

Royal Mist Collectors



- Low-cost, highly efficient mist and smoke collectors keep your shop clean and your workers healthy
- Over 150,000 units operating in over 50 countries worldwide
- Exclusive Royal Risk-Free Performance Guarantee

Royal Rota-Rack™ Parts Accumulator



- Safely collects a large volume of finished parts for hours of unmanned production on bar-fed CNC lathes
- Heavy-duty design handles up to 700 lbs. of parts
- Easy to setup and install – no interface with CNC control is required

For Additional Performance Solutions, visit www.royalproducts.com



Table of Contents

Letter From Our Chairman	4
--------------------------	---

IN THE NEWS

Addition of External Executive Committee Member-Debbie Holton	6
Addition of AMPED Board of Directors	6

FEATURES

Going Back to the Basics with AMPED	8-9
Helping Fill the Skills Gap	10-11
Streamlined Communication at Focused on Machining	14
2020 Spring Conference	18-19

CHAPTER NEWS

CTMA Meeting & Holiday Party	20
Celebrate L.A. Chapter's Manufacturer of the Year, T&T Enterprises!	20
Pittsburgh Chapter Celebrates the Season	21
California Manufacturing Workforce Foundation	21
NTMA Honors Paul Anselmo For Two Decades Of Service	22

MEMBER BENEFITS

Partnership: Fedex and UPS Rates Explained	24
APPI Energy: Here's to the Past, Present, and Future	26

THE RECORD

OPERATIONS & EDITORIAL

Doug DeRose, Vice President

NTMA EXECUTIVE COMMITTEE

Mark Lashinske, Chairman
Modern Industries Inc. - Phoenix, AZ

Alan Ortnier, Vice Chairman
Sirois Tool Co., Inc. - Berlin, CT

Samuel Griffith, Board Member
National Jet Company - Cumberland, MD

Mark Vaughn, Board Member
Vaughn Manufacturing Co., Inc. - Nashville, TN

Gillen Young, Board Member
Custom Tool - Cookeville, TN

Tom Sothard, External Board Member
Debbie Holton, External Board Member

ADVERTISING INQUIRIES

To advertise in The Record, or for information on publishing your corporate newsletter or sales literature, contact Kelly LaMarca at (216) 264-2837 or via email at klamarca@ntma.org for advertising and editorial content.

DESIGN & LAYOUT

Bluebird Branding
www.bluebirdbranding.com

© 2020 NTMA



Welcome New Members

Claudia Kovach
City Machine Technologies Inc
Akron Chapter
www.cmtcompanies.com

Bernard Brazis
Expert Brazing & Heat Treating, Inc.
Akron Chapter
www.expertbrazing.com

Monte Hoffman
Machined Castings Specialties, LLC
Indiana Chapter
www.machinedcastingspecialties.com

Brad Hodgdon
Millrite Machine Inc.
Western Massachusetts Chapter
www.millrite.com

Kurt Malec
United Gear & Machine Company, Inc.
Connecticut Chapter
www.unitedgearct.com

Linda Joyce Shippie
VanPelt Precision Machine Shop
Western Massachusetts Chapter

Upcoming NTMA National Events



Spring Conference

March 9-11, 2020
Cleveland, OH



International Tech Tour

April 18-25, 2020
Japan



Emerging Leaders Conference

April 27-29, 2019
Kansas City, MO

Letter From Our Chairman

Dear Valued Members, Associates, and Sponsors,

I would like to wish everyone a great 2020. May our business relationships and the value of our association continue to grow. This year, your Executive Committee will continue working on Leadership, Governance, Structure and the Strategic Plan for our Association.

The leadership will work with members, associates, and sponsors to create partnerships to increase the value of our association. This leadership will consist of community, communication, collaboration with staff, members, chapters, and all other Advanced/Precision Manufacturing sectors to our Association, creating value for all.

The governance and structure of our association must be clear and transparent for our members to see the direction and value added for all. The Board of Trustees, Executive Committee, teams and staff have a pathway to connect, communicate, and govern our association.

The strategic plan for 2020 and beyond is one of action with clear directives, for the common good of all in the association.

I would like to leave you with a quote from Forbes Magazine, “A great leader possesses a clear vision, is courageous, has integrity, honesty, humility, and clear focus. He or she helps people reach their goals, are not afraid to hire people that might be better than them, and take pride in the accomplishments of those they help along the way.” May we all be such leaders.

I thank you for having trust in me and for being an integral part of the NTMA, the greatest advanced/precision manufacturing association in America.



Mark Lashinske - NTMA Chairman of the Board

Announcing Our New President!

After months of careful consideration and deliberation, and a detailed selection, interviewing, and screening process, the NTMA Executive Committee offered the NTMA President position to Roger Atkins. We are delighted to inform you that Roger has accepted the position and joined NTMA beginning in early January 2020.

Many of you know Roger, and he certainly knows NTMA. He has already dedicated decades of service to our organization and has held every officer position in the Houston, Texas NTMA Chapter, as well as every officer position for NTMA at the national level, including serving as NTMA Chairman in 2012.

Roger also knows our industry; it's in his blood. He joined his family's contract manufacturing business (an NTMA member since 1967) immediately after graduating from Texas A&M University. Over the years, he spearheaded significant growth in multiple contract manufacturing companies, all of which also belonged to NTMA. His greatest success was growing a Texas-based contract manufacturing company from \$22M to \$156M which included acquisitions and international greenfield startups.

For the past few years, Roger has been running RJ3 Enterprise, LLC, an executive advisory company, guiding small- to medium-sized contract manufacturing companies through struggles and into success.

Roger brings to NTMA a deep understanding of the value of our association, a lifetime of insight into our industry, and a true generosity of spirit demonstrated through his commitment to serving the companies that make our association and the entire manufacturing community great. We are excited to have Roger take the NTMA helm and lead our organization into the future.

As we welcome Roger, we also express our most sincere gratitude to Doug DeRose who has served tirelessly as NTMA's Interim President. Doug's energy and dedication helped maintain our association's high level of programming and member services during this time of transition. Doug will remain in a leadership role with NTMA, and will be an important part of our association's next chapter.

To all NTMA members, thank you for your enthusiasm and support as the Executive Committee conducted our search and selection process. In the coming weeks, you will hear from Roger directly by email and through other channels.

I hope you will join us in extending warm congratulations and welcome to Roger!

NTMA Adds New External Executive Committee Member

As of January 1, 2020, Debbie Holton joined the NTMA Executive Committee as an External Executive Committee member. Debbie is a business development and events expert with a proven track record of growing revenue, impact, and results in the manufacturing technology space. Most recently, she has joined the



American Society of Mechanical Engineers (ASME) as Managing Director of Industry Events and Business Development to lead expanded efforts to provide products, services, and impact in the strategic areas of advanced manufacturing, clean energy, bioengineering, robotics, and pressure technology.

Debbie is a recognized industry spokesperson and contributor on manufacturing industry trends and

technologies like 3D Printing/Additive Manufacturing, Smart Manufacturing. In 2018 she was honored as a Notable Woman in Manufacturing by Crain's Detroit Business.

She holds a BA in Communications from the University of Michigan – Ann Arbor and will receive her MBA from the University in May 2019.

AMPED Adds New Board Member

The AMPED Board is excited to announce the addition of their newest board member, Kristin Carlson. Kristin Carlson is the President of Peerless Precision, Inc., in Westfield, MA, a small precision machine shop specializing in the manufacture of small parts mainly for the aerospace and defense industries. Kristin has been with Peerless since 1997, and has held a variety of positions with the company. Kristin also serves on



a variety of educational advisory boards/committees including Westfield Technical Academy's Manufacturing Advisory Committee, West Springfield High School's Pathways to Prosperity Steering Committee, and Agawam High School's newly formed Manufacturing Program Advisory Committee. Kristin is constantly opening Peerless's doors to student tours to show the next generation how "cool" it is and what it really means to be in manufacturing; she works tirelessly to change the outdated narrative that surrounds American manufacturing.

With the passing of her father in 2012, she assumed the role of president and joined the Board of Directors of NTMA's Western MA Chapter, for which she currently serves as president. Additionally, an educational fund was started in her father's name, "Larry A. Maier Memorial Education Fund," which is used towards scholarships, training, and support for students starting in middle school to expose them to the opportunities that come with a career in advanced manufacturing and to support the local vocational and technical programs.

paperlessPARTS 

Built To Help Your Shop Bridge The Skills Gap

Simplify complexity with the secure cloud platform that empowers everyone on your team to make smarter, faster, more informed decisions.



ITAR
REGISTERED
& COMPLIANT

PAPERLESSPARTS.COM/NTMA

MANUFACTURING WILL NEVER BE THE SAME



ONE PLACE FOR ALL TECH DATA

Manage all job files and add freely from any device: 3D CAD, drawings, setup sheets, pictures of fixtures, assembly instructions and more.

COMMUNICATE WITH CONTEXT

Comment on specific geometric features, tag your team, share feedback with customers and get notified at every step of the way.

INSIGHTS FOR EVERYONE

View design for manufacturability warnings, material stock information, and other feature information you can use to make better decisions.

FAST & ACCURATE QUOTING

Paperless Parts adapts to your workflow and streamlines your quoting by leveraging geometric features to power your pricing formulas.

2020

NTMA CALENDAR OF EVENTS



NATIONAL TOOLING AND MACHINING ASSOCIATION

Spring Conference

March 9-11 – Cleveland, OH

Strategize, revitalize, and let NTMA equip you and your business with the tools you'll need to succeed. Join NTMA during our Spring Conference offering business development sessions, educational speakers, and our highly rated roundtable discussions and networking events – these are conferences not to miss!

International Tech Tour

April 18-25 – Japan

Take this opportunity to learn and observe global best practices that can be applied in your own company. We've scheduled strategic stops and tours to highlight some of Japan's most successful manufacturing companies.

Emerging Leaders Conference

April 27-29 – Kansas City, MO

To ensure the future success of our businesses and our industry, we have to build the future today. NTMA gathers the best and brightest up-and-coming industry leaders to network, share knowledge, and brainstorm about tomorrow's manufacturing industry.

NRL Competition

May 14-16 – California, PA

Crunching metal, flying sparks — it's a gladiator-style competition between robots designed and built by students. Come witness tomorrow's workforce in action today. It's a battle of epic proportions that truly is a win for both students and industry.

Summer Conference

June 15-17 – Phoenix, AZ

Strategize, revitalize, and let NTMA equip you and your business with the tools you'll need to succeed. Join NTMA during our Summer Conference offering business development sessions, educational speakers, and our highly rated roundtable discussions and networking events – these are conferences not to miss!

Legislative Conference

September 23-25 – Washington, D.C

There's power in our collective voice. Join NTMA member companies from across the country as we converge in Washington to meet with legislators and policy makers.

Annual Fall Conference

October 27-30 – Kansas City, MO

NTMA's signature event is not to be missed! Our annual conference pulls together all that is great about NTMA into three days packed with networking, advocacy, and learning. You'll enjoy nationally acclaimed speakers, roundtable discussions, social events, and sessions designed to educate and inspire — consider it an opportunity to recharge both personally and professionally.

**Please Contact Kristen our
Events Manager for more information
and to register:**

**Kristen Hrusch khrusch@ntma.org
216-264-2845 or visit:
www.ntma.org/upcoming-events**

Going Back to the Basics with AMPED

Contributed by Bill Padnos



I love reading stories at this time of year. Everyone is predicting what is going to be the “it” thing for the new year. What is going to be the breakout trend? Who is going to make an impact over the next 12 months?

According to Deloitte’s 2020 Manufacturing Industry Outlook, the emerging key theme for industrial companies is to “get their houses in order.” With manufacturing at continued risk for disruption, manufacturers’ optimism has decreased from 93.9% in 2018 to its current level of 67.9%. Factors for this

decrease come from the ongoing uncertainty about tariffs and the workforce shortage due to the skills gap. Unfortunately, this mixed view from industry is expected to be prevailing sentiment for 2020, which is why it is critical for manufacturing companies to streamline operations and double down on the core of their portfolios.

The same goes for NTMA when it comes to workforce development. In 2019, we knew that we needed to rename NTMA-Workforce Development so it would fit

our mission to engage, inspire, and prepare America’s Precision Manufacturing Workforce. We wanted to have an organization that was inclusive of the entire precision manufacturing community because we knew that closing the skills gap needed a unified effort.

As I mentioned in my September article, NTMA-Workforce Development is now known as AMPED (Advanced Manufacturing Practices and Education Development). AMPED was an NTMA program started 20 years ago by Jeff Kelly to fill and retain the metalworking and

AMPED was formed by NTMA to create a unified effort to Engage, Inspire, and Prepare America's Precision Manufacturing Workforce.

manufacturing skilled workforce pipeline by upgrading and standardizing regional training sites into world-class centers of excellence. AMPED's goal was to help not just the metalworking industry, but to help all American manufacturing.

In 2020, the AMPED Board is committed to doubling down on the core of our mission through the programs that are already in our portfolio.

For the National Robotics League initiative, we have entered into an understanding with the REC Foundation to be able to explore ways that our organizations can work together to engage more youth and inspire them to explore manufacturing career pathways. The REC Foundation operates and supports VEX competitions across the world, reaching over 1 million students. Our ultimate goal is to hold the NRL National Championship in conjunction with the VEX Worlds event in Dallas in 2021 and expose our program and manufacturing careers to the 35,000 participants, spectators, and supporters in attendance.

For NTMA-U, we are committed to promoting the basics of why the online educational program was created in the first place. NTMA developed NTMA-U to help deliver an empowered workforce, providing you benefits that will positively impact your bottom line. NTMA-U provides both the approved related instruction for a machinist apprenticeship and specific incumbent worker training that is easy to access anytime and anywhere. Our goal is to consistently communicate this information to the membership so that when an individual company is ready to start an apprentice or needs training for their existing workforce, they will first turn to NTMA-U.

For the Mechanical Aptitude Test, we are committed to making it easier for NTMA members to access the test immediately through online credit card registration. All of our promotional materials are being updated to provide a better understanding of the true value of the test in discovering new talent both inside and outside of your company. We are also working on assessment tests for the advanced NTMA-U courses to help you to determine if an incumbent worker needs extra training.

For the Pre-Apprenticeship program, we are committed to continuing our outreach campaign to NTMA members, workforce development organizations, and schools to express the importance and value of providing industry-level training to a student at traditional high schools. The curriculum is year one of the related instruction for a machinist apprentice. The students complete 3 NTMA-U courses and should have the knowledge base to earn 2 NIMS credentials.

The cost of this program is nominal compared to its potential benefit. You can spend \$6,000 on traditional recruitment techniques of posting a job description and hoping the right candidate lands in your lap. Or utilize the Pre-Apprenticeship program and manufacture your new workforce while spending less than \$500 per student. In addition to high school students, this program is a great way to collaborate with local workforce development organizations to reach out to 18-24 year olds that are not in college and unengaged.

For the educational and training programs and resources that we know that the precision metalworking industry needs but are not a part of our core portfolio, we are committed to being a one-stop source to assist you in accessing them. The Education Team and staff have been researching and then connecting to the industry experts that provide education programs that are not covered by current NTMA-U curriculum.

Today's precision metalworking shops need access to educational opportunities in automation, additive and industrial maintenance, or enhanced training in GD&T or metallurgy. Training utilizing augmented and virtual reality will soon become the norm. Neither AMPED nor NTMA has the financial or human resources to develop new curriculum that will address these topics and modes of delivery. What we have is the ability to create partnerships with the organizations that specialize in these areas in order to make them easier for you to access.

AMPED and NTMA recognize that we need to ensure that you have easy access to the workforce development resources that you need for your company and employees. We are in the process of hiring a new staff member who will have the responsibility to support our efforts in searching and cataloging the education, training, and workforce development resources and materials that are available for you to utilize in your efforts to engage, inspire, and prepare your precision metalworking workforce. All of this information will be easy for you to access on the AMPED section of the NTMA web site.

While 2020 might be a year of uncertainty, we are 100% comfortable with predicating that AMPED will be a source of support for NTMA members and the entire precision metalworking community. Workforce development continues to be the number one issue facing industry. We will not solve this issue in this year, but we can guarantee that we will be better off 12 months from now.

**For More Information,
Please Contact Us Today:
Bill Padnos
216.264.2828
bpadnos@ntma.org**



HELPING FILL THE SKILLS GAP

Attract, Retain & Develop a Skilled Workforce

Attracting, retaining, and developing your precision machining workforce is among the most critical challenges manufacturers are currently facing. In partnership with industry experts, NTMA developed NTMA-U, a fully online educational program that can help deliver an empowered workforce, providing you benefits that will positively impact your bottom line. NTMA-U provides both the related instruction for a machinist apprenticeship and specific incumbent worker training.

NTMA-U key features include:

- *Available anytime, anywhere with Internet access*
- *Narrated courses with practice problems and assessments*
- *Content covers NIMS competencies, paired with resources*
- *College credit-earning potential with articulation agreements*
- *Federal Bureau of Apprenticeship Training approved*

Visit www.ntma.org/programs/education for more information. For questions or to get started, contact Bill Padnos at bpadnos@ntma.org.

Employees are the fuel that powers the engine that is your manufacturing business. Let's make sure that your tank is full.

OUR FOCUS ON EDUCATION

In partnership with industry experts, NTMA has developed NTMA-U, a fully online program of modules developed for precision machining and related occupations. Key features include:

- Available anytime, anywhere with Internet connection
- Narrated modules with practice problems and assessments
- Content covers NIMS competencies, paired with resources
- College credit-earning potential with the University of Akron
- Federal Bureau of Apprenticeship Training approved

Help fill the manufacturing pipeline by investing in the right training, purpose-built for the precision machining industry.

MECHANICAL APTITUDE TEST

An important first step in hiring, training or promoting individuals is to assess current capabilities and knowledge. NTMA's online mechanical aptitude test covers:

- Mechanical and Spatial Relations
- Mechanical Reasoning
- Applied Mathematics
- Theoretical Reasoning

This test is also helpful in determining which module to start an experienced student in.

SAFETY TRAINING

Safety is everyone's responsibility, and NTMA has developed a stand-alone online course that lays a solid foundation. Certificates of completion for this module can be used to document safety training for OSHA files.

NTMA-U 0-0960- Shop Safety

This course covers basic shop safety practices, drill press safety, machine guarding, Lock-out Tag-out, MSDS-SDS, hazard communication standards, OSHA fact sheets, safe lifting, basic first aid and blood borne pathogens.

NTMA-U CORE CONTENT

Modules are grouped into progressive series, but students can take any module, at any time, in any order. Each module can be purchased individually, or in groups of three.

SERIES 1

NTMA-U 1: 1100-1A - Basic Blueprint - 38 Contact Hours

This course teaches proper terminology, symbols, and guidelines for reading, sketching, and interpreting blueprints in a manufacturing environment using geometric equations and symbols. It includes dimensioning techniques, tolerancing, drafting lines using geometric equations, symbols, line types, orthographic views, isometric views, and offset, auxiliary and broken sections.

NTMA-U 1: 1120-1A - Basic Math - 42 Contact Hours

This course teaches shop math concepts such as fractions, fraction to decimal conversions, and calculating angles.

NTMA-U 1: 1200-1A - Precision Machining Technology - 42 Contact Hours

This course introduces metal cutting operations – basic metallurgy, types of machines and their safe operation and setup, terminology, quality measurement devices and methods, cutting tools, layouts, print reading, hand tools, and cutting tools.

SERIES 2

NTMA-U 2: 1200-2A - Precision Machine Technology 2 - 42 Contact Hours

This course focuses on metal removal processes and proper setup and use of workholding devices on the drill press, engine lathe, milling machine, and surface a grinder, with a continued emphasis on shop safety and quality measurement devices. It also reviews the use of the coordinate measuring machine (CMM), the optical comparator, and the electro-discharge machine (EDM).

NTMA-U 2: 1100-2 - Intermediate Blueprint Module 2 - 38 Contact Hours

This course improves efficiency in blueprint reading. It covers dimensioning, fraction to decimal conversion, drafting lines using geometric equations, line types, orthographic and isometric views, symbols, and offset, auxiliary, and broken sections.

NTMA-U 2: 1120-2A - Applied Mathematics - 42 Contact Hours

This course emphasizes the math skills and concepts required for interpreting drawings and applying them to manufacturing processes.

SERIES 3

NTMA-U 3: 2300-3 - CNC With Simulator - 38 Contact Hours

This course introduces tools and technology for computer numeric control (CNC) machining, G&M Codes, and principles and applications of the Cartesian Coordinate System. It reviews the use of metal cutting tools with CNC programming, and the process for creating CNC programs, including safety precautions, proper machine set up and operational skills, and controlling part sizes with wear offsets.

NTMA-U 3: 2500-3 - Intermediate Applied Math - 42 Contact Hours

It explains the proper use of the Pythagorean theory and trigonometric function, right triangle problems, and the use of sine bars and gage blocks.

NTMA-U 3: 1500-3 - Intermediate Blue Print Reading with Basic Essentials for GDT - 38 Contact Hours

This course introduces symbols and concepts of geometric dimensioning and tolerancing for engineering drawings.

SERIES 4

NTMA-U 4: 2720-4 - Metallurgy - 38 Contact Hours

This course introduces the nature, properties, and characteristics of materials, with a focus on metals. Chemical reactions, thermodynamics, and processing of iron and steel are covered, as well as how metals are alloyed and formed to achieve desired mechanical properties.

NTMA-U 4: 2800-4 - Advanced Math - 38 Contact Hours

This course includes more complex applications, such as the law of sines and the law of cosines.

NTMA-U 4: 2900-4 - Quality Control / SPC / Inspection - 38 Contact Hours

This course introduces quality control practices for machining. It teaches proper inspection techniques, using the appropriate tools. This course also touches on the applications of statistics in process and quality control.

SERIES 5

NTMA-U 5: 2420-5 - Manufacturing Technology - 38 Contact Hours

This course focuses on the machining of various metals, including differing speeds and feed rates, as well as the use of different cutting tools.

NTMA-U 5: 2500-5 - GDT - 38 Contact Hours

This course focuses on how to interpret and apply the concepts of geometric dimensioning and tolerancing to engineering drawings. Topics include fundamentals of symbols, terms, positional tolerance applications, data frames, and conversion tables.

NTMA-U 5: 2800-5 - Advanced Applied Math - 38 Contact Hours

This course builds on previous courses and teaches applied mathematics needed to solve for unknown surfaces found on advanced blueprints.

SERIES 6

NTMA-U 6: 2420 - 6 Jig and Fixture - 38 Contact Hours

This course covers the designs of jigs, fixtures and dies. It includes the use and application of bushings, locating devices and work holding devices used in jigs, fixtures and dies.

NTMA-U 6: 2410-6 - Moldmaking - 38 Contact Hours

This course covers the principles of injection molding, the equipment required, process set-up, and methods.

NTMA-U 6: 2800-6 - Advanced Math - 38 Contact Hours

This course goes into more depth on applied mathematics required to solve for unknown surfaces found on more advanced blueprints.

NTMA-U 6: 1300-6 - Diemaking - 38 Contact Hours

This course covers metal stamping die construction, materials, components, processes, and types related to automated manufacturing technology.

ADVANCED MODULES

NTMA-U 0-4000-7 Dimensional Metrology - 45 Contact Hours

This course teaches technical manufacturing terms and principles, the proper use of common hand-held measuring tools, the applications for GD&T, and probability and statistics.

NTMA-U 0-0950 -Advanced Diemaking Series 2 - 45 Contact Hours

This course covers die to press relationships, automatic feeds, inverted dies, compound dies, and progressive dies using the blank through process, and chop-off and parting principles. It also covers secondary operations, drawing operations, and computations.

Thousands of Machine Tools Right at Your Fingertips

TECHSPEX

The Machine Tool Search Engine

Search Smarter!

Spindle: Milling

Direction: V or H

of Main Spindles:

Max. HP:

Top RPM:

Machine Type:

- ☐ Machining Center
- ☐ Drill/Tap
- ☐ Boring Mill
- ☐ Milling Machine

SOURCE: Hwacheon

IN PARTNERSHIP WITH:

**Modern
Machine
Shop**

techspex.com



Future-Proof your Machine Shop with Blockchain

Join the industry's first blockchain-enabled manufacturing network and unlock new income streams today



Monetize idle machinery.



Win clients without ads.



Earn rewards for quoting.

SyncFab helps expand your client base with vetted jobs from pre-qualified buyers across America. Our platform streamlines your operations with all-in-one quoting, payment and production tracking.

PARTNERS



REGISTER AS A SUPPLIER AT [SYNCFAB.COM](https://syncfab.com)

Streamlined Communication at Focused on Machining

Contributed by Roger Maranan, Head of Product, Paperless Parts, Inc.

Focused on Machining (FOM) is a Colorado CNC machine shop that manufactures precision-machined parts. The company is well-known for delivering the most precise machining in the Denver metropolitan area, serving customers in aerospace, medical, food and beverage processing equipment, and a host of other industries. In the last year, FOM transformed their business by adopting Paperless Parts -- the secure, ITAR-compliant manufacturing platform built to streamline communication and quoting for custom parts manufacturers. FOM took a very manual quoting process that provided their customers with a quote turnaround time of 5 to 10 business days down to 1-3 business days.

According to President Justin Quinn, "The new, more efficient process supported by Paperless Parts has increased the speed at which we respond to our customers." While Paperless Parts streamlines the quoting process for FOM, the biggest impact came in the adoption of the chat and communication tools in Paperless Parts.

Better Teamwork and Communication During the Quoting Process

In addition to the quoting functionality, Paperless Parts gives everyone in the shop, from the estimators in the front office to the operators on the floor, the ability to view 2D and 3D CAD. This replaces the need for additional CAD licenses or downloading stand-alone viewers. All job-related files are uploaded to one secure place, capturing the full technical data package of each part and ensuring everyone in the shop has what they need to do their job. The Paperless Parts viewer comes with chat features that enable the FOM team to collaborate on quotes and jobs. Some examples of how FOM uses chat include:

- Tracking material requirements and outstanding quote requests
- Discussing strategy between their experienced machinists on how to best approach a part
- Identifying especially tight tolerances, undercuts, and other features that might be challenging

"With Paperless Parts our team can communicate internally about the various parts we work on in the context of the 3D and 2D CAD models and prints, reducing confusion and removing the need to recreate documentation on prints," Quinn says.

Providing a Better Customer Experience

The chat features work between the shop and the customer too, enabling FOM to level up their customer service. As Quinn states, "With Paperless Parts we can identify, highlight, and comment on a feature of the part in question and send a link to the customer through which they can view the identical feature, highlight, and my comments about it. This helps us more easily deal with potential manufacturing issues during the quoting process, such as showing the customer how a feature like a sharp corner that increases machining costs can be modified to reduce the price." The response from customers has been overwhelmingly positive. As one of Justin's customers says in the chat in Paperless Parts, "@Justin Quinn BTW this software is really cool!"

To expedite the quoting process for customers, FOM also uses the chat with outside vendors.

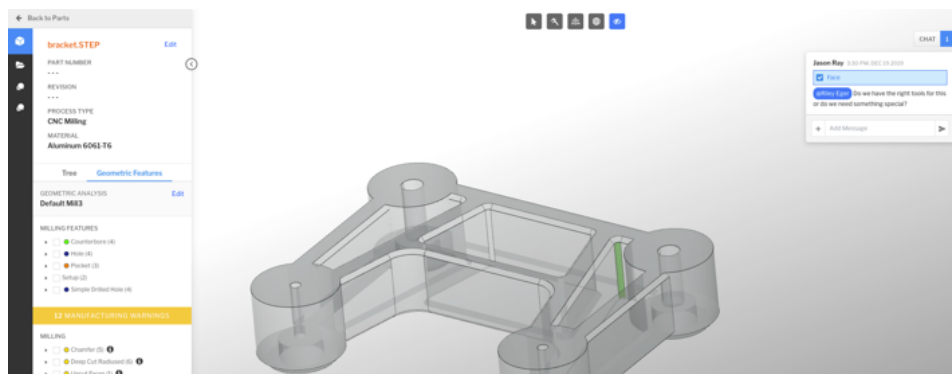
"We are communicating externally with vendors to discuss features and tolerances using CAD geometry," explains Quinn. "This reduces the time to quote a part, and to get questions answered before making the part." This also reduces mistakes in the quoting process which can lead to under-quoting and expensive RMAs.

Streamlined Communication is an Advantage

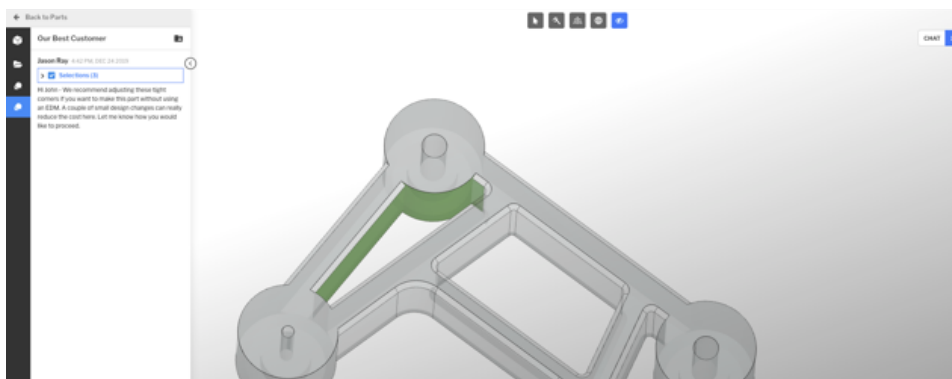
With increasing customer expectations for faster responses to RFQs, it is imperative for manufacturers to identify ways to streamline their quoting process. As FOM demonstrates, better communication in the shop and with the customer brings advantages to meet the high demands placed on custom part manufacturers.

Paperless Parts is the secure, ITAR-compliant manufacturing platform built to streamline communication and quoting for custom parts manufacturers. It supports a variety of manufacturing processes including CNC milling and turning, sheet metal, additive, lasercut, waterjet, and wire EDM.

Learn more at www.paperlessparts.com.



Picture of Paperless Parts internal chat tool.



Picture of how the Paperless Parts chat can be used to securely communicate design recommendations with customers.

HOW MUCH CAN YOU SAVE WITH VERICUT FORCE OPTIMIZATION?

FORCE OPTIMIZATION - MACHINE SAVINGS CALCULATOR

Hourly Machine Cost \$
(total burden)

0 50 100

Number of Machine Tools

5

Weekly Machining Hours

80

Estimated Reduction in Machining Time
Reduce machining time by as much as 15-25% or more

25% (typical reported savings)

ANNUAL MACHINE SAVINGS

\$520,000



FORCE OPTIMIZATION - CUTTER SAVINGS CALCULATOR

Hourly Cutter Cost \$
(average cutter cost/cutter life hours
e.g. \$100/1 hour)

0 50 100

Number of Machine Tools

5

Weekly Machining Hours

80

Estimated Increase in Cutter Life
Extend the life of your cutters up to 100% or more

+50% increase

ANNUAL CUTTER SAVINGS

\$692,640



Calculate your own savings at: cgttech.com/force-calculator

- Reduce machining time by 15-25% or more -
- Increase cutter life and improve surface finish -
- Optimize ANY CAM or manually generated tool path -

Optimize. Save. Every time.

9000 Research Dr, Irvine, California 92618
(949) 753-1050 • info@cgttech.com

CGTECH_{.com}
VERICUT[®]

EMAG GROUP TECHNOLOGIES

Turning 	Milling 	Grinding 
Gear Hobbing 	Power Skiving 	Heat Shrink Assembly 
ECM / PECM 	Laser Welding 	Induction Hardening 

The EMAG Group covers the entire spectrum of machining processes in the metalworking industry, from soft to hard machining. Access to a wide range of technologies (turning, drilling, milling, gear cutting, grinding, laser welding, ECM/PECM, induction hardening and automation) allows EMAG to implement complete manufacturing lines for the production of gear box, engine and chassis parts in the automotive industry, as well as for non-automotive sectors including oil field, power generation, aerospace and large equipment.



EMAG L.L.C. USA

38800 Grand River Avenue · Farmington Hills, MI 48335 · USA | Phone: +1 248 477-4770 | Fax: +1 248 477-7784 | E-mail: info@usa.emag.com | Website: www.emag.com

MFG 2020

FT. LAUDERDALE • APRIL 1-5

POWERED BY  AMT



JOIN US AT MARRIOTT RESORT FT. LAUDERDALE HARBOR BEACH FOR MFG2020

Now in its 9th year, AMT's annual MFG Meeting has become a tradition for AMT members to network with their peers and learn from industry thought leaders about the most important issues and trends in the market today—transformational technology, economic predictions, business leadership, and industry best practices.

REGISTER TODAY AT [THEMFGMEETING.COM](https://themfgmeeting.com)

BEFORE PRICES INCREASE AT THE END OF THE YEAR

NTMA Members attending MFG will keep Member Rate!

NTMA

2020 SPRING CONFERENCE STRATEGIZE REVITALIZE SUCCEED

Spring Conference
March 9-11 – Cleveland, OH

You'll love the affordability of this conference.
Plan to bring your top people!

With member registration fees at the low rate
of \$295 per person, you'll want your top people
to experience the NTMA Spring Conference
first hand. Bring a team to reap the
greatest benefit!

Member Registration: \$295 per person - For more information or to register: www.ntma.org/events





Mark Eich



Chris Fox



Jeff Graham



Montez King



Omar Nashashibi



Lisa Ryan



Caitlin Sickles

Keynotes

Manufacturing Engagement: Keep YOUR Talent from Becoming THEIRS

Presented by: Lisa Ryan, Chief Appreciation Strategist, Grategy

It's no secret. With unemployment at a historical low for the past several years, your best employees may be the perfect source of new talent – for your competitors. Based on how engaged and committed they are to your organization, workers can make the choice as to whether they want to stay with you or not. The bottom line is that you are faced with an enormous challenge: keeping your top talent from becoming someone else's!

Race for the White House: A 2020 Update

Presented by: Omar Nashashibi, Founding Partner, The Franklin Partnership; Caitlin Sickles, Director, Policy Resolution Group

The 2016 election results shocked the country and the world, but the 2020 race for the White House will decide in which direction voters want to take the United States. NTMA's Washington, D.C. representatives with The Franklin Partnership and Policy Resolution Group at Bracewell will update attendees on the 2020 elections, the implications for manufacturers, and analyze the Democratic primaries. With our Spring Conference in the middle of the Democrat's primary contest, you won't want to miss the latest on which Democrat has the best chance to face President Trump, how candidates are communicating with manufacturers, and what it all means for you.

Questions?

Contact Kristen Hrusch
khrusch@ntma.org
or 216-264-2845

Breakout Sessions

The New Cybersecurity Maturity Model Certification: What You Need to Know

Presented by: Mark Eich, Principal, Cybersecurity, CliftonLarsonAllen

The Department of Defense is moving forward to adopt a framework for cybersecurity to better assess and enhance the cybersecurity posture of the Defense Industrial Base (DIB). The Cybersecurity Maturity Model Certification (CMMC) will review and combine various cybersecurity standards, as well as best practices and map these controls and processes across several maturity levels that range from basic cyber hygiene to advanced. Attend this session to learn all you need to know about this upcoming certification process.

Educational Training Programs: How to Match your Technology with What's Coming Down the Pike

Presented by: Montez King, Executive Director, NIMS

A new decade of emerging technologies requires Responsive Training. Join Montez King with NIMS for an introduction to Responsive Training Principles (RTPs) and Performance Measures (PMs). Train for Performance with our RTPs and PMs. Learn how this customizable experience is not only industry recognized and industry skill-aligned, but is impactful to your business.

Manufacturing Marketing: Going from 10 Years Behind to Ahead of the Curve

Presented by: Chris Fox, Founder, Creative Industrial Marketing

A focus on the old style of manufacturing marketing that we are all so familiar with – print ads, trade show booths, and sales calls/visits: how they were successful and where the challenges were. There will be a final focus into what digital marketing can really do, instead of spending precious dollars on the old school marketing methods, and where content plays a role. Attendees can also expect to discuss marketing automation and why the world of digital/social marketing isn't just for B2C brands.

Attracting, Training, and Retaining your Talent

Moderated by: Caitlin Sickles, Director, Policy Resolution Group

Hear from up and coming young leaders as they discuss what attracted them to the industry, what is inspiring them to stay at their company, and how they are being prepared and preparing themselves for the future. Attendees will also hear from other member companies about what they are doing to attract the younger generation and build their workforce.

NTMA Member Benefits: Are you Utilizing your Benefits to the Fullest?

Moderated by: Kelly LaMarca, Administration & Member Relation Manager, NTMA

Hear testimonials from member companies about NTMA benefits that they have utilized that saved them enough money to pay for their membership and more in just one year. Member panel will focus on affinity partner benefits, such as APPI Energy and PartnerShip, NTMA-U, and the new Healthcare Plan. Attendees will have the opportunity to ask their peers and NTMA staff questions about all membership benefits.

How to Address and Optimize your Workplace Shortage

Presented by: Jeff Graham, Product Sales Manager, NEFF

Overview of the manufacturing landscape and making the case for automation. Implementing simple automation with collaborative robots and vision for tasks like machine tending, inspection, etc.

Getting your Money's Worth: How to Make Washington Work for You

Presented by: Omar Nashashibi, Founding Partner, The Franklin Partnership

Learn about job training grant opportunities, manufacturing tax incentives, energy efficiency initiatives, export support services, and workplace safety support programs.

CTMA Meeting and Holiday Party

On Tuesday, December 10th CTMA held its Annual Meeting/Holiday Party at Marquee Events in downtown Hartford. Close to 50 members enjoyed an evening of networking, delicious food and drink and the annual special raffle.

Several members received awards that evening – 'Award for Dedication and Service to CTMA and our Industry' was awarded to Bruce Dworak of Hobson & Motzer, a board member for at least 20 years; also two 'Years of Service' awards from NTMA were presented to Frasal Tool Co., Inc., and Kell-Strom Tool Company, Inc. both in service for 30 years. Athens Industries received a 'Years of Service' award for 35 years in service but was not able to attend and accept the award. Alan Ortnor of Sirois Tool gave us an NTMA update and NJ Goulet III gave a year in review for CTMA.



Celebrate L.A. Chapter's Manufacturer of the Year, T&T Enterprises!

LA/NTMA recently sat down with the President & Owner of T&T Enterprises, Brent Thalasinis, to learn more about his business. Brent is a third generation manufacturer and LA/NTMA will be celebrating T&T Enterprises at its upcoming installation dinner.

Where did you grow up and were you interested in manufacturing when you were younger?

I grew up in Huntington Beach interested in golf and going to the beach. On the weekends, I would go into work with my dad at a fastener manufacturing company. This is where it all began.

How did you start in the manufacturing business?

I am a third generation manufacturer. My Grandfather William Thalasinis was a machinist; my father John Thalasinis was a machinist and started his own manufacturing company (T&T) in 1993, and now I am carrying on the torch.

How long have you been in business?

I have been in the fastener manufacturing business for all my life. I have been involved with everything from manufacturing to testing, inspection, quality, operations, and serving as COO and now CEO/Owner for the last 3 years.

What do you see as your greatest challenge and greatest opportunity?

People, and more specifically our team, is always our greatest challenge because we all have different strengths and finding the right natural fit for everyone is an art. I also find our team is our greatest opportunity because together we will meet our goals and continue to innovate in an ever changing business environment.

What problem does your business solve/how do you differentiate yourself from your competition?

We are a fastener manufacturer that holds inventory for our customers and supports long term stocking agreements. We are mostly known for our ability to produce specialty fasteners with a quick delivery. When a nuclear power plant is doing maintenance and finds they need 4 or 400 bolts at 11:00 p.m. on a Saturday, we get the call and get it done. When an oil refinery is in a shutdown and they need studs and nuts on a Sunday, we get the call and get it done. WE MOVE FAST FOR YOU®

What does the future of manufacturing look like to you?

The up and coming generation will continue with interest in CNC and robotics. 3D printing is changing the mold and plastics manufacturing industry and some metals manufacturing; however, 3D printing of pressure retaining fasteners has a long way to go. The future of manufacturing lies in the hands of our youth. Their interest will decide where we go and how we solve the world's manufacturing challenges.

What's the best part of your day?

Taking an early morning walk around the shop while sipping a cup of coffee with the smell of metal cutting and warm oil; you look over and see a team member with a smile and wanting to tell you a story about how he or she overcame a recent challenge.

How many employees do you have?

T&T Enterprises currently has 22 valued employees. Each one of our team members provides an exemplary contribution to the community representing quality, integrity, and accountability.

Where do you live?

I live in beautiful Murrieta, CA. Home of the Murrieta Rod Run and several other fun car shows.

Besides work, what do you do for fun?

My wife and I enjoy exercising together and outdoor activities such as hiking, tennis, and golf. We have committed to trying standup paddle boarding. I am sure it will be a lot of fun!



T&T Enterprises

1220 Railroad Street, Corona, CA 92882

951.340.0911 brent@ttenterprises.com

www.ttenterprises.com

Pittsburgh Chapter Celebrates the Season

'Tis the season to celebrate a successful year and look to the successes of the future. Pittsburgh Chapter NTMA colleagues gathered on December 10, 2019 at the Pittsburgh Field Club for the annual Christmas Party. With more than 75 manufacturers, supporters, and friends, the gathering brought great conversation and connections. The Pittsburgh Chapter NTMA was pleased to surprise long-time manufacturing advocate, Paul Anselmo, president of New Century Careers, with a national lifetime achievement award, the William H. Hardman Award. The award recognizes outstanding contributions to the manufacturing community.

This year's entertainment was Steve the Mentalist, who never disappoints! A special thank you to everyone who came out to share this memorable evening — and a warm, Happy New Year from the Pittsburgh Chapter NTMA!



CMWF

California Manufacturing Workforce Foundation

The California Manufacturing Workforce Foundation is a 501(c)3 public charity. We provide financial aid to students enrolled in local manufacturing education classes. We do this to ensure that you can find qualified entry level employees.

Do you have room in your lobby for a small supply of Foundation brochures in a plastic stand? The brochures describe our Foundation's mission in colorful detail. They also tell the reader how to support us. If you have room to display our brochures, please contact us today. I'll personally send them to you with a plastic stand. Please give them to your visitors. All donations are tax deductible.

Mark Obsterstock
Board President
www.camworkforce.org



**"The best coolant I've ever used.
My guys love it."**



Titan Gilroy
TITANS of CNC: Academy

Find out which coolant is Titan Gilroy's clear choice:
blaser.com/synergy735



liquidtool®
BOOSTS YOUR PRODUCTIVITY

The NTMA Honors Paul Anselmo for Two Decades Of Service

It was the turn of the century, and a pivotal time for manufacturing. The 1900s brought a manufacturing boom that had been unprecedented in history, but as the year 2000 approached, it became apparent that manufacturing could not continue to thrive in a business-as-usual manner. Those at the cutting edge of the industry began talking about what would make a difference in manufacturing in the next millennium. Paul Anselmo was one of them. Of course, technology would play a pivotal role in progress, but at the heart of it all, Anselmo was among those that recognized the future of manufacturing was in its people. Not only did he recognize it, he built his career around it—and for that, the Pittsburgh Chapter NTMA is proud to honor Paul Anselmo, the 2019 winner of the National NTMA William H. Hardman Award for excellence in training and education.



This year, Anselmo, the president and CEO of New Century Careers (NCC), marks 20 years of training the next generation of manufacturers. In those 20 years, his MANUFACTURING 2000 (M2K) machinist program has provided free basic training and advanced skills training for 1,500 unemployed and underemployed workers in the Pittsburgh region. M2K is a win-win. The program has helped southwestern Pennsylvania manufacturers combat the skilled worker shortage—providing employees with the skills to strengthen and grow manufacturing companies, and additionally, it's provided Pittsburgh workers with well-paying jobs with future potential. For two decades, Anselmo has spearheaded efforts. Neil Ashbaugh has worked with him as the director of services for the past three years.



“Paul’s knowledge of workforce development and skills training is unsurpassed. His passion to see people succeed is what makes this work so enjoyable,” said Ashbaugh.

When the Pittsburgh Chapter NTMA was looking for a program manager for the chapter’s apprentice training, it is no surprise that, under Anselmo’s leadership, NCC was the natural fit. In addition to the expertise and experience that Anselmo and his team brought to the program, many employees who had trained under M2K were equipped to move into apprentice training. Anselmo’s role with NIMS has also made it possible for M2K students and NTMA apprentices to earn NIMS credentialing during their coursework—another score for their employers and a personal accomplishment for the new machinists. The training and credentialing moved many to see manufacturing not just as a job, but a career choice with upward progression.

Greg Chambers, director of corporate compliance at Oberg Industries, has served on the NCC board since its inception and has known Anselmo for 20 years. “Paul is a fighter – New Century Careers is fortunate to have a leader that never backs down from adversity, economic uncertainty, or technological challenges,” said Chambers. “He exemplifies what he wants from his students so they don’t just learn the manufacturing processes, but the work ethic and passion needed to be a trusted employee.”

Anselmo has made a career of building the manufacturing industry. So when a group of manufacturing professionals and educators recognized that by changing the message about manufacturing, they could change the future of the industry, once again, Anselmo was on board. The group took the next

step—introducing the benefits of a manufacturing career at the high school level and BotsIQ came to fruition. As a member of the BotsIQ executive committee, Anselmo continues to be at the forefront as the workforce development program fulfills its vision: that all high school students in Southwestern Pennsylvania consider manufacturing as a viable career option. Since its inception, more than 6,000 students have benefited from BotsIQ, making it a model program for the region and the nation.

“You can tell that manufacturing is in his blood. It is truly his passion,” said Chambers.

He’s a frequent guest lecturer for the Aspen Institute’s Sector Skills Academy, which trains the leaders in workforce development throughout North America. He’s served on numerous committees and boards and advises on workforce development.

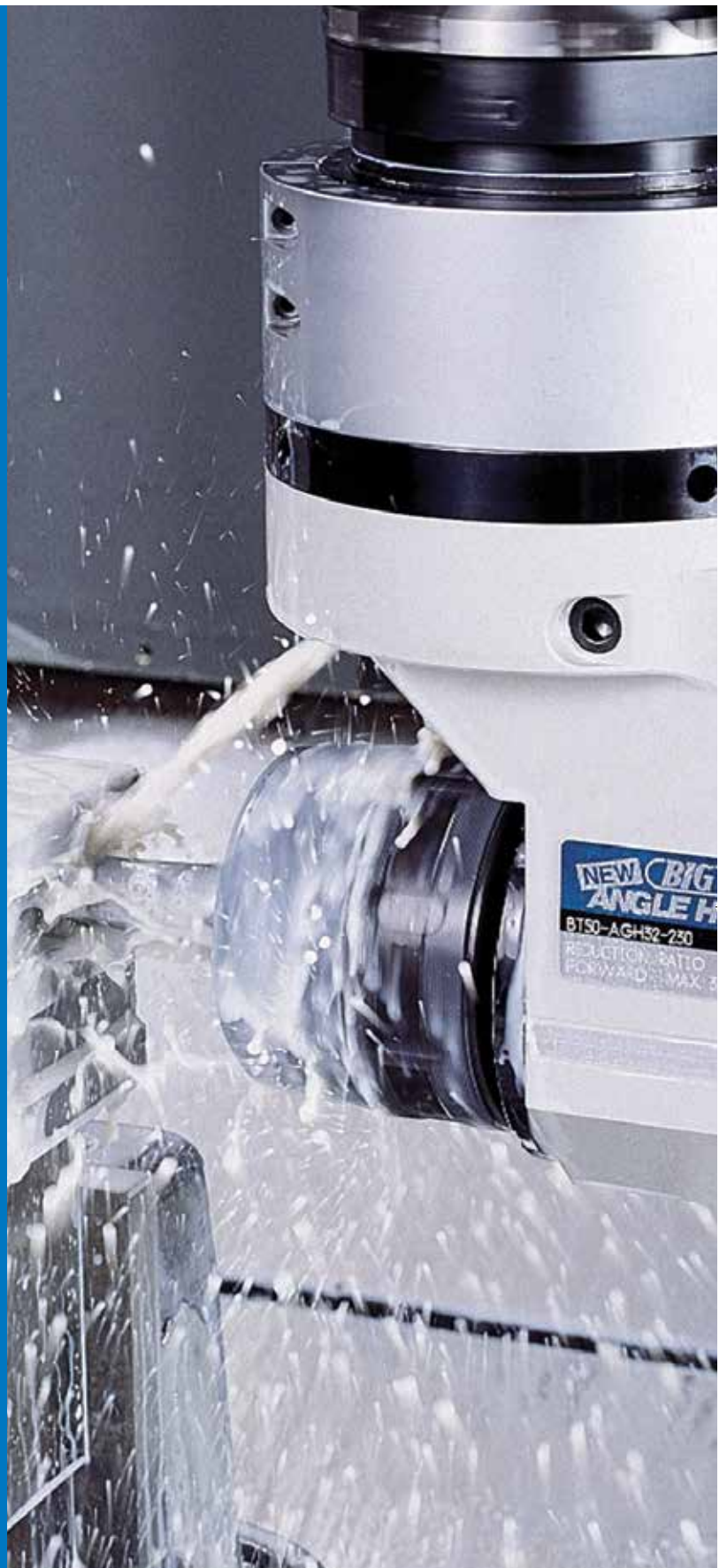


In fact, when the White House wanted to make a major announcement in Pittsburgh about training future workers, they reached out for input from Anselmo. “He’s passionate, bold, a quick thinker,” said Ashbaugh. “He’ll challenge conventional wisdom all to see that the bar of excellence is raised, no matter the subject or topic. Paul has definitely created a legacy for many of us to attempt to reach.”

His breadth and depth of knowledge, his easy demeanor, and his genuine interest in making a difference have made an indelible impression. Undoubtedly, Anselmo’s work has impacted the region and the industry, but it goes much deeper. He’s impacted the thousands of people who now take pride in their manufacturing careers and those who employ them.

EXPERIENCE THE ECONOMY OF QUALITY

Invest in world-class
BIG DAISHOWA Tool Holding
to eliminate inconsistent tool
changes, increase tool life and
reduce cycle time.



BIG KAISER



Tool Holders | Boring Tools | Cutting Tools | Workholding | Tool Measuring | bigkaiser.com

2020 Fedex and UPS Rates Explained



Important Information about the 2020 FedEx and UPS Rate Increases

Once again, FedEx and UPS have announced their rate increases, and NTMA members need to stay informed in order to keep costs low. PartnerShip®, the endorsed provider managing the NTMA Shipping Program, has combed through the details so you can stay on top of the 2020 changes. Download the free white paper for key details about the new rates and how they may impact your business.

Key Considerations for the 2020 FedEx and UPS Rate Increases Rates are going to increase in 2020 with carriers FedEx and UPS. Here are the top takeaways you need to know:

- *FedEx and UPS small package rates are increasing an average of 4.9% - effective January 6, 2020 and December 29, 2019 respectively.*
- *Your actual costs will vary. Depending on the service you use and your package characteristics, you could see increases above or below the average.*
- *Many common surcharges are also increasing. On top of the base rates, you need to be aware of the charges that apply to your shipments and how they'll affect your total costs.*

PartnerShip®, the endorsed shipping provider for NTMA, has sorted through the rate charts and put together a complete guide for members.

NTMA members have exclusive access to discounts on select FedEx® services to help offset these increases.

Enroll today to start saving.



www.partnership.com/micro-site/small-package/54ntma

NTMA

EMERGING LEADERS CONFERENCE

April 27-29 – Kansas City, MO

To ensure the future success of our businesses and our industry, we have to build the future today. NTMA gathers the best and brightest up-and-coming industry leaders to network, share knowledge, and brainstorm about tomorrow's manufacturing industry.

Your emerging leaders are your rising managers and leaders in the making. If you have someone who exhibits these five traits, the Emerging Leaders Conference is the key to their success.

1. Achiever
2. Change agent
3. Developer
4. Team Player
5. Business-savvy

Questions? Contact Kristen Hrusch - khrusch@ntma.org or 216-264-2845



The sustainable and global innovator in the manufacturing industry



DMG MORI – THE FUTURE OF MANUFACTURING TECHNOLOGY

VISIT
DMG MORI
AT IMTS

IMTS Chicago
Booth # 338900
South Building,
September 14 - 19, 2020



DMG MORI
TECHNOLOGY CYCLES



DMGMORI.COM

DMG MORI

APPI Energy: Here's to the Past, Present, and Future

Contributed by Susan Skirta, Communications Specialist

With the end of the year approaching and the beginning of a new decade upon us, it is a good time to reflect on the past; more specifically the past 23 years. APPI Energy is completing its 23rd year of business and we are just getting started. With a new location and the expansion of a new division, it is hard to imagine that we started as an idea over breakfast.

Founded in 1996, after the National Energy Policy Act was passed in 1992, APPI Energy formed at the start of energy deregulation. Utilities were integrating power plants into their business models to allow them to act as suppliers and distributors, opening the market for competition and allowing negotiations for energy supply contracts. During this time, our founder, Walter Moore, met with an electrical engineer over breakfast about the recent changes being made in the industry. Moore foresaw the issue of consumers being uninformed and overwhelmed in their decision-making process. He knew there was a need for an expert intermediary that could vet suppliers and assist businesses in finding an ideal energy contract that fit their needs. After years of researching, developing expertise in the field, APPI Energy earned the endorsement of multiple trade associations and chambers of commerce. Being vetted and endorsed by the associations gave the members the confidence that APPI Energy was the trusted energy advisor for all their needs. As of today, we have the endorsement of 160 trade associations and ASAE (American Society of Association Executives), affinity groups, and chambers of commerce.

In 2013, we differentiated ourselves by creating our exclusive pricing database that analyzes historic pricing and trends in order to predict the movement of the market. With a database of hundreds of millions of pricing records, we have the capability to examine pricing and make informed recommendations to our clients. Providing our clients and prospective clients data driven analysis has been a game changer. Today we have the ability to drill down to the utility service territory to pull historical pricing in their backyard; it is not just a national average, it's granular to meet specific needs and make well informed decisions.

By 2017 we were one of the leading electricity and natural gas procurement companies. With the trends for alternative and holistic energy methods emerging, we knew it was only a matter of time before we needed to expand in that market as well. We decided to create a sustainability division to provide clients a comprehensive way to reduce energy expenses and create budget certainty. This division launched in

with an ideal solution for their business. Recently, we were awarded for "Consultant of the Year" from The Energy Professionals Association (TEPA). The award recognizes one company on their promise to remain innovative in areas such as contract negotiating, ethical business practices, and customer service. Today, we successfully manage more than 2 billion kWh of electricity and 33 million DTH of natural gas.



2019 allowing us to service all states, not just in deregulated markets, with these services. We can help customers with purchasing renewable energy, conducting holistic energy assessments that provide solutions to improve resiliency and sustainability, and reduce demand and energy costs. We optimize your facilities through HVAC upgrades, lighting retrofits, advanced metering technology, peak load scheduling, and weatherization. Our sustainability division can implement demand response systems that can adjust energy usage during peak hours and battery storage systems that will allow energy usage off the grid. We can assist in utilizing renewable energy systems such as solar power, wind farms, or hydro systems to increase efficiency and reduce energy consumption.

Over the past 23 years APPI Energy has strived to continually perfect our methods and provide the best tools for our customers to ensure they are provided

With our new division, we can go beyond competitive electricity and natural gas and offer alternative methods to both regulated and deregulated states. We expect to continually grow as deregulation becomes more common. Technology will advance, and new alternative solutions will be available. The future is bright in the energy industry and we are excited to be a part of it.

APPI
ENERGY

To see how APPI Energy can help you with the future of your energy costs, contact us at 800-520-6685 or visit www.appienergy.com.



HEIDENHAIN



TNC 640 – High-End Control for Milling and Turning Operations

The TNC 640 from HEIDENHAIN: for the first time, milling and turning are combined in one TNC. Now users can switch as desired between milling and turning—within the same NC program. Switchover is independent of the machine kinematics. It automatically takes the respective operating mode into account and without any additional action.

HEIDENHAIN CORPORATION, 333 East State Parkway, Schaumburg IL, 60173 847-490-1191 www.heidenhain.us

Angle Encoders + Linear Encoders + Contouring Controls + Subsequent Electronics + Length Gauges + Rotary Encoders



NATIONAL TOOLING AND MACHINING ASSOCIATION

1375 Rockside Rd.
Cleveland, OH 44134

Manufacturing America's Future

**Have an interesting story you would like to
share with other NTMA members?**

Each issue of The Record will feature one or more stories
from members that fit the month's theme.

The submission deadline will be the first
of the month prior to the publication date.

Email to Kelly LaMarca at klamarca@ntma.org.

Upcoming Record Themes:

February

The Next Generation of Manufacturing

March

Government and Manufacturing: How to Get Involved

April

Data Driven Manufacturing

