NRL: A manufacturing workforce development program disguised as a robotics competition - see details pp.10-13

“The NRL is the only combat robotics league that formalizes ties with middle to post-secondary school teams, teachers and manufacturing partners, introducing them to real-world manufacturing experiences”

Bill Padnos
NTMA Director of Youth Engagement

EMERGING LEADERS CONFERENCE

Laying a foundation to build a community of peers at the May inaugural conference. — pp18-19

THE RESHORING TREND

A growing number of companies across the country are bringing their manufacturing efforts back from overseas. — p23

ONE VOICE MEMBERS MAKE ADVOCACY TRIP TO CAPITOL HILL, REMIND LAWMAKERS THAT MANUFACTURING MATTERS

Nearly 70 NTMA and PMA members participated in the seventh-annual One Voice Legislative Conference in Washington, DC in April. — p24

SMALL BUSINESSES HIRING MILITARY: A WIN-WIN

In late May, the Center for America and the American Jobs for America’s Heroes military hiring campaign released its groundbreaking “Best Practices Guide for Employers in Recruiting and Hiring National Guard Members and Veterans.” — p24
Time Is Money.
Start Here and SAVE!

Make parts faster with TCI Machine-Ready Blanks.

- Custom made to order from one to thousands
- As close as +/- .0005” dimensionally and .0002” flatness, squareness and parallelism while minimizing material movement during CNC machining
- Deburred and clean; ready to load directly into your CNC machining center

Call today to discuss your next job. 800-234-5613.

Save On:
- Material Prep Time
- Set Up Time
- CNC Cycle Time
ONE VOICE MEMBERS MAKE ADVOCACY TRIP TO CAPITOL HILL, REMIND LAWMAKERS THAT MANUFACTURING MATTERS

MACHINE METRICS
National Associate Member
Mr. Eric Hagopian
5 Strong Avenue, Suite 201
Northampton, MA 01060

Synergy Resources are specialists in improving manufacturers’ performance. With the strategic combination of best in class ERP and Lean manufacturing principles, their clients experience continuous improvement in many aspects of their business. In an industry (ERP) where dissatisfaction is very high, Synergy’s customer improvement results stand out in the crowd. www.synergyresources.net

MachineMetrics is a production monitoring system that opens a live view into production, allowing workers to immediately react to manufacturing problems with real-time dashboards and notifications. Every second, data from each machine is stored securely and is available for historical performance analysis and problem diagnosis. Our customers experience production gains of over 20% after installing MachineMetrics. www.machinemetrics.com
As we look back on May it was filled with key events that help shape who we are as the NTMA and bring focus on our future.

What am I referencing? The NRL National Competition and the Emerging Leaders Conference. Both events were held in Cleveland on May 15 and 16. If you hadn’t heard yet, we had a record turnout for the NRL Competition with 65 student teams (versus 54 teams last year) attending from eight states plus Puerto Rico.

Special thanks go to Steve Tamasi (NRL Team Leader) as well as to Bill Padnos and Sarah Brooks, who orchestrated all aspects of the competition. The NTMA events team led by Kristen Hrusch coordinated venue details and event hospitality. I’d be remiss if I didn’t recognize the efforts of our volunteers who contributed hours of their time, judging and making the competitions safe and fun.

There is a separate section in this edition of The Record devoted to the national competition so please look at the great photos and read about all the interest generated in manufacturing.

The Emerging Leaders Conference had 41 attendees, far exceeding expectations, due in large part to the hard work and leadership by the Emerging Leaders Team and Zac Overton. Kudos on the production video, generously funded by CliftonLarsonAllen; to GF Machining Solutions and DMG Mori, sponsors of networking events; to subjects presented, lively discussions during the roundtable, and special guest speaker Mark Mohr (president of DMG Mori). This was an Emerging Leaders Conference that set the bar very high for future events. Zac and the Emerging Leaders Team really wanted to have meaningful and instructive content in a relaxed and fun atmosphere. Mission accomplished on all fronts!

Supply Chain Network – September 16th @ Hurco, Indianapolis: Many of you have told me of the new business you realized by attending prior Purchasing Fairs, but have asked for improvements and enhancements. So we have implemented a strategic initiative to improve members’ opportunities to enter new markets, expand in existing markets and grow business, all while taking into account the many changes we have all observed. The Purchasing Fairs of the past are being revamped to increase value to buyers and sellers alike.

After reviewing attendees’ survey results and observing changes within supply chain management in the U.S., it was decided that we need to make changes that would preserve the value of attending, yet make it more efficient and effective for you and buyers.

As I write this, the Purchasing Fair is being reinvented with a new name, logo and improved format. In fact, we are teaming with the ISM (Institute for Supply Management) to learn about their members’ key drivers and interests. The Purchasing Fair will now be known as the Supply Chain Network. The Supply Chain Network event will take into account the trend of streamlining the supply chain value streams of companies and the movement of reshoring by many companies.

A team was assembled to review and recommend changes necessary to revital-
Workshop will be held the day before. We will explore initiatives being implemented by OEMs and large manufacturers that will help tailor your discussions with and proposals to buyers and prospective customers. You’ll learn how to present the value you provide to your existing customers and translate that into a meaningful dialog with the buyers you’ll meet the next day.

By the time you read this, an email has been sent announcing the name change and introducing the new logo. More details will follow in E-Trends, future editions of The Record and a separate communication on the Supply Chain Network in upcoming weeks. In the meantime, please mark your calendars for September 15th and 16th when Hurco will host the Sales and Marketing Workshop and the new Supply Chain Network.
This year’s Chairman’s theme is Authentic Leadership. Throughout the year to come you will have the chance to hear and read about my thoughts on the characteristics of Authentic Leadership.

Authentic Leaders are courageous. To be a visionary, it takes courage. It takes inner strength to do what you think is right, even though it may not be easy. Throughout my travels as NTMA Chairman this year, I have the privilege of seeing NTMA members as courageous, authentic leaders.

It takes courage to expand facilities, to expand and develop technologies and equipment. It takes courage for a company to embrace innovative operations, perhaps stretching and challenging long-held practices that might very well have enabled successes, yet need to be changed to meet the today’s and tomorrow’s demands.

It takes courage to invest in workforce development and apprenticeship programs. Four years ago NTMA-U was launched. The Education Team had a vision of an online training program that could reach the NTMA membership. Training programs had been eliminated in many states. Current training programs weren’t meeting the needs and technical expertise of modern manufacturing. Many students today want an option of accessing their training on-line, not in classrooms.

We had many obstacles launching this program – from members’ questioning the program’s need to funding challenges. Fortunately, because of the Education Team’s perseverance NTMA-U continues to grow and expand. Today, NTMA-U enrollment is strong and growing; it has brought in new members, and aligns with NTMA’s mission and vision. It took courage to maintain the vision with all the obstacles. It took courage to create (and to continue to develop) NTMA-U to the success it is today and beyond.

The growth of NRL is another way I am seeing courage. Two Chapters celebrated the success of brand new regional NRL competitions, investing time and financial resources to establish new opportunities for students, our workforce and our future. On the flip-side, look at the widely successful NRL programs with rich histories and traditions. These regional competitions gathered in Cleveland for the May national completion.

Consider, too, the courage it took for students to build their teams and their robots, then to compete all the way to the national championship competition. Talk about courage!

I challenge you to look around for evidence of courage – in yourself and your family, in your company and in your community. How does that courage affect change and build our future? How can you be courageous and step forward as an authentic leader?

Herb Homeyer / NTMA Chairman

CHAIRMAN’S CORNER

HERB HOMEYER / NTMA CHAIRMAN OF THE BOARD
INDUSTRY VETERAN JOINS FORCES WITH MACHINEMETRICS TO IMPROVE MFG PRODUCTIVITY

Many manufacturers have little visibility into their production and rarely operate at optimal performance. Eric Hagopian, third generation (now former) owner of Hoppe Technologies knew that from first-hand experience.

After leaving Hoppe, Eric consulted with successful software developer Bill Bither to develop a product that would automatically collect valuable but mostly unused data that comes directly from the CNC machine control to more effectively manage the business. On-time delivery and productivity are two of the toughest parts of managing a modern manufacturing company. They developed a product conceptualized through the lens of a successful advanced manufacturing job shop. Hagopian decided to invest in the company and join them to promote the solution to most companies’ toughest challenge: ON TIME DELIVERY. The solution: software that opens a live window into parts production – software that allows an immediate response to problems and speeds up production by 20% by empowering operators, managers and owners to actively manage jobs on a real time basis.

MachineMetrics’ target customer is a manufacturer that produces parts with metal cutting CNC machines. In speaking with over 100 manufacturers, Eric has found that most have limited visibility into production. Some track parts by hand using whiteboards, which is very prone to human error and isn’t actionable. Others have implemented ERP and MRP systems, but failed to use the systems’ full potential. Problems aren’t identified and are not corrected until it’s too late, when contracts are lost.

MachineMetrics was built to solve this problem. TV dashboards are installed across the shop floor. That same display on computers and mobile devices can be accessed from home or on the go, giving workers and managers real-time feedback. Machine operators compete with each other to perform as good as or better than their peers. This transparency alone can increase productivity by over 10%. If a job falls behind, the color of the tile changes and SMS notifications are sent to managers so that action can be taken immediately.

Every second of data is stored in the cloud and is made available through historical reporting and a timeline that displays every event exactly when it happened. This helps diagnose problems and gives managers the ability to evaluate efficiency over time. The vision is to eventually use this information to predict failures before they occur.

For more information on MachineMetrics’ fully automated collection and visualization of manufacturing data for increased production efficiency visit www.machinemetrics.com or (413) 341-5747 (info@machinemetrics.com)

“IF THIS TECHNOLOGY WERE AVAILABLE WHEN I RAN MY MANUFACTURING BUSINESS, I WOULD HAVE BOUGHT IT!“
Eric Hagopian

Royal Quick Grip™ CNC Collet Chucks set a new standard featuring superior design, incredible accuracy, and easy, 10-second collet changes.

Check out the Royal Quick-Grip™ Video at: colletchucks.com

Royal Quick Grip™ CNC Collet Chucks
set a new standard featuring superior design, incredible accuracy, and easy, 10-second collet changes.

Ultra-Precision Accuracy
- Chuck and collets guaranteed to 0.0002” TIR or better
- Total system accuracy guaranteed to 0.0004” TIR or better

Exclusive Bolt & Go™ Mounting Advantage
- Out-of-the-box near perfect face/taper fit with machine spindle-nose
- No jack screws to hassle with
- Significantly reduces chuck changeover time

Widest Gripping Range
- Full 0.062” grip range – 50% greater than the competition
- Parallel clamping collet segments remain in contact with the workpiece over their entire length for maximum holding power and accuracy
- Compensates for oversized or undersized bar stock

Most Compact Chucks in the Industry
- Ultra-compact lengths maximize z-axis capacity
- Super slim nose diameters provide outstanding tool clearance
NTMA FALL CONFERENCE
St. Louis, MO
October 21-24, 2015

Sponsoring Opportunities Now Open
Contact Tiffany Bryson • tbryson@ntma.org

Already on Stage:
NTMA-U UPDATES

NTMA-U will have a total of 21 graduates by the end of June. These students have completed over 600 contact hours of training and will be qualified to receive their Federal DOL- Journeyman’s Certification in Precision Machining.

Current NTMA-U Enrollment (by modules)
- 138 NTMA member students
- 19 high school students
- 23 college students
- 82 individual modules
- Total 655

NEW! COMPREHENSIVE SAFETY COURSE

NTMA-U now offers a comprehensive safety course that includes Lock-Out Tag-Out, Safety Data Sheets and MSDS.

Training is highly encouraged in these areas, which have the highest national rate of OSHA compliance violations:
- Lock-out Tag-out
- MSDS
- Machine Guarding

CFO ROUNDTABLE IN PHILADELPHIA

The unique demands of the financial operations of NTMA member companies meant that regional Technical Seminars that zero in on learning, shared topics of interest and networking made perfect sense to National Associate Member CBIZ. That’s why they have stepped to the plate to sponsor four 2015 CFO Roundtables throughout the country. Philadelphia was the site for April’s CFO Roundtable.

John Mackay, President of Mackay Research Group launched the day’s conversations, with thoughts on how using the OCEC Benchmarking results helps companies improve their bottom line. (The OCEC Survey and resulting report is a free benefit available to NTMA members.) “Having John Mackay present … was right on the mark. He brought the importance of measurements and action to become an industry leader to us in a manner we can take home, complete with action items to improve the bottom line” noted Jim Carroll (Controller, Hamill Manufacturing Company).

Mackay’s presentation was followed by discussions on tax structures (CBIZ), 401K plans (Medallion Wealth Management), workers comp and employee health and safety (CBIZ) and cash flow forecasting (CBIZ).

The afternoon closed with a roundtable discussion – from which one attendee said that “the most valuable aspect of the event was hearing about others’ actual experiences.” “The conversation with our peers supports the need for periodic meetings and open discussion that matter,” concluded Carroll.

The next CFO Roundtable is just around the corner – June 24 in Cleveland, OH.
2015 NRL:
THE FUTURE OF MANUFACTURING AT WORK/IN COMPETITION

Dayton’s Ponitz CTC takes NRL Grand Championship

Ponitz Career Technology Center (CTC) of Dayton, Ohio took Grand Championship and third place honors at the National Robotics League (NRL) national competition at Baldwin Wallace University, in Berea, OH, May 15-16.

In addition to double elimination bouts, teams completed stringent engineering and detailed documentation requirements and face-to-face interviews with NRL officials to determine points toward the Grand Champion title. The Grand Champion Award and $500 prize went to the team with the highest combined score. Other winners received an award or certificate.

THE LINEUP OF AWARDEES INCLUDES:

• Grand Champion – Ponitz CTC, Dayton, OH. Robot: R.O.N.
• First Place – Plum Borough School District, Pittsburgh, PA. Robot: Knockout
• Second Place – North High School, North St. Paul, MN. Robot: Final Cut
• Third Place – Ponitz CTC, Dayton, OH. Robot: R.O.N.
• Best Engineered Bot (tie) – Beaumont School, Cleveland Heights, OH. Robot: Beaumonster and Dunwoody College of Technology, Minneapolis, MN. Robot: Wedgey
• Best Documentation – Ringgold High School, Monongahela, PA. Robot: Mark 42
• Sportsmanship – Punxsutawney (PA) Area High School

Months of work by a record number of 65 teams and nearly 300 student participants from eight states and Puerto Rico were on display this year. Student teams competed in NRL sanctioned regionals to prepare for the national competition.

The NRL provides a national structure for job-driven, STEM...
NRL: TEAMS WITH SHARED GOALS
(science, technology, engineering and math) focused educational robotics where students design and build remote controlled robots to face off in a gladiator-style competition.

Manufacturers support the National Robotics League because its “wow” factor helps to overcome two of the industry’s greatest challenges – to attract the best and brightest into a variety of manufacturing careers and to align public perception of manufacturing with today’s clean, high-tech, advanced facilities. The technical and soft skills students learn can directly lead to broad career options – direct to industry, technical school certificates, associate’s or bachelor’s degrees, and a career track with family-wage earnings.

“The NRL is the only combat robotics league that formalizes ties with middle to post-secondary school teams, teachers and manufacturing partners, introducing them to real-world manufacturing experiences,” said Bill Padnos, NTMA Director of Youth Engagement.

For additional information about the NRL, industry sponsorships, and participation in 2016 regional and national competitions, contact Bill Padnos, 412-258-6629, bpadnos@ntma.org, or visit www.gonrl.org.
The “Beaumonsters” of Beaumont School were back in full force for the 2015 National Robotics League championship May 15-16 at Baldwin Wallace University (Berea, OH). But it wasn’t their competitive prowess that captured the attention of CNN.com reporter Parija Bhatnagar. It was the fact that they are two all-girl teams in a field of 65 – and in an industry for that matter – dominated by men. As high as 98 percent of manufacturing personnel are male, according to some estimates.

“We are going to change all that,” said Sister Gretchen Rodenfels, Beaumont president. “The NRL empowered these girls and gave them the courage to try something new and challenging,” she added.

The girls recount the first year of competition when they encountered sniggers from male teams, some of whom were soon to be foiled by Beaumont’s capabilities. These girls are driven! They spend countless Saturday mornings at Christopher Tool, their industry sponsor, working on Bridgeport milling machines, researching risk factors of their designs, and acing the NRL’s documentation requirement – taking honors in last year’s competition.

Their cool under pressure is not limited to time in the competition’s polycarbonate arena. They represented NTMA at the 2015 International Manufacturing Technology Show (IMTS), spoke before Ohio Lt. Governor Mary Taylor in September, and accompanied NRL Commissioner Steve Tamasi to the May 15 meeting of Creative Morning Cleveland, an eclectic group of professionals representing careers from arts to business. One of their bots “Joan of Arc” prowled among the more than 50 attendees as the girls fielded their questions.

“The Beaumont teams are indicative of the opportunities for all talent in manufacturing,” said Tamasi. He noted that as he travels he is seeing an increase in women in the manufacturing workforce – both as workers and as managers.

Engaging youth is a key goal of NTMA and NRL. Another major role for women was offered by NTMA President Dave Tilstone. “Mothers are career influencers and we are exploring ways we can involve them in recruiting,” he said.

While the Beaumont teams are fierce competitors at regionals and nationals, they manage to weave in designing their team logo, two proms, graduation rehearsals, a lacrosse game and student service projects. Ana Maria Vargas, who will attend MIT in the fall, credits her NRL experience for her acceptance for admission. “It gave me an edge.”

The team didn’t leave this year’s NRL competition empty handed: they shared “Best Engineered Bot” in a tie with a team from Dunwoody College of Technology (Minneapolis, MN). Julie Schiffer commented, “I am proud to have won the Best Engineering Award for the second year in a row because other teams and the officials have frequently underestimated us. Winning this award helps us to prove them wrong. I have learned about being confident in my work and standing up for myself and my teammates because of this.”

Reflecting further on her NRL experience, Schiffer noted, “In my experience with the NRL competition, I have learned the valuable skills of teamwork and working under pressure. When we have our weekly meetings, we learn about working together, and this skill becomes even more important when we are working on repairing or assessing the bot after a battle. In our future careers, it is very likely that we will have to work with others and that we might have to work under pressure or a quick deadline. I feel extremely prepared to enter an engineering or manufacturing field because of the practical skills I have learned and knowledge I have gained from my participation in both the NRL and AWT Robobots competitions.”
Titanium is demanding. To succeed, you need everything Makino titanium ADVANTiGE brings to your shop floor. From higher metal-removal rates to extended tool life, ADVANTiGE technology delivers on-time performance, builds your reputation and secures your company’s future.

Build your business cutting the materials that matter most.
makino.com/ADVANTiGE

WHEN YOU MAKE WHAT MATTERS
On Friday, May 1st, the top machining tech students from across Massachusetts met to compete in the state’s SkillsUSA Competition at the Blackstone Valley Regional Technical High School. The Boston NTMA Chapter (BTMA) is pleased to recognize the following high school students who took home gold medals in their respective competitions:

CNC Technician: Justin Costa (Diman Regional Vocational Technical High School)
CNC Milling: Levi Strzpek (Whittier Regional Vocational Technical High School)
CNC Turning: Jeffrey Harris (Diman Regional Vocational Technical High School)

Also placing in the three contests were:

CNC Technician: Cristopher Mason, South Shore VTHS (Silver Medal) and Kaitlyn Fricke, Pathfinder RVTHS (Bronze Medal)
CNC Milling: Michael Hayes, South Shore RVTHS (Silver Medal) and Brandon Antone, Diman RVTHS (Bronze Medal)
CNC Turning: Nicholas Desmarais, Diman RVTHS (Silver) and Daniel Erickson, Diman RVTHS (Bronze)

Congratulations to all of the students. You and your schools should be very proud of your accomplishments!

Donations from BTMA members will help to cover the registration and travel costs for the winners. This year BTMA volunteers coordinated and judged the CNC Technician Contest and BTMA members donated almost $4000 in prizes, giveaways, National SkillsUSA Conference registrations and travel scholarships for the gold medal winners. BTMA has been assisting the MA SkillsUSA competition for over nine years. They want to acknowledge the following companies that donated to this year’s effort:

- Custom Machine, LLC
- Tucker Engineering
- Mitutoyo
- O-D Tool & Cutter, Inc.
- Seabrook International
- FH Peterson Machine Corp.
- Machine Incorporated
- AccuRounds Inc.
- North Easton Machine Co.
- Howard Tool Co., Inc.
- Pell Engineering & Mfg. Co.
- Methods Machine Tool Co.
- Boston Centerless Inc.
- Aerodyne Alloys
- M&H Engineering Co.
- Salem Five Insurance Services
- Magellan Aerospace
- Robert E. Morris Co.

Thanks to BTMA’s Day-of-Competition Volunteer Team: Michael Pasciuto (Custom Machine, LLC), Andy Gross (FH Peterson Machine Corp.), John Ricardi (Robert E. Morris), Kevin O’Donnell (O-D Tool & Cutter Inc.), Corey Hartwell (AccuRounds Inc.), Sabrina Pasciuto (Wentworth Institute of Technology & Custom Machine, LLC) and Aisha Elfiki (Wentworth Institute of Technology). A very special “Thank You” goes to Michael Pasciuto of Custom Machine, LLC, who helped the state Metal Trades Series Directors to coordinate and create the competition format for the new CNC Technician Competition in 2015.

Students from across the country will gather at the National SkillsUSA Leadership and Skills Conference on June 22 – 26, 2015 in Louisville, KY. SkillsUSA is a nation-wide organization that prepares America’s high performance workers (www.skillsusa.org). Participation in these competitions is an extraordinary opportunity for the teens who compete, as well as for the industry volunteers/supporters who assist with the events and donations.
Success Story: Boers & Co FineMetalworking Group

Boers delivers fine mechanical parts, high precision assembly and sheet metal products to the medical appliances, flow-control, automotive and petro-chemical industries.

Challenge
Facing increasing market demands and limited resources, Boers sought an ERP solution designed specifically for the manufacturing industry that would enable them to increase efficiency in their operations.

Solution
After successfully streamlining their supply chain with Epicor ERP version 9 software, Epicor ERP version 10 software became available and Boers quickly upgraded. With Epicor ERP 10, Boers was able to:

• Improve the customer experience through enhanced scheduling and increased collaboration among customers and suppliers
• Maximize employee productivity with expanded deployment options and touch-enabled, intuitive user interfaces that work with smart devices
• Support and clearly measure their faster operation

Results
With Epicor ERP 10 software, Boers has cut indirect labor costs by 15 percent and amplified their competitive advantage through improved service offerings and significant efficiency gains, positioning Boers for its next stage of growth.
By supporting a wide range of Quick Response Manufacturing processes Epicor® ERP 10 software provides greater flexibility which has helped us to significantly reduce our lead-times. Through being able to react much faster than ever before we have cut the time it takes us to deliver parts from eight weeks down to just three weeks.”

Ronald Koot, CEO, Boers & Co FineMetalworking Group

Software should inspire your business, not complicate it.
EMERGING LEADERS CONFERENCE: BUILDING A COMMUNITY OF PEERS

The building blocks were laid for a community of sorts within NTMA – a community made up of tomorrow’s industry leaders. Tomorrow’s NTMA leaders. Leaders who stepped to the plate to be part of the inaugural conference on May 15-16 in Cleveland, Ohio.

This was a diverse group – 41 people from 32 companies and 13 states. Roles within companies varied, as did the size of the companies they represented. In the end, takeaways also varied, but the common observation was that the time was well-spent, empowering and inspiring. They look forward to continued networking within the group and to taking new ideas and inspiration back to their companies. They shared the common vision that this community of peers will be the “go to” place for any emerging leader in the manufacturing industry who is moving into any higher level position.

“T have a renewed outlook on manufacturing after attending the Emerging Leaders Conference 2015. Powerful speakers discussing great topics. What a way of networking with others in your position from all over the country!” reflected Andy Jordan, Director of Operations, Exacto-Inc. of South Bend.

A planning group headed up by Emerging Leader Team Leader, Zac Overton and NTMA Staff Liaison, Kelly Kasner delivered a powerful schedule, starting with a welcome reception and dinner sponsored by DMG MORI and an opening address by DMG MORI President and CEO, Mark Mohr.

Continued on next page
Saturday’s slate included:

- **Financial Management for Non-Financial Managers (Brent Terhaar, CliftonLarsonAllen)**
  Attendees discovered how simplifying the financial business model leads to better decision making, resulting in improved profitability and growth. Brent offered simple, practical and timely tools to measure, manage and drive significant profitability improvements in organizations, all accomplished without asking the customer for more money.

- **Sales & Marketing – Finding Your Strengths (Dan Bagley, NTMA)**
  Dan asked each emerging leader “Are you the rainmaker or should you hire one?” “How do you manage sales as a function of your business?” Attendees discussed the competencies for a sales leader, its motivations and the development plan and processes of ‘sales’ work, regardless of title or position within the company.

- **Tabletop Networking and Lunch (Sponsored by +GF+)**

- **Building a Stronger, Cohesive Team (Ron Kaminski, CultureShoc)**
  In his energizing and highly interactive workshop, Ron provided a roadmap for setting a team up to win. Using emotional engagement, trust and accountability as a foundation, Ron dove into what makes teams perform at a high level and how emerging leaders can build a team that outperforms the competition, where unique ability is celebrated and leveraged. “Be a buffalo!”

- **Preparing for the Next Level of Leadership (Erik Skie, CliftonLarsonAllen)**
  How can emerging leaders move from a ‘management’ to a ‘leadership’ role and hone leadership skills? The group concluded that they are already leaders and defined leadership as “to positively influence.” Erik’s premise: “Sometimes being a great leader is being a great follower.”

Jerry Flohr, President of Flohr Machine Company noted, “I left the Emerging Leaders conference with valuable information both personally and for my company. We are all struggling to improve our work force. I came back to my shop with many new ideas on how to get and keep our existing work force engaged and have them buy in to the company goals and values. There were also many ways for me to improve and to develop the skills necessary to lead effectively.”

Stay tuned for more to come from the Emerging Leaders Team – this is only the beginning!
THE NTMA CHAPTER EXECUTIVE TEAM

Some NTMA leadership happens at the Team level, as member volunteers drive many of the projects and events that happen each year. Throughout 2015 The Record will feature overviews of the various NTMA Teams.

Torree Pederson, (Chapter Executive of the Kansas City Chapter) is the team leader for the Chapter Executive Team, a sub-team under the Membership Value Leadership Team.

MISSION:

The mission of the CE Team is to build strong chapters by enhancing communication with the NTMA headquarters, providing networking with other NTMA chapters, establishing professional development for Chapter Executives and facilitating Chapters’ Board development.

The Chapter Executives Team works on behalf of Chapter Executives from all NTMA chapters. The Team meets monthly by conference call to coordinate activities. They recommend content for both Fall Conference and the annual Leadership Summit, with the goal of providing both chapter and professional development for Chapter Executives.

The Team is engaged throughout the year, developing and refining the Chapter Organization Questionnaire. This questionnaire is the assessment vehicle through which chapters can achieve Star Chapter status. Star Chapters are recognized annually at Fall Conference as having achieved best practices standards in operation and organization.

Mentorship relationships are suggested among Chapter Executives to help engage newer Chapter Executives and those chapters looking for resources to achieve best practices or to further develop particular aspects of their operations. Many Chapter Executives and Chapter Board Members have noted that networking among the Chapter Executives and at Chapter Executives programs at national events are useful and valuable resources.

Working with NTMA staff, the Team also recommends resources to enhance the NTMA website, with the goal of aligning content with the Star Chapter Questionnaire Survey and providing a Chapter Organizational Manual. A newer project is to evaluate best practices of Chapter/National Associate Member relationships.

CHAPTER EXECUTIVE TEAM:

Torree Pederson: CE Team Leader
Tami Adams
Northwestern Pennsylvania Chapter
Nils Kjell
San Francisco Bay Area Chapter
Michelle Martin
Philadelphia Delaware Chapter
Maegan Rozinski
Rock River Valley Chapter
Sally Safra
St. Louis Chapter
Ken Seilkop
Executive Team Liaison
Kelly LaMarca
NTMA Staff Representative

COURTNEY WAGNER DANNEMILLER GRADUATES FROM THE JO ANN DAVIDSON OHIO LEADERSHIP INSTITUTE

The Jo Ann Davidson Ohio Leadership Institute has announced that Courtney Wagner-Dannemiller of Wayne County, Ohio graduated from the Institute at a recent ceremony that took place in Washington, D.C. Courtney is CFO at Wagner Machine in Norton, Ohio. She is Vice President of the Akron Chapter and is a member of NTMA’s Budget and Finance Team.

“These outstanding women leaders are dedicated to applying their experience and skills to community and public service,” Institute Chair Betty Montgomery said. “It is inspiring to watch their growth and commitment to a better future for our state and our communities.”

The Institute’s nine-month leadership training provides professional training for women aspiring to become leaders in public and community service. Extensive studies are offered in local, state and federal governments, as well as public policy, public speaking, politics and the organization of political parties. This year, the final week of training took place in Washington, D.C. where national congressional leaders and representatives from national corporations addressed the Institute.

Since its first class in 2001, 291 Ohio women from 57 counties have completed the leadership course. In the fall, the Institute will begin its 16th class.

Handling a variety of workpiece sizes ranging from 12.6” to 78.74”, and with spindle speeds from 4.5k to 20k providing torque output up to 1920 Nm, the Okuma line-up of horizontal machining centers includes a machine configuration to cut nearly any type of metal — aluminum, hardened steel, titanium and other exotics. Built on Okuma’s exclusive Thermo-Friendly Concept, these machines manage thermal deformation to maintain accuracy and repeatability over long continuous cuts. Okuma’s open-architecture OSP-P control allows the use of machine tool apps for enhanced functionality, productivity and communication. And with a variety of functional options — Super NURBS and Turn-Cut, for example — and the ability to connect pallet pools and flexible manufacturing systems, the possibilities are endless.

Contact your local Okuma distributor for more information, or visit okuma.com/americas

Arizona CNC Equipment
www.arizonacnc.com

EMEC Machine Tools, Inc.
www.emecmt.com

Gosiger
www.gosiger.com

Hartwig, Inc
www.hartwiginc.com

HEMAQ
www.hemaq.com

Morris Group, Inc.
www.morrisgroupinc.com

Thomas Skinner & Son, Ltd.
www.thomasskinner.com
The dictionary defines residue as "something that is left behind." In the application of metalworking fluids, two basic kinds of residue can develop—which we refer to as "insoluble deposits" and "product residues."

If a metalworking fluid undergoes chemical changes or picks up contaminants, insoluble deposits are likely to occur. Such deposits can plate out on hard surfaces in direct contact with the circulating fluid. The presence of tramp oil, rust preventatives, and insoluble soaps due to water hardness or dissolved metals (such as iron or aluminum) lead to this type of residue, which may contain or attract very fine metal or graphite particles. These deposits, sometimes referred to as "varnish" because of their appearance and texture, can interfere with production if they are allowed to build up on tools, chucks, fixtures, gauges and transfer equipment. They also contribute to "dirty" machine tools.

However, not all residues are insoluble. If any fluid splashes on hot motor housings, flat surfaces or guard shields, the water can evaporate and leave concentrated metalworking fluid. Although the amount of product residue formed by evaporation should be a direct function of product concentration, this amount is significantly affected by the type of fluid, the presence of additives and contaminants, the machine tool design and shielding, the amount of fluid spray generated, and the "housekeeping" practices employed.

Product concentration, oil contamination, water hardness and relative humidity are key factors in defining the nature and amount of residue obtained when metalworking fluid evaporates. In addition to this, used mixes can be expected to contain a significant buildup of salts introduced from the water used for makeup.

Wintertime introduces two additional factors that promote residue problems as well. Cold-process water generates more hard water soap scum formation. Low relative humidity promotes more rapid evaporation of water, causing mixes to become richer and making evaporated residues drier. Thus, conditions such as decreased humidity, increased water hardness or higher inorganic salt content will transform a semi-liquid residue to a sticky residue, or a sticky residue to a dry residue.

Since deposits in the fluid flow area or the splash area contain metal chips, it is probable that there are two separate problems to deal with. This may require different approaches to resolve inadequate "washing" action by the flowing liquid or tackiness of the evaporated residue, which attracts the chips to the splash area.

Another situation that arises is extended sump life. New technology in metalworking fluids often results in longer sump life (to the benefit of the end user). Longer sump life, while conducive to good economy, also allows fluids to become more contaminated with hard water minerals as well as other contaminants. A fluid that lasts for 30 days before being discarded will carry less contaminant than a fluid lasting for 60 to 90 days. These longer-lasting fluids can now become problematic with regard to cleanliness, because even good quality water will begin to create hard water conditions over time. For this reason, the end user may consider using deionized (D.I.) or reverse osmosis treated (R.O.) water to minimize the buildup of mineral salts that contribute significantly to residue. Another alternative is to use dilute premix daily to top machines. Premix adds many of the components that are depleted through normal aging. Components such as water conditioners and detergents added in small amounts through premix can minimize the problem of dirty residues left on parts and equipment.

A final note on residue is its contribution to skin irritation. Because residue consists of highly concentrated fluid and contaminants, handling parts or fixtures with these residues can contribute to dermatitis (skin irritation). For this reason, we encourage regular flushing of machines with used coolant to wash off any residues. This minimizes the amount of residue that can accumulate.

In most cases, following the above corrective actions can control residue, but we also encourage you to contact your local fluid supplier to help determine the specific cause of residues and any other fluid-related issues.

This Tech Tip offered by Cimcool Fluid Technology. For more information on Cimcool go to www.cimcool.com.
The Reshoring Trend

A growing number of companies across the country are bringing their manufacturing efforts back from overseas.

1. Escalating Wages Overseas

Unit Labor Costs in Manufacturing in U.S. $(

As wages continue to increase overseas, particularly in China, it’s becoming less cost effective to manufacture outside the United States.

Source: Oxford Economics/Haver Analytics

2. Cause Companies to Reevaluate Total Costs

U.S. Advantages

- Innovation and R&D
- Skilled Workforce
- Higher Productivity
- Shorter Supply Chains
- Customer Responsiveness

Source: Reshoring Library

** TCO: Total Cost of Ownership

3. Including Low U.S. Natural Gas Prices

Source: Federal Energy Regulatory Commission

4. Therefore, More Companies Are Reshoring

20% more respondents this year say their companies are actively reshoring.


5. Including These Top Reshoring Industries

Creating, with FDI, about 170,000 U.S. manufacturing jobs since February 2010*


6. Top Reshoring Cases in the U.S.

<table>
<thead>
<tr>
<th>Company</th>
<th>Total Jobs</th>
<th>Reshored From</th>
<th>State</th>
<th>Product Reshored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walmart</td>
<td>4,444</td>
<td>Various</td>
<td>Various</td>
<td>Consumer goods F-450, F-750, Ford Fusion, EcoBoost Engine</td>
</tr>
<tr>
<td>Ford</td>
<td>3,250</td>
<td>Mexico</td>
<td>OH, MI</td>
<td>Construction equipment</td>
</tr>
<tr>
<td>Caterpillar</td>
<td>1,900</td>
<td>Japan</td>
<td>GA, TX</td>
<td>Appliances, industrial batteries, light bulbs</td>
</tr>
<tr>
<td>GE</td>
<td>1,900</td>
<td>China, Mexico</td>
<td>KY, NY, OH</td>
<td>Small gas engine (Ecotec), SRX</td>
</tr>
<tr>
<td>GM</td>
<td>1,800</td>
<td>Mexico</td>
<td>TN</td>
<td>Mac Pro</td>
</tr>
<tr>
<td>Flextronics (Apple)</td>
<td>1,700</td>
<td>Abroad</td>
<td>TX</td>
<td>Ceramic hairstyling irons</td>
</tr>
<tr>
<td>Farouk Systems</td>
<td>1,200</td>
<td>China, South Korea</td>
<td>TX</td>
<td>ATMs, self-service checkouts</td>
</tr>
<tr>
<td>NCR</td>
<td>870</td>
<td>Brazil, China, India, Hungary</td>
<td>GA</td>
<td>Parts for the 777X</td>
</tr>
<tr>
<td>Boeing</td>
<td>700</td>
<td>Abroad</td>
<td>MO</td>
<td>Ergonomic office chairs</td>
</tr>
<tr>
<td>Made in America Seating</td>
<td>610</td>
<td>China</td>
<td>TN</td>
<td>Ergonomic office chairs</td>
</tr>
</tbody>
</table>

*About 20% of the 870,000 increase in U.S. manufacturing jobs since the recession low in February 2010.


For More Information | Harry Moser, Founder & President | Reshoring Initiative | harry.moser@reshorenow.org | 847.726.2975 | www.reshorenow.org
ONE VOICE MEMBERS MAKE ADVOCACY TRIP TO CAPITOL HILL, REMIND LAWMAKERS THAT MANUFACTURING MATTERS

Nearly 70 NTMA and PMA members participated in the seventh-annual One Voice Legislative Conference in Washington, DC in April. They visited 150 congressional offices over the course of two days, sharing the industry’s views on issues like tax reform, workforce development and regulations. Participants also enjoyed sitting down to lunch with members of Congress to talk in more informal settings.

The trip, a highlight of the One Voice advocacy efforts in Washington, is a unique opportunity to meet with the elected officials and integral staff members whose decisions impact NTMA member businesses. In the meetings this year, NTMA members offered insight into the issues most important to the industry and, even more importantly, shared their own stories. They reminded Washington of the real-world consequences of legislation and regulation that are felt in facilities across the country.

This year’s visit to the Hill was especially important as Congress is expected to tackle some tough issues in 2015. One such issue is tax reform. According to the 2015 One Voice survey, approximately 65% of One Voice members expect their energy costs to rise in the next year.

Finally, during the Hill meetings, NTMA members shared the struggle of manufacturers trying to recruit new employees. Right now, 84% of One Voice members have skilled position job openings. In addition, 95% of One Voice members rank the difficulty they are experiencing in recruiting qualified employees as “moderate” or “severe.” During meetings, One Voice members asked law makers to help raise awareness about the opportunities available in manufacturing careers and to support industry credentialing and training programs.

This year’s Legislative Conference was an important event and planning is already underway to ensure that next year’s gathering keeps up the message to Washington that manufacturing matters. Remember that NTMA members can give unlimited corporate or individual contributions to the NTMA Government Affairs Administrative Fund which supports the work done by The Franklin Partnership and Policy Resolution Group at Bracewell & Giuliani LLP. Additionally, NTMA members can make limited personal donations to the Committee for a Strong Economy (CFASE) PAC, which supports pro-manufacturing Congressional candidates.

Manufacturers have a lot at stake, and to make a difference in Washington, those who know the industry best have to participate in the process. Keep up with One Voice advocacy efforts and find ways to get involved on the One Voice website - www.metalworkingadvocate.com - and by following @onevoiceformfg on Twitter.

SMALL BUSINESSES HIRING MILITARY: A WIN-WIN

In late May, the Center for America and the American Jobs for America’s Heroes military hiring campaign released its groundbreaking “Best Practices Guide for Employers in Recruiting and Hiring National Guard Members and Veterans,” which is free for download at www.CenterforAmerica.org.

Ron Overton, President of Overton Industries in Franklin, Indiana, is the former Chairman of the National Tooling & Machining Association and has written the Guide’s foreword to encourage small
Following is an excerpt from Overton’s Foreword:

“If you’re in a small business like Overton Industries, you know that success often depends on finding and training employees that can work as part of a team to get the job done properly . . . we have always been eager to hire veterans because they bring commitment, attention to detail and great teamwork to our company. Drawing on their military training and experiences, those who served their country in the military have helped us with creative ways to solve problems and improving our operations . . .

The time and effort invested in finding and recruiting veterans and National Guard members with the right qualifications can be challenging for small businesses. Like most small businesses, we don’t maintain a large human resources department to search for qualified candidates. However, we know that finding the right veteran candidate can provide a big pay-off for our company.

The Guide, which is tailored for small businesses, is full of good ideas and insights about how to bring veterans and Guard members into your company efficiently and successfully. Many of the ideas in this Guide come from the 1,600 employers participating in the American Jobs for America’s Heroes campaign.”
Increase productivity...
on any model, NEW or EXISTING machining center. Pallet Changers available in sizes from 12.75" x 10.5" up to 150" x 50". Improve efficiency in all aspects of manufacturing including VMC, Bridge, HMC, Drill/Tap and EDM machines.

- Automatic Pallet Changer
- Manual Pallet Changer
- Micro Pallet Changer
- Manual Rotary System
- Automatic Door Opener

Midaco Corporation
toll free: 888.593.8420
e-mail: midaco@midaco-corp.com
www.midaco-corp.com
HEARTLAND OVATION PAYROLL

Heartland Ovation Payroll services over 30,000 customers nationwide, offering a full range of payroll and HR Solutions, coupled with award winning customer service to deliver the ultimate user experience.

Heartland Ovation Payroll is a full service payroll processing that focuses on payroll. They assist clients who are focused on growing their business rather than worrying about the ever-changing complexities of payroll. With Ovation Payroll you get personalized service, superior technology and the industry’s only three year price lock. The company also provides everything business owners need to get their staff paid accurately, on time and with minimal effort, including:

• Gross-to-net employee payroll processing
• Compliance with taxing guideline local, state and federal tax to eliminate penalties
• New hire reporting to the appropriate state and federal agencies
• Employee pay by check, direct deposit and/or Pay Advantage card
• Web-hosted payroll platform, which provides the ability to customize the payroll processes from web-based submissions to completely paperless processing

OVATION PAYROLL PLUS – EMPLOYEE RESOURCES AND EXPERTISE

Eliminate the HR tasks that can take over the day. With Ovation Payroll Plus, customers get the turnkey Ovation Payroll service, plus a fully integrated human resources solution that offers a complete range of HR tools to support their business, including:

• My HR Support Center – customizable documents for hiring, managing and paying employees, plus alerts that keep you up to date on the laws, regulations and court decisions that could impact your business
• My Employee Files – built-in electronic employee file system that replaces paper files

• Our Info Center – secure employee access to pay records, messages, schedules, policies, job-related websites and more, to keep employees informed and up to date
• Business Partner Reporting – secure and efficient access to data for employees’ CPA, insurance broker, financial advisor and benefits administrator.

“NTMA MEMBERS RECEIVE SPECIAL DISCOUNTS WITH OUR AFFINITY PARTNER, HEARTLAND OVATION PAYROLL. WHEN YOU ARE ASSESSING YOUR PAYROLL AND HR NEEDS, I ENCOURAGE YOU TO CONTACT THEM TO SEE HOW YOU CAN TAKE ADVANTAGE OF THIS SPECIAL NTMA/HEARTLAND OVATION PARTNERSHIP.”

Sarah Shoaff, NTMA Director of Membership and Business Development

NTMA AFFINITY PROGRAM SPOTLIGHT

AFFINITY PROGRAMS - A SIMPLE DEFINITION

NTMA is able to save members significant amounts of money on products and services they are already using. These cost-savings programs are what we call “Affinity” programs and they are among the most tangible benefits of NTMA membership. Over the course of 2015 we are going to highlight the companies and their products and services so members better understand the benefits our Affinity Partners offer.

NTMA is proud to be able to help our members save millions of dollars each year on products and services essential to the operation of their business. Who isn’t looking to save money, right? Look right here each month.

THE MANY FACES OF NTMA COMMUNICATIONS

THE RECORD is available in .pdf format on the home page of the website

2015 Directory is available online: www.ntma.org/resources
You can elect now to have your 2016 Directory emailed rather than have a printed copy mailed. Email sbailey@ntma.org to request link.

Do you receive E-Trends each Wednesday? If not, subscribe via the link on website home page.

NTMA has a LinkedIn group - a great place to read and share news or post questions for your peers.

www.ntma.org
NEWS. RESOURCES. EVENTS.
FLEXIBLE MANUFACTURING SYSTEMS FOR GROWTH AT STEELVILLE MANUFACTURING

By Alan Richter

Job shops generally tackle numerous low-volume part runs and often feel that automated manufacturing systems are not suitable for their operations. Steelville (MO) Manufacturing Company begs to differ.

The family-owned and -operated company handled about 10,500 part numbers last year, predominantly defense-related aerospace components, and used two flexible manufacturing systems to produce a vast majority of them, noted John Bell, vice president – engineering for SMC. “We’ve done as many as 13,800 part numbers in a year,” he said, adding that the shop produces an average of 30 pieces of each part number annually.

About 15 years ago, SMC installed a Makino A55E 4-axis, 400mm (15.75”) horizontal machining center as a stand-alone machine and added two Makino A51 HMCs about eight years ago. The shop then combined the three machines to create an MMC (Makino Machining Complex) automated pallet-delivery work cell. “We can put two more machines on it if we get enough business to fill it up,” Bell said.

Realizing the shop was going down the right automation path while understanding it needed to perform simultaneous 5-axis machining, in 2009 SMC added a Fastems pallet-delivery work cell that marries two Okuma Millac 800HV 5-axis, 800mm vertical machining centers and two Okuma MA600HB 4-axis, 630mm (24.8”) VMCs. The Fastems/Okuma FMS also includes two tombstone-changing stations and two material-handling stations, one between two machines and the other at the end of the cell.

When installed, the FMS was Fastems’ longest in North America at 167’ (50.9m), according to the company, and still remains one of the longest. When installing the MMC, Bell said SMC planned on adding a second cell at a later date as well, so the company added about 17,000 sq. ft. (5,182 sq. m) to its facility to accommodate both. The addition brought the building to 50,000 sq. ft. (15,240 sq. m).

As with the Makino cell, the second cell has space for up to two more machines. Bell noted adding machines to the Fastems cell is basically a plug-and-play procedure that doesn’t involve adding to payroll. “We can simply add two machines,” he said. “It’s nice to know that I don’t have to bring in more employees [to operate them]. It’s just a matter of capital expenditure.”

Although both cells function in a similar manner while processing information a bit differently, the MMC communicates only with Makino machines while the Fastems FMS works with CNC machines from various builders. On the Fastems system at SMC, the shop can add any modern machine tool, according to Michael Bell, director of operations for Fastems LLC, West Chester, Ohio, who’s not related to John. “We have integrated 72 different machine tool manufacturers’ equipment into our systems to date,” he said. “Pallet size is irrelevant as is machine tool type (VMC or HMC).”

Bell added that lathes and mills can even be positioned in a progressive line, if needed. In addition to scheduling jobs, the cells use a track-based, pick-and-place robot to gather workpiece materials and tombstones from multiple-level racks and return them.

Bell emphasized that any mix of parts can justify an FMS, but a shop must have work it can schedule for the system to function properly. This sometimes requires a shift in a company’s mindset. “So many machinists have never really had to do scheduling,” he said. That differs from the typical scenario in which a machinist receives a job from his foreman, completes it, then receives another job.

HARD AND SOFT CELLS

SMC machines a host of workpiece materials, including titanium, Inconel, stainless steel, aluminum, phenolic, plastics and some composite materials. In the Fastems system, Bell said two machines – a 4-axis machine for roughing and a 5-axis one for finishing – are more or less dedicated to cut relatively soft metals and two are dedicated to the more challenging ones.

The arrangement functions fairly well, but Bell conceded it is not ideal, because it limits SMC’s ability to run any part on any machine. “If the whole cell ran one or the other, we could greatly increase our efficiencies,” he said.

Nonetheless, Bell noted the two 5-axis machines in the cell achieve at least 80 percent spindle utilization and frequently hit 90 percent, while the 4-axis machines have a spindle utilization from 40 to 60 percent. Achieving higher spindle utilization is easier to achieve when the need to write part programs, which is done offline, is not as demanding.

“Last year, we did a little over 2,000 first articles,” Bell said. “We will likely do about 1,500 to 1,800 first articles this year, but we still are getting 100 to 150 new parts each month.”

The shop runs three shifts five days a week, with the day shift being the most manned. It uses that shift to produce first articles and other critical components. During the first shift, two people run each cell, whereas only one person runs each cell during the second shift and one person runs both cells during the midnight shift.

Prior to adding the Fastems system, SMC employed slightly fewer than 50 people, Bell said. Some of those workers were concerned that more automation would jeopardize their jobs. “Their automatic response was that ‘you’re not going to need us,’ but we’ve done nothing but hire more people since putting it in,” he said, adding that SMC employs 138 workers. Those additional hires are not necessarily tending machine tools; the automation created positions in shipping and receiving, inspection, quality and programming.

“The cells have actually decreased our need for skilled machinists,” Bell said. However, he added that the cells make the production process more difficult because SMC needs programmers with significantly higher skill levels to keep everything moving, especially with the volume it has. “We’ve had as many as seven programmers operating at one time, and we could always use two or three more.” The shop didn’t have 5-axis programming capability when it installed the Fastems system.

TRACKING DOWN TALENT

Finding the required talent to grow can be a challenge for any manufacturer, and particularly for one located in a town with some 1,600 residents and 90 miles from the nearest city.

“Being out here in the middle of the country, we don’t have a deep bench of talent to draw from,” Bell said.

Therefore, SMC provides in-house training and taps into online resources, such as the
salvage parts with secondary, corrective operations or an outside processor might redo a batch of parts — or not. “One time they scrapped $8,000 worth of parts; I don’t even think they said they were sorry.”

To bring the work in-house and avoid lead-time and part-quality problems, SMC built a new 16,000-sq.-ft. (4,877-sq.-m) facility to house equipment for painting, heat treating and chemical processing. The facility is expected to begin operating in the fall. Not only will doing those processes internally solve the quality problems, it will also ensure that SMC can meet its delivery times if a supplier is unable to accommodate SMC because the supplier no longer has the capacity, Bell added. “We’re trying to get ahead of that curve.”

After installing the equipment and obtaining the required Nadcap certifications, such as for heat treating and chemically processing, Bell said the shop plans to start heat treating parts in six months and perform chemical processing by the end of 2016. (Nadcap is an aerospace-industry-managed conformity assessment.)

With about 25 acres of land to expand on out of the 400 acres the company owns, SMC has room to grow. Bell indicated that the company is considering adding another building, possibly to house a flexible manufacturing work cell dedicated to machining hard metals and one dedicated to machining soft metals.

The growth would certainly generate more jobs at SMC while making its customers happier by meeting their lead time requirements. “I can show them that these systems make my machines more productive,” Bell said. For more information about Steelville Manufacturing, call (573) 775-2977 or visit www.steelvillenmg.com.

Printed with permission, Cutting Tool Engineering

10 TIPS TO REDUCE ENERGY COSTS

NTMA members can take steps to reduce a major operating expense—energy. Read on for 10 easy, fast, and permanent ways to reduce electricity costs.

1. Lighting. Replace outdated incandescent light bulbs with light-emitting diodes (LEDs) or compact florescent light bulbs. Install occupancy sensors so lights will only operate when motion is detected.

2. Heating/Cooling. Adjusting the temperature in your facility by only a few degrees can significantly lower energy costs. Many electricity utility companies offer financial incentives for upgrading HVAC systems.

3. Demand Response Program. Receive payments for voluntarily reducing electricity usage during peak demand times. This also benefits the grid system and the environment.

4. Efficiency project. Upgrade your facility and equipment. Install energy efficient appliances and machines. Many state governments and electricity utility companies offer financial incentives for manufacturers to save energy.

5. Reduce consumption. Schedule operations for off-peak hours. Use an onsite generator. Shut down equipment whenever possible.

6. Energy audit. An efficiency expert can evaluate your facility and operating procedures, and identify ways to increase efficiencies, including variable frequency drives and advanced metering technology.

7. Energy Data Tracking. Online energy management systems track and report energy costs and consumption. Benchmarking tools measure efficiency projects. Manufacturing facilities can be compared to similar locations to identify ways to cut costs.

8. Review your energy bill. Ensure you pay the correct price per kilowatt hour. Look for added costs and line items.


10. NTMA member benefit. NTMA endorses APPI Energy to provide data-driven procurement and consulting solutions to members. APPI Energy reviews thousands of supplier prices every day to deliver true apples-to-apples comparisons. For a courtesy evaluation, contact 800-520-6685 or info@appienergy.com.
ERP that works where you do

“When you have a robust system that you can access anywhere, the constraints start to fall off. The creativity that was infused into our company and, more importantly, our culture by moving to Epicor Solutions in the cloud was absolutely incredible.”

Michael Chirchirillo, Operations Manager, Chirch Global Manufacturing

Software should inspire your business, not complicate it.
Tackling the things that keep you up at night!

Come down for the day or make it a weekend get-away!

Conference location:
Chateau on the Lake Resort • 415 North State Highway 265 • Branson, MO 65616
www.chateauonthelakebranson.com • 1-888-333-LAKE

Information & Register:
Call: 816-739-4422  E-mail: execdir@kcntma.org
Move over Purchasing Fair

Stay tuned for more on NTMA’s newest event…

September 16, 2015
Indianapolis, IN