

THE RECORD

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MANUFACTURING COMPANIES

MANUFACTURERS CONVENE FOR SUCCESSFUL SECOND EDITION OF MFG

More than 750 manufacturing executives attended the second edition of the MFG Meeting (Manufacturing for Growth), March 8-11, 2012 —p8

2012 LEGISLATIVE CONFERENCE FEATURES EXPANDED TIME ON CAPITOL HILL

In response to member feedback, the 2012 One Voice Legislative Conference will include a greater emphasis on congressional visits —p10

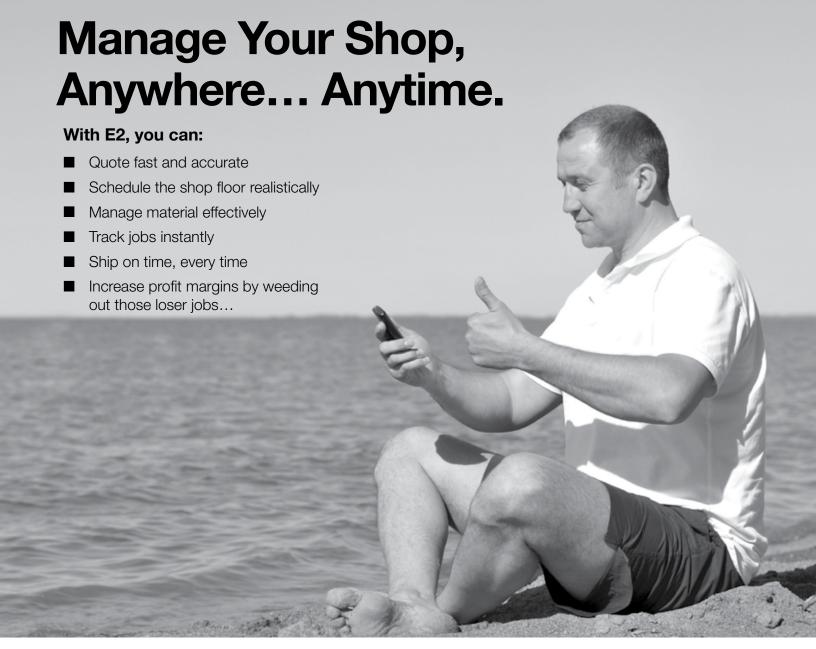
INDIANA PREPARES FOR ROBOT MAYHEM IN THE RING

Indiana will once again host mayhem in the ring when robot gladiators collide at the 2012 National Robotics League (NRL) Championships —p12

NTMA INSURANCE PROGRAM

The National Tooling and Machining Association has offered an Insurance Program to its members for over 30 years. —p18







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THIS COULD BE THE YEAR: TIME TO MAKE YOUR VOICES HEARD

Every year on baseball's opening day, Cubs fans around the world are known to say these words prior to the first pitch: "This could be the year." The Cubs haven't won the World Series since 1908, but that optimism remains.

For manufacturers, the wait is over. This IS the year. After years of trying to make our voices heard in Washington, policymakers and elected officials are listening. The White House has announced numerous manufacturing initiatives on issues that we have been talking about for years, such as training to increase the number of skilled workers and "inshoring" (reshoring). In February, the President called for a "National Network for Manufacturing Innovation," which the White House says will help up to 15 manufacturing "Institutes" to foster innovation around the country.

A quick search of bills filed in Congress during this session shows 41 bills introduced focused on "manufacturing" and "jobs." One Voice is doing its part to keep manufacturing literally on the front pages. In February, a front page story in The Washington Post featured NTMA member Matt Tyler on the issue of the shortage of skilled manufacturing workers.

This is our year, and we need your help. Sign up for the Legislative Conference in Washington, DC on May 8-9.

It is incredibly important for manufacturers to keep the pressure on our elected officials. For example, discussions have already started in Congress on tax reform. Manufacturers must weigh in as the action Congress takes could last a decade or more and impact our ability to compete globally. Policymakers are also working on health

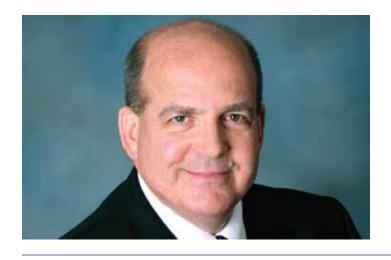
care, workforce development, labor, and regulations in 2012—all important issues to manufacturers.

The Legislative Conference gives you the opportunity to meet face to face with Members of Congress and their staff. This year we have extended the time for Capitol Hill visits, allowing you more opportunities to discuss the issues that matter most to your business with those who hold power in Washington. The program kicks off on May 8 with lunch and a political insider's analysis of the 2012 elections, followed by an issue briefing from us - your One Voice team in DC. We'll then head to Capitol Hill for meetings and then enjoy a networking reception. May 9 will be spent on Capitol Hill. A pre-conference webinar is being planned for first-time attendees and others who would like a refresher on what to expect during the congressional visits.

LET'S SEIZE THE MOMENT BY PARTICIPATING IN THIS IMPORTANT EVENT!

Manufacturers can make a difference in Washington, but only if they participate in the process. 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 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.





CHAIRMAN'S CORNER

ROGER ATKINS / NTMA CHAIRMAN OF THE BOARD

Little does one realize the gravity of leading an organization of your peers until you find yourself called to serve in this position. Rest assured that the gravity and responsibility has set in and I am thankful for the trust and confidence that you have placed in me.

I am a second generation NTMA Member. My Dad, Don Atkins, stated his business in 1963 and joined NTMA in 1967 and served numerous positions both locally and nationally. Thanks to my Dad, I joined NTMA in 1979 and have been active in NTMA for 29 of my 33 year working career with three different NTMA companies.

Just for statistics sake, I am only the second Chairman from the great state of Texas; following the late Mr. Myron Mallay of the Mallay Corporation in 1972. I am the first non-owner ever to serve as Chairman of NTMA and as such I would like to publicly thank my company, MIC Group for allowing me to serve NTMA and our industry. I am currently Vice President of Sales & Marketing of MIC Group headquartered in Brenham, Texas. We have 4 domestic and 2 international locations doing precision machining and mechanical/electrical assembly primarily serving the Oil & Gas Industry.

I want to talk about NTMA for a minute. I ask myself; what characterizes an NTMA Member? Who are we?

I believe we are "a group of creative, independent, opinionated, visionary thinkers and doers, risk takers that work hard, wanting and demanding nothing more than what we have earned." Just to prove my point, have you ever met an NTMA member that did not have an opinion or more importantly an opinion that they did not think they was right?

How about NTMA and manufacturing of yesterday?

- 1943 a group unified under the single purpose of "Training"
- Skilled Crafts were encouraged and respected
- Communication was done by phone, mail, and personal visits
- We actually used pencil and paper
- Prints and Specs were on blueline prints or velum
- Your handshake was your word/bond/your contract
- Competitors were the local shops, companies and persons you knew
- We held information close to our vest
- Personal relationships were valued and were a strength
- Trust, honesty, integrity, and fairness were the norm

How about the NTMA and manufacturing of today?

• It's hard to believe going into NTMA's 70th year, and training remains one of our biggest needs

- We are not reproducing ourselves, we have an aging work force
- We have seen our industry and association fractured, by our inward focus on our own company's fight for survival during changing times.
- Like it or not we are in a global market, it's as easy as calling next door. I have been to China, Germany, Singapore, South America. I have seen our competitors, they have the same equipment or nicer than we do. What I see as the difference is... our people. Our people are what set us apart.
- Communication is instant and information at your finger tips
- Prints, specs, documentation is all electronic
- Trades are not encouraged and actually viewed as dirty industries
- Our customers want to commoditize or products and services
- We are under pricing and performance demands like never before
- We have seen unprecedented shifts in market demands, global competition, supply chain dynamics

Now the NTMA and manufacturing of tomorrow?

• First of all we can no longer look at NTMA as our "Father's" organization. We have watched our Dad's organization and industry go from the very back-

bone of our nation's economy to be splintered, de-valued, commoditized, and unappreciated or understood.

- Most decisions will be driven by economic conditions and thus the "New Normal" will become our new frame of mine. Even though change and continuing change will continue, sound principles will remain intact
- We MUST re-establish our industry and our place in the American and world economy.
- Not in recent years has the opportunity been so available to us as an industry and to us as NTMA members to take back our industry.
- As Joe Gibbs said this morning, "Adapt or Die"

Grady's theme Marketing "Manufacturing to America" becomes reality as we believe it is, we as the manufacturing backbone of our nation must be prepared. We are in an election year and we just heard our President use the word manufacturing in his State of the Union address 16 times. We must be ready. We cannot continue to be the companies or association of yesterday, we must be "transforming" our companies and chapters to be relevant on the current world stage. Regardless of perception, America remains as the leading manufacturing nation in the world, with 9% of the American workforce (about 12 million)

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THE RECORD

OPERATIONS & EDITORIAL

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people employed directly in manufacturing today verses 25% in 1970. One must note that the US has remained the leading manufacturing nation because our workersare so much more productive. In a recent study by the LaSalle Research Group, it was reported that it took 1000 workers in 1960 to do what 184 workers do today. Yet today we see our business' growth hampered by the inability to fill open positions. It is estimated there are 600,000 positions open for skilled workers. When you look in our facilities today, we see workers 40-50 years old with relatively few younger workers. One of our challenges will be to change people's perception of manufacturing employment. Too many of our high school students are pushed towards college and universities while not enough are directed towards apprentice and training programs in manufacturing. We see the National Robotics League and our new NTMA-U on-line training addressing these pressing needs.

Tomorrow's success will be driven by Manufacturing Leadership within our companies. Again as Joe Gibbs said, "we are the Coaches." The shortage of workers and the expectations of a new generation of tech-savvy employees will force our companies to a new set of rules in the 21st-century manufacturing world. Exceptional leaders and



companies will be those (coaches) that can build an open and flexible vision of the future, that can inspire others to think differently about problems and challenges, and the ability to drive extensive cultural change across borders, functions, and generations.

As stated this morning, define the game plan, make sure everyone understands the plan, and lastly that everyone understands how important their role in the plan is.

My theme for 2012 is "Transforming for Competiveness"...your Company, your Chapter, your Industry.



Being competitive means WINNING. Ladies and Gentlemen, our businesses can win if we will commit to:

- Technology
- Innovation
- Productivity
- Efficiency
- Optimization
- Continuous improvement
- Processes and procedures
- Lean/Kaizan
- Flexiblity

We are an industry that has asked for nothing; however, we can no longer do it ourselves, we must be willing to partner and engage our suppliers of equipment, tooling, materials to work with us to achieve the performance demands placed on us by our customers. This is what the MFG Meeting is all about, to introduce the metal working industry to each other for the sole purpose of all our success. This collaboration is what will keep American manufacturing number one in the world and our companies competitive.

For our Chapters

- We must put our differences aside and work together. We must realize that we are stronger united than divided.
- We must rally together like never before around training, advocacy, technology, and manufacturing as a future.
- We must collaborate with other associations and associate members
- We must have a critical mass and speak with one voice
- We must drive value to our members, as a member driven association

Our Industry

- There is no "business as usual" anymore.
- Our costs cannot continue to escalate.
 - We will do more with less

via technology.

- We will transform ourselves or be transformed by others or our customers. Competitiveness is our transformation. Transformation is our door for increased profits/ making money.
- The manufacturing world, and the manufacturing world's customers have moved on. The question is...can our companies move along with them?

I challenge us to ACT. We must not depend on the rising tides of our current customers. We must unite and rally together for the good of American Manufacturing. I contend, NTMA is that rally point.

- Let's look at our companies....are we transforming our companies, are we transforming our people for the future
- Get involved in your Chapters, and get others in your companies involved in our Chapters, and work together for the good of all...
- Keep a close eye, constantly analyzing the transforming industries we serve. Be an early adopter of change.

As my Dad would say, he learned more about running a business from his involvement in NTMA and solved more shop challenges from information and ideas from his fellow NTMA members.

We both give NTMA credit for much of the success that our families have enjoyed in this industry and would say, our reason for being an NTMA Member was not for NTMA's success, but it was for our success.

In closing, I want to finish my personal story.

Other than my parents, there were three men that help transform my life. These men engaged me, mentored me, and through their time and effort "transformed my life."

You might ask why I close with this? Regardless of your age, whether it was your Dad, Uncle, Brother, or friend it is always good to remind ourselves who helped get us to where we are today. I challenge each of us to leave this type of legacy, making sure that we are all doing our part to "transform" others and doing our part to "transform" our industry.

Ladies and Gentlemen, I can confidently tell you that NTMA is prepared to lead the way in the metalworking industry and "Transforming for Competiveness" is my commitment to you this year. Will you join me in this quest?

ROGER ATKINS / CHAIRMAN

SCHOLARSHIPS AVAILABLE TO NTMA MEMBERS IN CENTRAL TIME ZONE

Thanks to a generous donation from the Edwin F. and Mildred Vobeda Charitable Remainder Annuity Trust, scholarships are available through the National Tooling and Machining Foundation (NTMF) to employees of NTMA member companies who meet the following basic criteria:

• Be an employee of and nominated in writing by an NTMA Member Company in Good Standing located in the Central Time Zone and enrolled in a registered tool and die apprenticeship program.

- Be at least 18 years at time of class start
- Be a high school graduate and achieved a minimum high school GPA of 2.5.

To receive a full description of the award with more details about the requirements and an application, please contact Dave Sansone at NTMF (dsansone@msi-groups.com). The NTMF Board has extended this year's deadline for applications until June 1.



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MANUFACTURERS CONVENE FOR SUCCESSFUL SECOND EDITION OF MFG

MANUFACTURING FOR GROWTH MEETING

BY BONNIE GURNEY, AMT

More than 750 manufacturing executives attended the second edition of the MFG Meeting (Manufacturing for Growth), March 8-11, 2012, in Orlando, FL. The event was organized by AMT-The Association for Manufacturing Technology, the American Machine Tool Distributors' Association (AMTDA), the National Tooling and Machining Association (NTMA) and the Precision Metalforming Association (PMA).

During the meeting, AMT and AMTDA announced their merger of the two associations. The Associations have integrated their products and services to better serve the members of both associations, calling the merger a logical evolution for the manufacturing technology industry. AMT leadership says "We are uniting the entire manufacturing technology chain from engineering and building machines, to integrating automation and support, to distribution services, which will well serve the users of manufacturing technology for their future."

The hosts of the MFG Meeting comprise of more than 4000 small and medium

sized manufacturers and distributors from all 50 states that provide products for the aerospace, automotive, construction, energy, medical, and many other industries in the United States and abroad. By sharing resources, the MFG Meeting provided an opportunity for attendees to exchange best practices as the manufacturing industry continues its resurgence in the U.S.

The second annual MFG Meeting go underway on Thursday with a record breaking number of attendees listening to Joe Gibbs, Hall of Fame Head Coach of the Washington Redskins and owner and founder of Joe Gibbs Racing. Coach Gibbs brought into focus the three priorities of living in a successful life, which is God, family and job. By listening to his personal experiences in keeping with these priorities, the audience received a great deal of food for thought.

Following Coach Gibbs, attendees received sound advice from Brad Hams, President of Ownership Thinking, LLC. Hams discussed the importance of teaching employees to think and act like business owners and creating broad-based incentive plans that are self-funding and align em-

ployees' behavior to the organization's business and financial objectives.

On Friday, the General Assembly Session centered on an Industry & Economic Update from the President of the Institute for Trend Research, Alan Beaulieu, and Adrian Cooper, CEO, Oxford Economics. While both economists believe that the industry may experience a modest slowdown in 2013, they also predict that the business cycle will trend continue to strengthen through 2017. Since it is not often that two economists agree on a five-year forecast, their talks certainly renewed the confidence of the audience to move forward with production growth plans.

After the Economic Update, attendees had an opportunity to attend a variety of breakout sessions centered on current issues. Due to the interactive format of each session, participants were able to gather a wealth of information.

At the last General Assembly Session on Saturday, attendees listened to a thoughtprovoking talk on Productivity Strategies of Super achievers by Darren Hardy,

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Publisher and Editorial Director of SUCCESS Magazine. Hardy's comments on not doing many things but rather concentrating on doing two or three things that have the biggest impact on our business will lead us to a more productive and successful life got the attention of the attendees, which led to some lively conversation following the presentation.

"Last year's inaugural MFG set the bar for very high expectations this year," said Brian Norris, Vice President for Sandvik Coromant, the conference's Gold Sponsor. "I can say without a doubt that this conference delivered even beyond last year. We hosted a mix of customers, machine tool partners, and industry association leadership that was engaged and thoroughly committed to keeping manufacturing vibrant. I was impressed by the high quality of speakers and though provoking topics, and most importantly, I had plenty of networking opportunities with other attendees."

"We at Gardner Publications are pleased to have been the MFG Meeting's Media Sponsor, said Rick Kline, Sr., President and CEO of Gardner Publications. This conference has become a landmark

event for builders, distributors and users throughout the manufacturing technology industry, and the focus of the meeting closely mirrors the focus of Modern Machine Shop. The unique forum setting brings to life the best practices and principles that we discuss daily in our website, blog and magazine. We look forward to continuing to support the industry through this event."

"The NTMA was excited to be a part of the 2012 MFG Meeting" noted Dave Tilstone, President. To have these powerful industry associations come together to support manufacturing shows the positive effects of collaborating around a common goal. This event provided the perfect atmosphere to discuss the importance of increasing corporate competitiveness in our transforming industry."

In 2013, The MFG Meeting will be held at the Hilton Waikoloa Village in Waikoloa, Hawaii, March 6-10.

NTMA

2012 LEGISLATIVE CONFERENCE FEATURES EXPANDED TIME ON CAPITOL HILL

In response to member feedback, the 2012 One Voice Legislative Conference will include a greater emphasis on congressional visits than in the past, allowing more time to discuss the issues that matter most to your business with those who hold power in Washington, D.C.

Join other metalworking industry leaders for this year's conference, May 8-9 at the Westin Washington, D.C. City Center. The program kicks off on Tuesday, May 8 with lunch and a political insider's analysis of what to expect in the 2012 elections, followed by a briefing from One Voice lobbyists on the latest developments related to key legislation. We'll then head to Capitol Hill for a few hours of meetings before enjoying a networking reception that evening. The entire day on Wednesday, May 9 will be spent on Capitol Hill.

Finally, as an added benefit, a pre-conference webinar is being planned for first-time attendees plus any others who would like a refresher on what to expect during the congressional visits.

For complete program details and online registration, visit www.metalworkingadvocate. org/legislative.asp. Contact Christie Carmigiano at 800-248-6862 or ccarmigiano@ntma.org with questions.







INDIANA PREPARES FOR ROBOT MAYHEM IN THE RING: NATIONAL ROBOTICS LEAGUE ANNOUNCES 2012 NATIONAL CHAMPIONSHIPS TO BE HELD IN INDIANAPOLIS

NTMA SPONSORED LEAGUE HELPS STUDENTS LEARN SKILLS NEEDED FOR CAREERS IN MANUFACTURING

Indiana will once again host mayhem in the ring when robot gladiators collide at the 2012 National Robotics League (NRL) Championships at the Circle Centre Mall in Indianapolis on May 5-6, 2012. NTMA created the NRL, a robot combat competition, to introduce a new generation of Americans to manufacturing. This is the second year in a row that the National Championships will be held in Indianapolis.

NTMA founded the NRL to help change misperceptions about manufacturing and attract a new generation of students to well-paying technical careers. The program partners teams of middle school, high school, and post-secondary school students with local NTMA manufacturers to work together to build robots designed to do battle. The result is not only a destruction-



POWERED BY

driven face-off of incredible machines, but also an opportunity to develop high-tech skills and cultivate the interest of a new generation of students who will determine the future of manufacturing

"This is a great way to teach students technical skills and interest them in careers in manufacturing," said Ron Overton, CEO of Mooresville, IN-based Overton Industries and a member of the NTMA Board of Directors. "There are more than 600,000 openings in manufacturing for skilled workers, with this number to rise even further as the economy picks up steam. We need to attract a new generation of bright, skilled Americans to fill these well-paying jobs. "Beyond the fun and action-packed excitement of the com-

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petition, NRL establishes great relationships between local manufacturers and local schools"

"For NTMA, the NRL helps combat negative stereotypes of manufacturing and introduces these students to potential careers in this important sector," added NTMA COO Rob Akers. "NTMA members are eager to hire new workers for positions that offer wages and benefits that exceed those of most service sector jobs. Incredibly, many of these jobs are unfilled because manufacturers are having trouble finding enough skilled applicants."

The National Championship matches will feature student teams who have competed in NRL-sanctioned competitions across the U.S. Clashes begin Saturday, May 5 with preliminary rounds followed by quarterfinals, semi-finals and final rounds that will take place through Sunday, May 6. Circle Centre Mall in located at 49 West Maryland St. in Indianapolis. Competition is open to the public free of charge.

For additional information, visit the NRL website at www.gonrl.org. For additional information on NTMA, visit www.ntma.org.



THE MARCELLUS SHALE: REDEFINING PENNSYLVANIA

BY KATHY KIERNAN

Untapped natural gas lies in the Marcellus Shale beneath portions of Ohio, Maryland, New York, West Virginia, and Pennsylvania. In the last 5 years, natural gas drillers have flocked to this region, particularly western PA, to extract gas from the Marcellus Shale's black sedimentary rock.

Drilling in the Marcellus Shale region has profoundly increased since 2008 because of regulatory changes and hydraulic fracturing—also known as fracking or hydrofracking—a process during which a mixture of highly pressurized water, sand, and chemicals is injected into rock, releasing shale gas and forcing it upward. This practice, combined with a horizontal drilling technique, enables drillers to extract a massive amount of shale gas that was previously unreachable.

PROS

Low energy prices. The Marcellus Shale is comprised of enough gas to help the United States achieve independence from foreign energy, including the troubled Middle East for its oil. The amount of natural gas in storage by the end of March 2012 is expected to be the highest since 1983. Consequentially, the abundance of ready-to-be-shipped natural gas in storage and the extensive reserves now accessible have driven down the market price to a 9-year historical low.

In 2008, the average price for a Dekatherm of natural gas was \$8. The price dropped to \$5.50 in 2010 and now has declined to \$2.50.

Market forecasts are that natural gas prices will remain low for several years. The number CONTINUED ON - P18



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April 2012: Tip of the Month

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of active drilling rigs is declining as prices have dropped. And, there is an immense amount of natural gas in storage. These factors are helping to keep a lid on prices. (See how to benefit from historically low energy prices.)

All of this is occurring while oil prices have steadily increased during the past year, recently eclipsing \$100 per barrel. Oil prices are not linked to natural gas prices in any direct way. However, some industrial and other large energy consumers will convert usage of oil to natural gas if these price levels hold.

Economic growth. Forty drilling companies are currently leasing land in Pennsylvania and have invested more than \$4 billion in land acquisition, new wells, infrastructure development, and community partnerships. Pittsburgh is the largest city atop the Marcellus Shale formation, but most Pennsylvanian communities with access to shale gas are quiet rural towns with no previous exposure to drilling. In communities where drilling companies are extracting natural gas, local economies are flourishing. Landowners are profiting, job opportunities are increasing, and local governments are considering implementing an "impact fee" to raise community revenue from drilling companies.

Jobs. Recent projections are that over 200,000 new jobs will be created by 2020 from Marcellus Shale drilling. In 2011, one of Pennsylvania's poorest areas, rural Bradford County, led the state in job creation. "We're not impacted by the recession at all," says Gregg Murrelle, a hotel manager in the Bradford County seat who leased the land around his properties for drilling.

Drilling companies are just one piece of the puzzle. Existing businesses in the hotel and restaurant industries are adding employees. Local truck drivers and construction contractors are seizing opportunities. Law and engineering firms are hiring experts in oil and gas development and regulatory matters. Specialized insurance agents are needed. Environmental inspectors are required to monitor and enforce laws that protect air, land, and water. The list goes on.

CONS

Drilling opponents have voiced complaints about fracking and taken actions to slow it down. The fracking process creates extremely high water pressure underground, which could trigger tremors and earthquakes. Horizontal wells require as much as 5 million gallons of water for fracking. After the fracking process is complete, wellbore pressure is released and water flows out of the wells. Backflow and the threat of spills and downhill leaks are causing concerns.

Fracking backflow. Drilling companies are not required to disclose which chemicals are mixed with fresh water for fracking, which raises alarm over water pollution. Fracking additives could be as harmless as household chemicals or as harmful as toxic ingredients. Even if chemicals makeup only 0.5% of 5 million gallons of water used for one horizontal well, that amounts to 250,000 gallons of unknown chemicals. Plus, when fluid mixes with shale rock it becomes brackish and could become contaminated with radioactivity. "You bring everything the fluid encounters down there back to the surface along with the gas," comments Michel Boufadel, an environmental engineer at Temple University in Philadelphia.

Leaks. Drilling companies must securely cement wells to prevent leaks. In December 2010, a major oil and gas business paid a \$4.1 million settlement to the Pennsylvania Department of Environmental Protection (DEP) and 19 families in Dimock, Pennsylvania, whose water was tainted with methane because of



poor cementing around well castings.

On farmland outside of Wellsboro, Pennsylvania, 75-year-old Don Johnson, who has lived in the area his entire life, was forced to quarantine his livestock in the summer of 2010 after his cows drank from a pond with a suspected wastewater leak. "They affected the water, and without water you can't farm here and you can't live here," says Johnson. The DEP also fined one major energy company \$565,000 for violating rules protecting streams and wetlands in Potter and Bradford counties. Some of these violations were administrative, such as improper signage or paperwork.

CLEAN CHOICE

Despite relevant concerns over natural gas drilling, coal mining will always be more harmful to the environment. Coal mining uses 5 times more water than natural gas drilling and permanently changes the terrain and environment in the area around the mine. The burning of coal causes many air pollutants and some experts argue it is primarily responsible for climate change. Thousands of people die worldwide each year from coal mining operations, and toxic emissions from coal-burning power plants cause thousands of premature deaths each year in the United States. (See the health effects on residents in states downwind from power plant emissions. http://appienergy.blogspot.com/2012/01/epa-issues-historic-air-pollution.html)

SOLUTIONS

Backflow water from fracking is pumped into wastewater holding ponds and storage areas for transport to water treatment plants for recycling. Chesapeake Energy, the second-largest natural gas producer in the United States, asserts that it recycles 100% of fracking wastewater to reuse in additional wells. Pennsylvania is tightening its regulations for screening wastewater at municipal treatment plants, and an increasing amount of wastewater is now being reused for additional fracking.

In September 2011, the U.S. Environmental Protection Agency launched a probe to analyze the impact of drilling on air, land, and water in Washington County, Pennsylvania. "While natural gas operators employ various safeguards to minimize the risks inherent to the industry, legitimate concerns have emerged regarding potential environmental impacts," says Bonnie Smith, EPA spokeswoman.

A step in the right direction is for the gas industry to continue improving its level of recycling wastewater, and to identify the chemicals used for fracking. Technologies that can capture and clean wastewater at the wellhead would be a valuable innovation, as well. In the meantime, fracking wells could be completely prohibited or dramatically restricted in dense population areas like Pittsburgh and the New York City watershed, where real and potential environmental/human concerns are simply too high compared to the benefits of drilling.

BOUNTIFUL FORECAST

How bountiful is the Marcellus Shale? Reports vary. Investors, academia, politicians, energy companies, and government agencies are just a few of many industry experts who track the shale gas market and provide evaluations and predictions.

Experts have declared that enough natural gas is in the Marcellus Shale to fully meet the energy demand for the entire United States for as few as 6 years and as many as 100 years. Regardless of whether the Marcellus Shale contains 141 trillion cubic feet or 410 trillion cubic feet of natural gas, experts predict that 49% of energy will be generated by shale gas by 2035. By 2016, the United States will most likely become a net exporter of liquefied natural gas.

Much of the Marcellus Shale, which is thousands of feet below the earth's surface, remains untested for long term productivity. More than 2,400 wells were drilled between 2006 and 2011 in the Marcellus Shale region. As fracking continues, more information will be revealed about accessibility and environmental consequences. Future technological innovations could improve accessibility and increase productivity. Forecasts will evolve as all of these factors come into play.

SHALE LOCATIONS

In addition to the Marcellus Shale region, shale formations in the United States include the Barnett Shale in Texas, the Woodford Shale in Oklahoma, the Fayetteville Shale in Arkansas, the Haynesville Shale in Louisiana, and the Antrim Shale in Michigan, Ohio, and Indiana. Shale formations in China, India, Britain, and Eastern Europe countries provide potential natural gas resources, as well.



TECH'S EXPANDED FACILITY UP AND RUNNING

February 2012 - It was February of last year when Tech announced plans to acquire an adjoining facility to meet strategic planning goals even though the economy was still in turmoil. Since then, the ISO 9001:2008 injection molded plastic company made major investments in facility up-grades, plasticizing technology, computerized monitoring of plastics processes, and advanced RJG training certification in plastics processing.

Tech's total footprint has almost doubled to over 92,000 sq ft. "This investment cements our commitment to customers, our people, and the community even when economic conditions have been strained," stated Scott Hanaway, President/CEO.

CONTINUED ON - P20

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The 38,000 sq ft addition was designed to optimize production efficiencies in a white room environment and establish dedicated training resources for personnel development. Tech specializes in close tolerance molded plastics for high precision products with 33 injection molding machines ranging in size from 40 ton to 440 tons. The company's expansion currently holds 12 of 33 presses with the flexibility to add up to 20 more presses.

The new facility was upgraded above and beyond industry standards with new highly efficient overhead lighting fixtures and large energy conserving windows for natural lighting. The core production area features an open floor plan with white liner wall panels for maximum energy efficiency and a glossy white floor finish that compliments the company's visual workplace standards. The pride of American manufacturing is very evident in the overall design as red and blue accents compliment the production area's white floor and wall panels.

The facility has a full climate control system with direct connect mold cooling capability. Finally, a new corridor was constructed to bridge the new facility to Tech's

main building. The upgrades enable Tech to provide customers with flexible expansion of production capacity and products that match their most challenging specifications while minimizing employee workplace hazards.

The facility design includes an optimized flow of materials between the two buildings through a primary corridor which serves as a communication center for shift-to-shift resource planning. Other efficiency improvements come from newly streamlined inventory management processes using ERP/MRP technologies.

Tech's dedicated training center is located in the new facility. The commitment to provide skills enhancement training and continuous education programs are evident in the course offerings. New employees can take part in basic training exercises through more advanced sessions. Tech recently held its first RJG training session which aligns the company's goal to support personnel growth and provide the best opportunities to expand skills and knowledge.

Plastics Operations Manager Jason Kinnear said that the improvements "were done exceedingly well" and that "it's an excellent environment for our employees." Not

only is the new facility great for employees, but also for Tech's customers. Facility planning project coordinator, Doug Hanaway, explains that visiting customers can now relax in new conference areas or catch up on the news while watching the large screen television in the facility's lunch room. Doug said that "we tried to make it as customer friendly as possible." And with the expansion, Tech shows its continued support to maintain full service operations in the Meadville area.

Tech Molded Plastics, Inc was founded by William and Eva Hanaway in 1973 with the drive for precision mold building, custom molded plastics, and skilled people. Problem solving talent has grown the company from a small garage shop to an international operation that ships products to countries across the globe.

Tech Molded Plastics, Inc. is also on Facebook. Find us online at https://www. facebook.com/TechMoldedPlastics.

For more information, please contact Tech at Tech@ttmp.com.

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MEMORIAL

Michael James Moulton, 54, of Beverly passed away at Massachusetts General Hospital after a brief but immensely courageous battle with cancer.

Born in Lynn on December 13, 1957, to Connie (Rigol) Moulton, formerly of Danvers, and the late Otto Moulton, Michael graduated from Danvers High School in 1975, followed by Phillips Exeter Academy in 1976 and Williams College in 1980. Immediately after graduation, he joined his father at the family business, Fairview Machine Company in Topsfield and has watched the business grow and prosper there as president and owner of the company since 1990. Fairview has been a member company for many years. As a member and its involvement with the Chapter over the years included both his brother, Tom Moulton, and his father, Otto Moulton having been active on the BTMA Board and serving as Chapter Presidents.

Words could never adequately express the tremendous legacy Michael has left behind him. Whether you met him during the time when he coached Little League and Youth Hockey teams, or at the "greatest place on earth" - Great East Lake or relishing in the hot sun along the Floridian coast or were simply blessed enough to receive a special "Michael hug" or kiss for no particular reason, the imprint he placed on all who knew him is one that can never be forgotten. Aptly termed "hero" by many, Michael's infectious personality, fervor for life, consummate strength and unconditional love of those around him was and will forever continue to be a constant source of inspiration. He was a devoted and encouraging father and father figure to so many, a dutiful son, a caring brother, a fiercely loyal friend and a fair and compassionate leader. As any individual reading this who was fortunate to know Michael can attest, the truth is there is not enough paper in the world to allow one to accurately encapsulate how incredible of a man he was — we can only hope to continue to strive to emulate the model he set forth for all of us.

In addition to his mother, Michael is survived by his three adoring children, Michael C. Moulton and his wife Olivia (Medeiros) Moulton of Georgetown; Nicole M. Moulton of Tampa, FL, and Stephen T. Moulton and his fiancée Kyla Fallon of Danvers. He also leaves behind three siblings, Thomas Moulton and his wife Dana (DeNiro) Moulton of Rye, NH; his "perfect match" Lisa (Moulton) Brown

and her husband Rich Brown of Danvers; and Ronnie Moulton of Danvers. In addition, he is survived by many beloved nieces, nephews, "adopted" children, cherished friends and treasured canine companions who all meant the world to him.

NTMA



NTMA INSURANCE PROGRAM

BY JOHN RAZZANO, CHAIRMAN, NTMA INSURANCE BOARD

The National Tooling and Machining Association has offered an Insurance Program to its members for over 30 years.

Many members have taken advantage of this program over the years.

In the past several years, your association has worked hard to improve this important program.

The results are impressive. Volume as measured by premium dollars written is up significantly. The number of NTMA member companies participating in the program is up significantly.

These results can be attributed to the creation of a permanent NTMA Insurance Board which was formed over 3 years ago. This board has worked very hard to offer our members a comprehensive solution to their insurance needs. I'd like to recognize the 2011 members of the Board. They are Mike Mittler, Roy Sweatman, Jeff Kelly, Grady Cope, Ron Overton, Pete Conway, Stu Cohn and John Salisbury. Pete, Stu and John are the three insurance professionals on the Board. Their input has been invaluable.

In addition, the Executive Team has been very engaged in the effort as have Dave Tilstone and Rob Akers.

We have partnered over the past two years with AIX Specialty Insurance Company, a subsidiary of Nova Casualty Company to provide our Insurance offering. They have been extremely helpful in improving the insurance offerings to our members.

Through the combined efforts of all the parties above, NTMA is now offering the most comprehensive Insurance Program in its history. In future articles, you will learn about the many advantages of being a part of the NTMA Insurance Program.

At our national convention in Orlando last month, we introduced two new partners to the NTMA Insurance Program. These are large, well managed, brokerage firms that have achieved considerable success in the insurance field.

Britt/Paulk Insurance Underwriters located in Atlanta, Georgia, will be handling all of the states in the continental U.S. with the exception of California, Arizona, and Nevada.

John Paulk, Jr. is leading the Britt/Paulk effort for the NTMA Insurance Program.

Barney and Barney located in San Diego, California, will be responsible for the very important California market as well as the states of Arizona and Nevada. Jim O'Connell is heading up the Barney and Barney effort for the NTMA Insurance Program.

In the coming months, these firms will be writing articles in the RECORD highlighting the specifics of the NTMA Insurance Program.

For those of you participating in the NTMA Insurance Program, please accept our thanks and appreciation.

For those of you who are not yet part of the NTMA Insurance Program, we would welcome the opportunity to earn your business.

If you need additional information about the NTMA Insurance Program not available through your local agent, please call the NTMA office and ask for Rob Akers or Dave Tilstone.

Thank you for your consideration of the NTMA Insurance Program and thank you for being a member of the National Tooling and Machining Association.

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AS THE BASEBALL SEASON BEGINS - NTMA-U IS WORKFORCE DEVELOPMENTS WAY TO HIT A HOME RUN

As we see momentum building in the U.S. manufacturing today, one of the greatest challenges is making sure there that a skilled workforce in place to drive our industry forward. The NTMA is in a unique position to help on a

number of fronts. Manufacturing companies across the U.S. have found that most employees have some weaknesses in their workplace skills. NTMA-U training programs encourages NTMA company employees to strengthen those skills which each employee needs to improve within the workplace, and that are required to advance their production levels. A workforce development program

"NTMA-U is an amazing tool that we use in our shop to "Grow our Own" when we are looking to strengthen our workforce since finding quality skilled help is so difficult to do in today's world"

Ervin Bean, Plano Machine and Instrument, Gainesville, TX



brings all employees to a higher level so they all have the highest level of skills and knowledge. This type of training helps reduce weak areas within the company, and strengthens the skills of those who rely heavily on others to complete basic work tasks.

NTMA-U workforce training provides the necessary training in an on-line user friendly environment that creates an overall knowledgeable staff with employees who can take over for one another as needed. NTMA-U is also developed to teach how to work on teams or work independently without constant help and supervision from others. Employees with access to training and development programs have the advantage over employees who are

"The course materials that are found in NTMA-U are very user friendly, and I have found the content to already help me to do a better job. The applied shop math and blue print reading with GDT videos deliver content in a way that is directly related to our field, and that makes what could be a difficult to learn topic, very easy to understand "

Shane Carlton, Sattler Companies

left to seek out training opportunities on their own. The investment in training that a company makes demonstrates to the employees that they are valued. NTMA-U workforce training creates a supportive workplace. Employees may gain access to training they wouldn't have otherwise known about or sought out themselves. Employees who feel appreciated and challenged through NTMA-U training opportunities may feel more satisfaction toward their jobs.

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PARTNERS IN THINC WELCOMES PREDATOR SOFTWARE AS A NEW PARTNER

Okuma America Corporation is pleased to announce that Predator Software, a leading provider of software applications, has joined Partners in THINC.

Predator Software, located in Portland, Oregon, focuses on the development of applications and solutions that provide manufacturers with answers to real world shop floor problems, such as scheduling based on material/tooling/machine availability, creation and delivery of work routers, and real-time cost collection and analysis. Predator's shop floor control system (SFC) technologies include CNC networking, machine monitoring, document management, data collection, machine simulation and verification, tool and gage crib management, traveler management and robotic cell manufacturing. With a strong staff dedicated to development, testing, sales, and support, Predator Software is committed to investing in the resources it takes to remain the recognized industry leader in shop floor automation technologies.

Predator Software applications can be seen and demonstrated at the Okuma Tech Center in Houston, TX and Chicago, IL and at the Partners in THINC facility in Charlotte, NC.



SECO ANNOUNCES 2011 RESULTS FOR NORTH AMERICAN RECYCLING PROGRAM

Seco has released the annual results of its North American Carbide Recycling Program, revealing that the company collected and processed 57,368 lbs of used carbide tools in 2011. This represented more than double the company's goal of 26,500 lbs, thanks to steady growth of the program throughout the year.

With its Carbide Recycling Program, Seco provides manufacturers with small, medium or large storage containers to place within their facilities. Small containers hold approximately 5 lbs of carbide, medium containers hold approximately 50 lbs, and the large drums accommodate approximately 1,500 lbs. As tools reach the end of their useful life, they can be placed in these containers, which are then collected by Seco. Any carbide products from any manufacturer can be submitted, including carbide inserts, solid drills, solid end mills, wear parts and PCD/PCBN-tipped inserts. Manufacturers are paid at the market rate when the carbide is returned.

"Over the past year, we've really spread the word to customers on just how easy it is to recycle used tools and inserts with the Seco program," says Vic Bruni, Manager of Quality at Seco Tools Inc. "Since launching the program in February 2011, we've seen a tremendous amount of growth and we're well on our way to our goal of recycling 50% of the carbide inserts we sell by 2014."

In addition to the well-publicized environmental benefits of re-CONTINUED ON - P26

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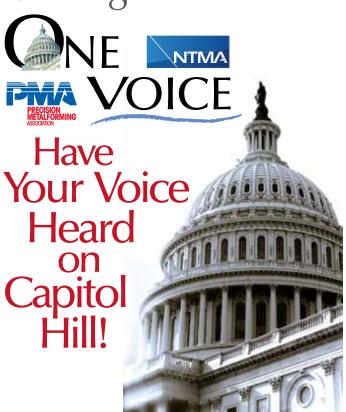
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cycling, Seco's Carbide Recycling Program helps to address the growing global demand for tungsten, which comprises 75% of cemented carbide. Up to 95% of the material in a typical carbide insert can be reclaimed, helping to ensure the long-term sustainability of the metal cutting industry.

Manufacturers interested in participating in the Seco Tools Used Carbide Recycling Program can visit www.secotools.com/recycling for more information, or contact Vic Bruni at vbruni@secotools.com.



EXSYS TOOL, INC. INTRODUCING NEW ADDITIONS TO ITS PRECI-FLEX® SYSTEM

The EXSYS/EPPINGER PRECI-FLEX® Adapter System is continuously expanding to meet the toolholding needs of today's manufacturers, and EXSYS Tool will feature two of the system's latest innovate additions in booth 2108 at the WESTEC 2012 show scheduled for March 27 - 29 in Los Angeles, California. Joining the industry-leading PRECI-FLEX line of high-precision modular tooling systems are the new Type 02 extended adapters and new Shrink-Fit adapters.

Type 02 extended adaptors within the PRECI-FLEX system feature extended collet chucks that allow tooling to be positioned closer into a machine spindle or chuck; because of their extended lengths, the adaptors eliminate any tool interference issues.

As part of the many different types of PRECI-FLEX adapters that adhere to the front face of the collet pocket, the Type 02 adaptors permit the use of smaller size collet diameters closer to those of the cutting tool to be used. This option provides more secure tool holding and the ability to clamp tooling at greater distances from the chuck, yet with the same rigidity as if using a standard toolholder.

EXSYS/EPPINGER adds all the benefits of shrink-fit tool holding technology to its PRECI-FLEX system with the development of the company's new Shrink-Fit adapters. The adapters deliver 100% clamping and connectivity around a tool's entire shank diameter, while providing the holding power, rigidity and accuracy associated with shrink-fit tool holding.

Unparalleled in performance, the EXSYS/EPPINGER PRECI-FLEX modular tooling system was the first of its kind on the market to offer a single base holder and multiple tooling adapters that utilize the ER collet pocket, making lathe tooling changeovers quick, accurate and cost-effective.

The product's compact design ensures maximum torque transmission and rigidity, resulting in increased machining accuracy and improved productivity. Available in a range of sizes and styles, PRECI-FLEX provides unsurpassed repeatability, with every toolholder offering repeatability within 3 microns. The system also virtually eliminates machine downtime, and allows tooling adapters to be interchanged between fixed and rotary base holders for fast, economical machining.



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For more information, please contact Ken McCreight toll-free at 800-248-NTMA (6862).

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MEMBER TESTIMONIAL

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FALL CONFERENCE

October 24-28, 2012 Nashville, TN

REYCO PRECISION MACHINING, INC. ACHIEVES AS9100 REV. C CERTIFICATION ON FIRST AUDIT

Reyco Precision Machining, Inc., a privately owned company focusing on the aerospace sector (Satellites, Space launch systems and missile defense systems), has received Aerospace Standard 9100 Rev. C (AS9100C) certification on its first audit.

The Aerospace Standards (AS) is a series of specific standards based on the ISO 9001 standard, a stringent quality management standard for systems and processes. Developed by the International Aerospace Quality Group (IAQG), the AS Standards provide international consistency and address the specific regulatory, safety and reliablility requirements demanded by the aeropsace sector. AS9100C is the latest Quality Management System standard, for aviation, space and defense organizations with an increased focus on program and risk management, intensive supply chain management controls, and facility-wide continuous improvement activities that include on-time delivery and product conformity measure-

ment processes. This new revision includes updating the ISO standard alignment to ISO 9001:2008. Industry-specific standards, like AS9100, help manufacturers monitor critical cost and time-to-market factors, while ensuring customers get the best quality products available.

Ike Lester, Owner and President of Reyco, stated, "Achieving this certification on first audit is a true testament to our quality systems and our commitment to ensuring we meet and exceed our customers' expectations through our continuous improvement philosophy. Our commitment to our customers is that we will deliver a finished product that they are completely satisfied with."

Additional information about Reyco can be obtained by visiting our web site at www.reycoprecison.net.





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