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TAX WIN SAVES NTMA MEMBERS HUNDREDS OF THOUSANDS

In a major lobbying victory for NTMA members, on December 18, 2015, President Obama signed into law a measure delaying, extending, or making permanent a number of tax provisions critical to manufacturers. — pp. 9-11

MEET OUR NATIONAL ASSOCIATE MEMBERS: BIG KAISER

BIG Kaiser President Chris Kaiser shares the company's history and relationship with NTMA and what they can offer members. — pp. 18-19

CONNECTED MACHINES FUEL THE SMART MANUFACTURING REVOLUTION

In this decade, we are seeing a convergence of technologies and process improvement initiatives with the potential to radically improve the way manufacturers thread processes and systems in the enterprise and the way they deliver customization and services to customers. — p. 20

THE NEW YEAR'S RESOLUTION YOU MUST KEEP

The NRL is looking for NTMA member companies to be our partners in our efforts to infuse the manufacturing industry with talented students, who are the future workforce, in a fun and challenging learning environment. — p. 23

THE MFG MEETING

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MFG MEETING 2016

SEE THE SCHEDULE FOR THE 2016 MFG MEETING IN PALM DESERT MARCH 2-5TH, AS WELL AS A PEAK INSIDE THE CHAPTER LEADERSHIP SUMMIT FEBRUARY 28-MARCH 1. — PP14-17

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Chapter
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TALON MACHINE & GEAR, INC.
Kansas City Chapter
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Blue Springs, MO 64015

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NTMA WELCOMES NEW NATIONAL ASSOCIATE MEMBER



5ME is a technology company entirely focused on manufacturing efficiency. Our solution portfolio includes Cryogenic Machining Systems and Manufacturing Efficiency Software. 5ME Cryo utilizes Liquid Nitrogen in place of conventional coolants and allows up to 5X faster processing speeds. Freedom eWARE is a Suite of Manufacturing Efficiency Software that leverages IIoT and has documented productivity increases of up to 50%. Contact Pete Tecos at pete.tecos@5ME.com.





PRESIDENT'S UPDATE

DAVE TILSTONE / NTMA PRESIDENT

Having seen the stock market plunge over the past several weeks, questions about manufacturing have become a concern with many of our members. I have spoken to many members and read many of the published forecasts for 2016. Although China's manufacturing has been blamed for the dramatic decline with stock, we have also seen oil drop below \$30 per barrel for the first time in many years. Regardless, the indicators for the U.S. continue to be positive; the decline in the fourth quarter manufacturing activity by members can be rationalized by manufacturers reducing inventory levels; economists that follow our industry believe that this inventory "burn" has run its course, with manufacturing ramping up in the first and second quarter; the automotive industry recorded sales of almost 17.5 million cars and light trucks with SUVs and pick-up trucks leading sales trends. Being the most profitable segment of their products, more and more profit is being recorded. The introduction of new models continues to accelerate as seen at the NA Auto Show held in Detroit. The increase in sales with larger vehicles can certainly be attributed to lower gas prices, however the average age of a vehicle in the U.S. is 14 years, leading

experts to believe there is pent-up demand for new vehicles; members involved with tooling for the auto industry continue to enjoy new orders; likewise, those involved with appliances and home heating/cooling systems have seen increased tooling business as more consumers are buying homes; aero space, including aero engine manufacturing, is very strong due to the high backlogs at Boeing and Airbus; Airbus built a new facility in Mobile, Alabama, to take advantage of the supply base in the U.S.; members involved with the aerospace business continue to be the busiest of all NTMA members and are expected to remain busy for the next several years; finally, the medical device industry is also very strong. All of these positive comments are supported by backlogs and forecasts by the machine tool builders. In short, regardless of the stock market plunge, NTMA members should enjoy a good business year in 2016.

One way for members to network and improve business this year is through NTMA regional workshops known as **Technical Seminars**. These regional events are intended to bring important and significant content and training to Plant Managers, Financial Managers, your Sales and Marketing per-

sonnel, as well as those involved with Employee Management and Benefits, including owners. For the first time, we will be conducting a Workforce Development Roundtable in conjunction with the National Robotics League competition on May 20th. Also, based upon your feedback from last year, a new and lower pricing structure was implemented. We already held a Plant Managers Roundtable in Charlotte on January 13th hosted by Okuma. As usual, Okuma did a great job introducing their latest technologies and being generous hosts. There was also a plant tour of a local Siemens plant covering 1.5 million square feet. 5ME presented their cryogenic machining technology followed by a machining demo on titanium that showed the improved tool life, higher speeds and feeds and surface finish provided by cryogenic machining. CultureShoc's presentation on team building and understanding your culture as it relates to the daily issues facing business owners and plant managers was an event highlight, as well as the Zeiss input on the latest technologies in metrology and precise measurement equipment. As usual, the roundtable discussions were a major part of the day where attendees discussed opportunities

and challenges they face within their shops. See the Technical Seminars calendar inside this issue and mark your calendars so you and others in your company can plan to attend.

Another valuable "tool" that many members utilize this time of year for planning and budget purposes is the **Wage and Fringe Benefits Report**. Survey results were made available in early January and free to members who participated. If you weren't able to participate but would still like the report, please contact Kelly LaMarca at klamarca@ntma.org. With the continued challenge of recruiting and retaining personnel, the Wage and Fringe Benefits annual report can be invaluable to you.

At the beginning of each year, the Executive Committee (EC) meets to review the **NTMA Strategic Plan** and grades itself and staff on the progress made during the prior year (2015). This time was also used to establish the annual strategic initiatives for NTMA staff. As these initiatives are completed, they are replaced by others. Executive staff will meet and establish action plans for 2016 based upon the budget. This helps with the implementation and execution of the Strategic

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THE RECORD

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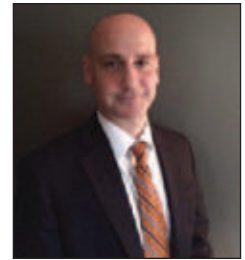
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NTMA WELCOMES MATT GILMORE

NTMA is pleased to introduce Matt Gilmore, our new Director of Membership and Business Development. Matt joined us on January 18th, and brings almost 20 years of not-for-profit experience and knowledge to us, most recently from his work at The Council for Economic Opportunities in Greater Cleveland where he held the position of vice president, public affairs. In his new role, Matt will be responsible for our regional membership and chapter support, membership programs, chapter management programs and agreements, Affinity Programs, marketing and communications and National Associates. When you meet Matt, you'll find him very energetic, motivated and passionate about membership and business development. He's an energetic leader with a strong team-building acumen that will fit well with members, chapters, National Associates, Affinity Partners and the NTMA team. Matt will report directly to Dave Tilstone.



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Plan as well as aligning staff resources and priorities. As the NTMA strategy is a multi-year plan, the EC also reviews it to be sure it remains relevant and pertinent with our mission and vision. The Strategic Plan has had a significant impact on your association over the past five years resulting in a focus and allocation of resources on member value, NTMA Chapter support, workforce development, the National Robotics League and by-laws. The Strategic Plan is reviewed quarterly by the EC throughout the year to follow the progress of key programs and make any adjustments based upon member feedback, changing business conditions, etc.

Finally, I hope you all join and enjoy the 2016 **MFG Meeting**. The MFG Meeting has been described by members as the ultimate networking meeting. As you've seen in the emails and announcements, the meeting will be held from March 2-5 at the JW Marriott Desert Springs Resort and Spa. The MFG Meeting will bring extraordinary speakers, invaluable networking and unexpected opportunities to be inspired. The theme of this meeting will be to address the interests and concerns of business owners and their emerging leaders. Presented in conjunction with AMT, you'll have the opportunity to meet with other business owners as well as the presidents, principles and c-suite management teams of the world's technology leaders. The meetings held at the MFG Meeting are designed to provide a casual business venue for introductions and meaningful conversations. Members who benefit the most are those that want to grow their businesses, understand key business and technology trends and bring back home some new ways to improve their business and develop their staff. If this is your first time attending, don't worry; special arrangements have been made for you to meet the Executive Committee and NTMA staff who will help you meet others as well as assist you with orientation and attendance at key events, and will be available throughout the conference to answer any questions you have. Please join us and see why others return year after year!

DAVE TILSTONE /
NTMA PRESIDENT

Dave Tilstone



MORE MANUFACTURERS TO BENEFIT FROM AN ENHANCED R&D CREDIT

Due to recent legislation passed by Congress, significantly more American companies are now expected to benefit from the R&D tax credit and improve their bottom lines.

The Protecting Americans from Tax Hikes (PATH) Act of 2015 permanently extends the Research and Development ("R&D") Tax Credit for the first time in the credit's 34-year history. The credit is now permanent for costs related to qualified activity incurred after December 31, 2014. In addition to being made permanent, the PATH Act includes enhancements to the R&D credit that will prove very advantageous to many companies.

Manufacturers of all kinds are performing Research & Development and do qualify for the R&D Tax Credit. Many of the day-to-day activities taking place in the job shop/contract manufacturing environment, as well as in those companies that have their own product lines, can qualify for the credit. For companies that have yet to take advantage of the R&D tax credit, this potentially can mean the creation of immediate and substantial amounts of cash—typically into the tens of thousands of dollars each year, and occasionally \$100,000 or more.

Previously, a big limiting roadblock for many businesses, and particularly sharehold-

ers of S corporations and other flow-through entities, was the uncertainty surrounding their ability to use the credits they could generate if they were subject to the alternative minimum tax (AMT). Now, through a provision in the PATH Act, certain eligible small businesses will be able to use the credits to offset AMT for tax years beginning after December 31, 2015. (For purposes of this provision, eligible small businesses are defined as those with average sales of less than \$50 million over the prior three tax years).

Another provision in the PATH Act allows certain qualified small businesses to utilize the R&D credit to offset their Payroll Tax/FICA liabilities beginning in tax years after December 31, 2015. These companies must have sales of less than \$5 million per year, and the credit is limited to \$250,000 for each eligible tax year for no more than 5 years.

The definition of R&D for tax credit purposes is much broader than people realize, which means that the R&D tax credit is often overlooked. Your company could likely benefit from the credit if it participates in any of the following:

- Manufacturing new and/or improved products, including making parts for OEM customers
- Developing new and/or improved prod-

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& BENEFITS WORKSHOP

Indianapolis, IN

NTMA EMPLOYEE MANAGEMENT & BENEFITS WORKSHOP

Wednesday, March 23rd, 2016

Meet with NTMA members and HR Professionals to discuss some of the industry's hot topics in Human Resources. The HR Roundtable Seminar for Owners will touch on topics that include Top-Grading your employees, Employment Law Case Studies, OCEC Reporting, Benefits to attract and retain workers, and Employee Relations.

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Tuesday, March 22 - Networking Reception

For registration information or questions contact:
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duction/manufacturing processes

- Developing prototypes and models, including computer-generated models
- Designing tools, jigs, molds and dies
- Performing certification testing
- Conducting testing of new concepts and technology
- Attempting to use new materials
- Adding new and/or modify existing equipment
- Implementing automation and/or technology into the manufacturing process

One example of a company in this industry benefitting from the R&D credit is a manufacturer of titanium forgings and machined components and assemblies. In one case of qualified R&D activity, the company needed to develop and manufacture a new rear spar fitting part for a customer. They were unsure how to orient the rear spar fitting part during the machining process in a way that would allow for the fewest number of operations during the process. They tried orienting the part so that the entire outside could be machined in the first operation and then followed up with subsequent operations to remove the internal material, and orienting the part so that all internal material would be removed in the first operation and the external material removed in

a subsequent operation, before determining the second alternative was the most reliable solution. Federal and state tax credits of over \$117,000 were identified for this company in 2014; and over \$380,000 of total credits have been identified over the last four years.

Tool and die companies are also excellent candidates for the R&D credit. An example of a company in this industry benefitting from the R&D tax credit is a developer of die cast and tooling solutions. One of their qualified R&D projects was to create a repeatable manufacturing process for multiple die components for a car transmission. They were unsure how to design the process order so that the die parts could withstand heat treatments needed to achieve the final strength and durability for each die part; also, they were unsure how to order the machining steps to achieve precision quality in a cost effective way. The company evaluated multiple process designs, using different machines; as well as reordering the heat treatments, roughing stages, and finishing stages in the process to accommodate for shrinkage, cracking, warping, and growth of each die. Through this process of trial and error, they were able to achieve their project goals. This company generated total Federal and state tax credits of over \$170,000 for the 2013-

2014 tax years.

One NTMA member firm that has benefited from the R&D Tax Credit is Hirsh Precision Products in Boulder, Colorado. Hirsh Precision Products is a contract manufacturer that regularly takes on projects involving technical engineering, design uncertainty, and challenging processing steps. "Nearly half of our staff is involved to some degree in these research and development activities, and the folks at Black Line Group helped us gather the supporting documentation with minimal disruption to our team," says Hirsh Precision Products Owner Mike Hirsh. "They really understand our industry and the fine details of the R&D Tax Credit. Bottom Line – we saved enough money in the first year alone to cover 10 years' worth of NTMA dues. I'd highly suggest that all companies that are not currently taking advantage of the R&D Tax Credit explore whether these recent changes by Congress would now provide a meaningful benefit."

For more information about the R&D Tax Credit and to learn whether your company can benefit, visit www.blacklinegrp.com, or contact Scott Schmidt at scott@blacklinegrp.com or 763-550-0111.



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NEW CONGRESSIONAL SPENDING BILL AFFECTS INDIVIDUALS AND BUSINESSES

Most taxpayers are familiar with the end-of-year “extender legislation” activity in Congress: approximately 50 deductions, credits and other taxpayer-friendly provisions that are rolled forward for a year or two at a time. This short-term approach is a budget maneuver, to avoid adding to the published size of the federal deficit.

On December 18, Congress finally passed and the President signed the retroactive extender legislation, restoring provisions that expired as of the beginning of 2015. But this year’s legislation was a breath of fresh air: Many of these “extenders” have been made permanent, and some were also enhanced. The others were all rolled ahead two years, to remain in the law through 2016.

This communication summarizes key provisions in this legislation, and also provides information on other timely tax developments of interest to businesses and individuals.

KEY BUSINESS PROVISIONS

SECTION 179 DEDUCTION

The legislation permanently extends this first-year depreciation deduction at the \$500,000 level for tax years beginning in 2015 and after. The deduction generally applies to new or used equipment and specialized production facilities, but not to real estate (although there is currently a limited opportunity to apply up to \$250,000 of the Section 179 allowance to qualified real property, including certain leasehold improvements, restaurant property, and retail improvements). The deduction phases out if a taxpayer has more than \$2 million of eligible asset additions in the year. For tax years beginning in 2016 and after, the \$500,000 deduction amount and \$2 million asset addition limit are indexed for inflation. Further, the \$250,000 cap on qualified real property is eliminated.

50 PERCENT BONUS DEPRECIATION

This first-year depreciation deduction, available to all businesses regardless of size, is also extended and ultimately phased out. It applies to new (not used) property placed in service during the calendar year, and remains at 50 percent through 2017. The deduction drops to 40 percent for calendar year 2018 and to 30 percent in 2019, be-

fore expiring in 2020. This phase-down is no surprise, as this provision, unlike other “extenders,” had its origins as a temporary economic stimulus during recessionary periods. Beginning in 2016, nonresidential interior building improvements qualify for bonus depreciation, not merely a narrow category of leasehold improvements.

ENHANCED RESEARCH CREDIT

The research and development (R&D) tax credit is finally made permanent (it’s been in the law since the 1980s). And for tax years beginning after 2015, two improvements apply. A business with \$50 million or less in gross receipts may claim the credit against Alternative Minimum Tax (AMT) as well as regular income tax. Smaller businesses under \$5 million in gross receipts may electively apply this credit against payroll taxes — a significant benefit if that small business is not yet profitable and paying income taxes.

EXTENDED JOBS CREDIT

The Work Opportunity Tax Credit is extended through 2019. This credit rewards employers who hire various categories of disadvantaged workers. An additional category of eligible new hires is added beginning in 2016: Those who have been unemployed at least 27 consecutive weeks. Like many of the other new hire categories,

the tax credit for this new category is 40 percent of the first \$6,000 of wages.

OTHER BUSINESS PROVISIONS MADE PERMANENT

A number of other business extenders were made permanent. Here are several of the more important provisions:

- The shorter five-year built-in gain period that applies to C corporations that elected S corporation status
- Fifteen-year recovery period for qualified leasehold improvements, restaurant property, and qualified retail improvements (versus the normal 39-year life for depreciable real estate)
- The 100 percent gain exclusion on the sale of certain small business C corporation stock acquired and held more than five years

TWO-YEAR MORATORIUM ON MEDICAL DEVICE TAX

The Affordable Care Act’s 2.3 percent excise tax on the sale of medical devices is suspended for sales during calendar years 2016 and 2017.

INCREASED INFORMATION RETURN PENALTIES

Earlier in 2015, Congress substantially increased the penalties for businesses failing to file information returns. Each failure to prepare an information return now results in a \$500 penalty. If intentional disregard applies, the penalty escalates to

CONTINUED ON — P11

**SAVE
THE
DATE**

**04.27.2016
Akron, OH**

**REGISTRATION
Early Bird \$300
(Deadline 4/6/16)**

Member \$375

**Non-Member
\$500**



**FINANCIAL MANAGERS
ROUNDTABLE**

Akron, OH

NTMA FINANCIAL MANAGERS ROUNDTABLE

Wednesday, April 27th, 2016

- Economy & Market Updates
- Tax Landscape Update
- Key Metrics for Performance Dashboard
- Effective Budgeting
- Costing and Overhead Allocation Methods

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Tuesday, April 26 - Networking Reception

For registration information or questions contact:
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NTMA Technology Tour 2016

Japan

APRIL 17-24, 2016



National Associate Members BIG KAISER Precision Tooling, Mazak, Memex, and Blaser Swisslube will host a 6-day tour for NTMA members to manufacturing facilities in Japan.

BIG KAISER

BIG Daishowa / BIG KAISER



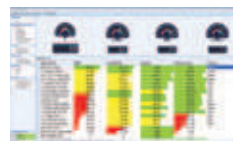
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Japan Tour Schedule

Date	Day	Activity	Accommodation
17-April	Sunday	US Departures / Monday arrivals to NGO (Nagoya Int'l Airport)	n/a
18-April	Monday	Day 1 - Arrivals to Nagoya / Welcome Dinner (TBD based on arrivals)	Nagoya - TBD
19-April	Tuesday	Day 2 - Visit MAZAK facilities Minokamo and Minokamo 2 Tour MAZAK Optonics	Nagoya - TBD
20-April	Wednesday	Day 3 - MEMEX demonstration "Data-Driven Manufacturing" Mazak Headquarters Tour Visit Mazak Museum of Art in Nagoya Depart PM by coach to Kyoto (2 hrs)	Grand Prince Hotel, Kyoto
21-April	Thursday	Day 4 - Kinkaku-ji (Golden Pavilion at Deer Park) Shopping at Handicraft Center Visit Nijo Castle (home of the shogun) Continue by coach to Awaji Island	XIV, Awaji
22-April	Friday	Day 5 - Tour BIG Daishowa's/ BIG KAISER's manufacturing plants Blaser "Liquid Tool" presentation & machining demonstrations	XIV, Awaji
23-April	Saturday	Day 6 - Depart Awaji by coach to Osaka - Free time in Osaka	Swissotel
24-April	Sunday	Day 7 - Departures to U.S. from Kansai Int'l Airport (KIX) or Osaka Hami Airport. Same day arrivals to U.S. destinations	n/a



NTMA Tech Tour 2016 is a special opportunity for NTMA members to learn, network and tour manufacturing facilities in Japan. While challenges in manufacturing are universal, methods applied in other parts of the world can bring unique insight and ideas to improve your own operations. Break away from your routine for one week and get inspired during NTMA Tech Tour 2016 - Japan!

REGISTRATION AND PRICING INFO:

Administration Fee: \$495

** Payment deadline: March 15, 2016

For Registration Contact:

Brittany Belko

bbelko@ntma.org

Maximun capacity is 25

Facility Tours: Your hosting National Associate Members include:

Mazak Corporation, MEMEX, BIG Daishowa (BIG KAISER), and Blaser Swisslube

The Hosting Companies will provide:

- Complimentary ground transportation in Japan
- Hotel accommodations
- Sightseeing activities
- Most meals

Flight Information:

- Participants should book their own flight departing the U.S. on Sunday, April 17, arriving Chūbu Centrair International Airport in Nagoya (NGO) on Monday, April 18.
- Select a return flight departing Sunday, April 24, from Kansai International Airport in Osaka (KIX) or Osaka Itami Airport (ITM)

\$1,000 per missed form. Businesses should review the list of potential information returns (follow the General Instructions for Certain Information Returns on the IRS website.) Common Form 1099 information return requirements include reporting of payments of fees to independent contractors and to attorneys, rent payments, and interest payments to individuals and other noncorporate taxpayers.

INCREASED SMALL ASSET EXPENSING

The repair regulations, effective in 2014, provided a safe harbor elective deduction for businesses under a two-tier system. Businesses with an Applicable Financial Statement (generally, a certified audit or a governmentally-mandated financial statement) are allowed to deduct small asset expenditures up to \$5,000. Other businesses have a lower tier \$500 safe harbor amount. The IRS recently announced an increase in the lower tier limit from \$500 to \$2,500, effective for tax years beginning in 2016. For more on this development, see our web article *IRS Increases Small Asset Safe Harbor Expensing*.

THE AFFORDABLE CARE ACT AND EMPLOYERS

Employers of all sizes are affected by this law. Beginning in 2015, those with 100 or more full-time and full-time equivalent employees must provide ACA-level group health coverage to their full-time employees. That threshold drops to 50 employees in 2016. All employers, other than those with only one health plan participant, are subject to a substantial penalty if they maintain arrangements that reimburse premiums on individual employee policies or use standalone Section 105 medical reimbursement plans.

Applicable large employers (ALEs) (i.e., employers with at least 50 full-time and full-time equivalent employees) must complete Form 1095-C for all employees who were full-time for any month beginning in 2015, even if no health insurance is provided. Form 1095-C reports extensive details of health coverage offerings to each full-time employee of the business.

The IRS recently granted an automatic extension to all those required to file the 1094 and 1095 forms for 2015. Though the IRS is ready to receive the forms, some employers, insurers, and other providers of the minimum essential coverage will need additional time to gather, analyze, and report the required information. While Notice 2016-4 grants the extension the IRS encourages employers and other coverage providers to submit statements and file the

information returns as soon as possible. The new due dates are as follows:

- March 31, 2016, (extended from February 1) for forms or statements that must be provided to individuals (1095-B/1095-C)
- May 31, 2016, (extended from February 29) for forms not electronically filed that must be provided to the IRS (1094-B/1094-C and 1095-B/1095-C)
- June 30, 2016, (extended from March 31) for electronically filed forms that must be provided to the IRS (1094-B/1094-C and 1095-B/1095-C)

RELATED PARTY LOANS

Closely held business owners frequently have loans to and from their businesses. To be respected for tax purposes, any loan, whether between individuals or businesses, must include adequate interest, with interest payable at least annually. The IRS publishes monthly tables of minimum interest rates. For open demand notes (i.e., those without a specified repayment date), the minimum interest rate for 2015 is only 0.45 percent. While this rate is nominal, interest must be paid annually on all related party loans if the underlying transaction is to withstand IRS scrutiny.

If there is an upturn in interest rates, the IRS minimums adjust quickly. At that point, those with substantial related-party debt should consider converting to term debt at lower rates. For example, for a term loan originating in December 2015, a long-term note (any maturity longer than nine years) may have an annual interest rate as low as 2.61 percent.

KEY INDIVIDUAL PROVISIONS

INDIVIDUAL EXTENDERS MADE PERMANENT

As with the business provisions, a number of individual extenders were made permanent by January's legislation. The more important include:

- The ability of individuals at least 70.5 years of age to exclude from gross income up to \$100,000 of IRA amounts transferred directly to charity
- The itemized deduction for state and local sales taxes claimed in lieu of state income taxes, using either actual sales taxes incurred during the year or an IRS table amount
- The 1040 page one deduction for up to \$250 of supplies purchased by elementary and secondary teachers. Beginning in 2016, the \$250 limit is indexed, and professional development expenses are eligible.
- The enhanced charitable deduction

for real property conservation easements **ENHANCEMENTS TO 529 COLLEGE SAVINGS ACCOUNTS**

Effective in 2015 and after, the extender legislation permanently allows tax-free disbursements from 529 college savings plans for computers, software, and related technology during higher education years. Tuition paid from a 529 plan that is later refunded can be recontributed to the 529 plan within 60 days, preventing any adverse tax treatment as a result of the refund.

CHARITABLE CONTRIBUTION DOCUMENTATION

When an IRS examination arises, a taxpayer's compliance with charitable contribution documentation rules is often tested. Each separate check or other donation to charity of \$250 or more must be supported by a written acknowledgement from the charity. This receipt or letter must indicate the amount of the contribution and contain the legend that no goods or services were provided by the charity to the donor in exchange for the contribution. This document must be in your hands by the date of the filing of your tax return. Property contributions are subject to more detailed reporting.

ONE IRA ROLLOVER PER YEAR RULE

The IRS has revised its interpretation of the "one IRA rollover per year" rule, effective in 2015. This limit applies to an individual who takes a distribution check from an IRA and has possession of those funds before transferring the amount into a new or same IRA within the 60 day time limit. But the one rollover per year rule does not apply to funds moved via a trustee-to-trustee transfer, nor does it apply to taxable IRA-to-Roth IRA conversions. Because of the risks of this rule, as well as occasional errors when taxpayers attempt to execute their own rollovers, our advice is to always use the trustee-to-trustee approach when moving IRA funds from one account or institution to another.



HOW CLIFTONLARSONALLEN CAN HELP

The experienced tax professionals and CliftonLarsonAllen can help you understand how this legislation and other recent tax developments affect you and your business. Please contact a CLA tax advisor if you have questions.



RUN FASTER

THE COLD HARD FACTS

11 Things Every Plant Manager Should Know About 5ME's Liquid Nitrogen-Based Cryogenic Machining System

1. Reduces Cutting Temperature to Increase Efficiency

Traditional Cutting Fluids are at ambient temperature – about 70°F. 5ME Cryogenic Machining uses LN₂ at -321°F. The roughly 400°F temperature differential counteracts the tool cutting edge heat produced in machining.

2. Enables Faster Processing Speeds

5ME's exclusive technology allows super-cooled liquid nitrogen to run through your spindle or turret and inside the tool, keeping temperatures significantly lower and enabling you to run up to 5x faster. Faster processing speeds mean higher throughput.

3. Increases Tool Life

When utilizing Cryogenic Machining, it is possible to realize a double-digit increase in tool life. Increased tool life means higher productivity.

4. Improves Surface Integrity and Part Quality

- Reduces White Layer / Alpha Layer
- Reduces Residual Stress
- Reduces Burr Formation
- Reduces Surface (Grain Boundary) Distortion

5. Effective for a Multitude of Difficult to Machine Materials

- Titanium
- Hardened and Stainless Steels
- Inconel
- Nodular Iron
- Compacted Graphite Iron
- Stellite
- Carbon Fiber Composites
- Composite/Metal Stacks



11 Things Every Plant Manager Should Know About 5ME's Liquid Nitrogen-Based Cryogenic Machining System



6. Can be Utilized in Many Key Applications and Operations

- Aerospace – Aero-Structure, Aero-Engine
- Automotive/Truck – Cylinder Blocks, Cylinder Heads, Crankshafts, Rods, Turbo Components
- Energy – Fracking Pumps, Subsea Components, Turbines, Cladded Components

7. Brand Agnostic

Can be easily retrofit onto virtually any machine on your shop floor, regardless of brand.

8. Protects Your Machine's Critical Components

5ME's Cryogenic Machining System uses tube-in-tube, vacuum-jacketed feed lines to deliver Liquid Nitrogen from an external bulk storage tank to the cutting zone. This protects the integral machine components from being exposed to the low temperatures.

9. Greener and More Economical

- Liquid Nitrogen evaporates into a non-toxic, non-greenhouse gas
 - Reduced Carbon Footprint
- Liquid Nitrogen replaces traditional water-based or oil-based cutting fluids which:
 - Eliminates disposal, management, and infrastructure associated with flood coolants
 - Eliminates cleaners needed to remove coolant residue from machine and parts
 - Eliminates the energy consuming pumps, required for conventional coolant systems
 - Eliminates the need to wash chips prior to recycling

10. Healthier and Safer

- No Coolant means safer, non-slip surfaces for large walk-on machines
- Eliminates bio-hazards related to aerosolized flood coolants
- Contamination-free for special machining requirements

11. 5ME's Patented Cryogenic Technology Has Won Numerous Industry Awards

- 2011 Modern Machine Award for Innovation
- 2012 New Equipment Digest King Award
- 2013 Frost & Sullivan Best Practice Award
- 2013 Approved for Titanium Rough Machining on F-35 by Lockheed Martin
- 2015 Approved for Titanium Finish Machining on F-35 by Lockheed Martin

Network with
some of our
TOP Affinity
Partners

GRAINGER
100% WORK TIME ONTO GET IT DONE

APPI
ENERGY

STAPLES Advantage

Heartland

Hear The Buzz on Chapter Leadership

Reasons to attend the Chapter Leadership Summit:

- 1) **Build** relationships with "new" and "seasoned" Chapter Leaders.
- 2) **Learn** how other chapters are advertising the benefits of NTMA membership.
- 3) **Meet** NTMA Staff, and hear what they think is worthwhile about NTMA.
- 4) **Hear** a different view about Board and chapter dynamics from chapters around the country.
- 5) **Find** out about different chapter models, which may or may not fit your chapter.
- 6) **Ensure** your voice is heard on subjects that affect your chapter.

Welcome Mixer

February 28th at 6:00 pm



Summit Highlights:

Building a High Performance Board

Discuss the value to be gained by transforming an effective board into a high performance board.

Star Chapter Guidelines

Hear the latest updates and changes to the Chapter Organization Questionnaire to ensure you're on the next "Star Chapter" list.

Traction Workshop

Learn to take action and utilize the tools to create accountability around goals, solve critical issues, and achieve Traction in your organization.

Networking Lunch

Connect with our top Affinity Partners and get the scoop on how your members can increase their cost savings.

Scavenger Hunt through the Hard Rock

Rock your 80's attire and Roll as a team to take home the grand prize!

*Dress to Impress in Your
80'S INSPIRED BEST
PRIZE FOR "BEST DRESSED" TO BE GIVEN
OUT DURING THE AWARDS CEREMONY.*



Testimonials

"Attending Chapter Leadership Summit is an invaluable networking and learning opportunity for Chapter Executives and Chapter Volunteer Leaders. I've attended all 3 offered thus far and have always come away with helpful information, new ideas and new contacts."

Cindy Zylkusi Norris
Chapter Executive - Boston Chapter

"The CLS event in June 2015 was extremely beneficial for me. We are working hard to rebuild the Indiana INTMA Chapter and this event provided me with the tools I need to be successful as Chapter President. The networking and social events with other Chapter Executives and Presidents was a valuable take-away. The event also focused on strategies for growth, member benefits, OCEC benchmarking reports, and covering the basics for running a local chapter. I would highly recommend this event to other chapters who are trying to engage and promote the precision machine tool industry."

J. David Weyreter
Chapter President - Indiana Chapter



CHAPTER LEADERSHIP SUMMIT

*Come for the Opening Act, Stay for the Headliner:
Join us at the Summit before MFG!*

February 28 - March 1 • 2016


**Hard Rock Hotel
in Palm Springs**

150 S. Indian Canyon Drive
Palm Springs, California 92262
760.325.9676

**FREE
REGISTRATION**
For The First
60 People!

Register by January 29th, 2016
(Up to 3 free registrations per chapter)

CHAPTER PRESIDENTS | CHAPTER TRUSTEES | CHAPTER EXECUTIVES



THE MFG MEETING

NETWORK & BE INSPIRED

MARCH 2 - 5, 2016

PALM DESERT, CA

www.TheMFGMeeting.com

Produced Jointly By



BRING YOUR TEAM

Now is the time to think about the next generation. Who can you count on? Have you employed the talent you need to be successful? Teamwork is the key. Bring your high performers and promising leaders to The MFG Meeting for four days of education and inspiration that you can't learn on the job.

SPEAKERS

The comprehensive agenda covers everything from sales and marketing strategies and motivating your team to economic outlook and industry trends. This is your opportunity to experience an extraordinary lineup of world-class speakers who are there for you; aware of the challenges and concerns you and your business will face in the coming years.

TRANSFORM YOUR BUSINESS

The MFG Meeting 2016 is your chance to develop a plan going forward. An amazing set of presenters have been booked and you will have ample time to share best practices with other top executives.

Wednesday, March 2

10:00am - 5:00pm Registration
12:00pm - 1:00pm *First Timer's Lunch
1:00pm - 3:00pm NTMA General Assembly & Franklin Partnership Update
3:30pm - 5:00pm Workforce Development & Education Meeting
3:30pm - 5:00pm *Budget & Finance Team Meeting
5:00pm - 6:00pm PAC Reception
6:00pm - 8:00pm Early Arrivals Joint Reception

Thursday, March 3

6:30am - 7:30am Miles for Manufacturing 5k
7:00am - 5:00pm Registration
7:00am - 8:30am Continental Breakfast
7:00am - 1:00pm Exhibits
8:00am - 9:00am Opening Keynote: Mickey McManus,
Chairman & Principal, MAYA Design
9:00am - 9:30am Morning Break
9:30am - 10:30am General Assembly Session 1: Richard Ward, WARDJet, Inc.
10:30am - 11:30am General Assembly Session 2: JP Pawliw-Fry, IHHP
11:30pm - 1:00pm NTMF Meeting and Lunch
1:00pm - 2:30pm GAT Meeting
1:00pm - 2:30pm Tech Team Meeting
1:00pm - 2:30pm *Nominating Team Meeting
3:00pm - 4:30pm Board of Trustees Meeting
6:30pm - 9:30pm MFG Welcome Reception & Dinner

From Alan Bealieu's economic outlook to Richard Ward's nudge to jump outside of your zone, the speaker lineup is unparalleled.



Register Today!
www.theMFGmeeting.com



Alan Bealieu
Principal, ITR Economics



Richard Mason
President & Chief Security Officer, Critical Infrastructure, LLC



Mickey McManus
Chairman & Principal, MAYA Design

SCHEDULE

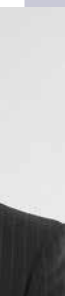
Members only or invite only

Friday, March 4

- 7:00am - 1:00pm Registration
- 7:00am - 8:30am Continental Breakfast
- 7:00am - 1:00pm Exhibits
- 8:00am - 9:00am General Assembly 3: Alan Beaulieu, ITR Economics
- 9:00am - 10:30am Spouse Program
- 9:00am - 9:30am Morning Break
- 9:30am - 10:30am General Assembly Session 4:
Rich Mason, Critical Infrastructure, LLC
- 10:30am - 11:30am General Assembly Session 5: George Stalk, Banyan Global
- 12:00pm Golf

Saturday, March 5

- 8:00am - 12:00pm Registration
- 7:00am - 1:00pm Exhibits
- 8:00am - 9:30am NTMA Continental Breakfast and Industry Roundtables
Precision Machining 1
Precision Machining 2
Medical
Aerospace & Automotive
Emerging Leaders Roundtable
- 10:00am - 11:00am General Assembly Session 6: T&B Sessions
- 11:00am - 12:00pm Closing Keynote: Mel Robbins, Motivational Speaker,
TV Personality, Coach, and Best Selling Author
- 12:00pm - 1:00pm Networking Break
- 12:00pm - 1:00pm Past Chair and Spouses Lunch
- 1:00pm - 2:30pm Breakout Sessions
- 6:00pm - 7:00pm Joint Reception
- 7:00pm - 11:00pm Closing Dinner Reception



JP Pawliw-Fry
President & Co-Founder, IHHP



Mel Robbins
Speaker, TV Personality, Coach & Best-Selling Author



George Stalk
Senior Partner, Banyan Global



Richard Ward
President, WARDJet

Meet Our National Associate Members:

BIG KAISER

with President and CEO Chris Kaiser



WHO IS BIG KAISER?

"We are a high precision tooling and work-holding provider with over 25 years of experience in the United States. We pride ourselves on being different from other companies by offering our customers cost-effective tooling solutions that help improve their machining processes and machining times. We are part of the BIG Daishowa Group of companies in Japan, with BIG Kaiser facilities located in the U.S., Switzerland and Germany."

WHEN DID BIG KAISER BECOME AN NTMA NATIONAL ASSOCIATE MEMBER?

"We first became a member in December of 2008, right before the deep recession in 2009. We were in it for the long haul and stuck with it, and still are an associate member and have been participating and sponsoring the NTMA since. We've been a member for seven years now."

Our VP of Sales and Engineering, Jack Burley, has been on the Tech Team since the end of 2013, which has been a great thing. Jack has been part of BIG KAISER for 25 years, and has been exposed to a lot of the latest machining technology, not just on the tooling side. Through his familiarity with the industry and vast knowledge of technical information, he is trying to help and share this information with the Tech Team that in turn helps NTMA members get exposed to the newest technologies and processes available to them."

WHAT DREW BIG KAISER TO BECOME AN NTMA NATIONAL ASSOCIATE?

"We had two different reasons; the first was Harry Moser, who was the President of Agie Charmilles at the time. He always talked about being a member and the benefits of networking with your customers as an NTMA National Associate. The other reason was another machine tool builder that we worked with became part of the organization, and no tooling companies like us participated at the time. We had a lot of synergies with these companies, because we put our tools on their machines. At the time when we joined, we were the only true tooling provider."

Internally, we took a look at the NTMA and felt our family-orientated business style fit alongside NTMA members. Many members were, and still are, smaller businesses that like us don't deal within a corporate structure. I think if we did have a larger corporate pres-

ence, we couldn't say "higher performance guaranteed." We have 44 employees in the U.S. (800 worldwide), and when a member comes to us with problems or questions we're able to talk one-on-one to find a solution, we are small and more flexible in servicing our customers."

WHAT PRODUCTS/SERVICES CAN BIG KAISER OFFER NTMA MEMBERS?

"We have our own engineering department that not only provides cutting parameters, information on how do you apply a tool and what's the best way to do a job, but we also engineer, develop and design special tools. If an NTMA member wants to combine several tools into one, maybe because they don't have enough room in the toolchain of their machining center, we can offer a custom solution. Most of these special tools are made here in the U.S. On the work-holding side, we can help layout fixtures for NTMA members, using our UNILOCK products. We can get as involved in the process as they need us to, and help make the process better and faster than perhaps what they're using today."

WHAT INDUSTRY INITIATIVES DO BIG KAISER SUPPORT/HOW?

"We understand the industry's need for workforce development, and support it beginning with the high schools around here in the Chicago area. We supply them with some of our tools for their machines for training in the schools. Once a year in April, we set up an open-house night in conjunction with AMT and the Golden Corridor Group in our facility and invite high school students and their parents to come and talk about careers in the industry. The students and parents get to interact with our engineers and hear about the exciting and challenging careers that are available in manufacturing. We try to

tell them that local community colleges can help prepare them for manufacturing careers, like CNC machining, at affordable tuitions without incurring heavy college debt. In fact, some of our younger employees started out in the warehouse and with our tuition help were able to take night classes at a local college to improve their skills for the industry that we're in. We now have two employees that are close to finishing their associate degrees in manufacturing. We're trying to promote this type of model in our community and to local students. We also provide internships, during the school year and/or over the summer, to expose more young talented high school students to our industry and help promote in that way manufacturing as a viable career choice."

WHERE CAN NTMA MEMBERS MEET BIG KAISER IN 2016?

"We're quite involved! We have a full year of NTMA events scheduled, the MFG meeting in March, the Japan Tech Tour in April, IMTS in September and the Fall Conference in October. Not only do we participate in these events, we have also participated in marketing roundtables this past year. We always bring the same familiar faces to these events to make easy to meet with our company."



BIG Kaiser and NTMA gather during the 2014 Purchasing Fair

WHAT NEW IDEAS IS BIG KAISER SHARING WITH NTMA MEMBERS THIS YEAR?

"We will have all of our newest high tech tools and complementary products that we're introducing on display at those meetings and tradeshows. As National Associates, what we try to do is not only promote our own products, but also show and talk about what new technologies are out there that our customers and members of NTMA should pay attention too."

CONTINUED ON NEXT PAGE



Students and parents meet with BIG Kaiser employees during an open house

WHAT HAS BIG KAISER LEARNED FROM NTMA MEMBERS?

"Meeting with members has taught us how we can improve our own operations. We go and visit their shops and make recommendations, but in turn find take-aways from how members do certain things, and we might get new ideas for new products and services. We always get a chance to discuss how our tools can improve processes, but the members also teach us the different ways they do what they do, and how we can adapt and make it better for them."

ONE LAST THING...

"I wish more NTMA members and shops would see the value in all of the meetings and workshops NTMA organizes. When we attend, we see the same people most of the time, and that's because the ones who come see the value in these meetings, workshops and the networking. I think a lot of other members are not really taking advantage of that and their NTMA membership; they don't realize how much the association can do for them and how these events bring them together with other members and National Associates and how much they can learn from each other. It's not that often that you get to meet presidents and VPs of companies and get to know each other better. You can make real connections; members call me and say "hey, I've got a problem, what do I do here?" It brings value, not just to us, but to all the members of the association, it's the networking and going to meetings. Yes, it is a monetary investment, but it pays back in multiple ways."



FANUC AMERICA SETS A NEW WORLD RECORD

FANUC America Corporation, the leading supplier of robotics, CNCs, and factory automation announced that its parent company, FANUC CORPORATION, has set a new world record for production of over 400,000 robots.

"Over the last several years, there's been an increasing global demand to implement the latest technologies in factories," says FANUC America Vice President, Mike Cicco. "This demand has stimulated production of industrial robots in general, and has played a major role in FANUC achieving this milestone, and maintaining our position as the world's number one supplier of factory automation and industrial robots."

"From a product standpoint, the recent drivers behind reaching this milestone

EAGLE TECHNOLOGIES GROUP IS EXPANDING



Due to increased business from existing customers

as well as meaningful growth coming from new customers, the need for more space and more people has Eagle Technologies Group ready to make some big moves – including more than doubling its floor space to 255,000 square feet.

"Due to many factors, including the fast-paced times we're living in, our customers are expecting shorter and shorter deliveries. These shorter deliveries are resulting in faster turns of the projects we build," says Mike Koziel, President of Eagle Technologies Group. "Our floor space has become a limiting factor for us and so we simply need to grow our in-house capabilities to meet both our customers' expectations as well as grow our business. We are doing what it takes to not only meet our promised delivery dates and provide world-class equipment, but we're growing as well!"

Eagle Technologies Groups is currently working internationally in multiple industries, including Life Science, Transportation, Consumer Products, Electronics, Food, and Military. Some projects are requiring more than 60,000 square feet of floor space. ETG

simply needed more space to support the diverse needs of its clients. "Our recent growth has come primarily due to a high level of confidence and trust that we've earned from our customer base to meet their program needs", says Koziel.

The new building's size and location will also enhance our abilities for national and global manufacturing of ETG automated systems. The new facility has 150,000 sq. ft. of open space (making the combined workspace for ETG 255,000 sq. ft.), which includes nine covered loading docks and a rail dock, all with over 30 feet of clearance for tall projects. The 26-acre lot is located in St. Joseph, Michigan.

To further meet the needs for growth, ETG will also be adding approximately 100 new positions. These new highly trained and qualified teammates will be ready to adopt the company's culture and attitude of providing exceptional quality and customer service and commitment to meeting both the goals of ETC and our customers' expectations. And, finally, a "get things done" enthusiasm that brings a winning philosophy to Eagle Technologies Group! To learn more, visit www.eagletechnologies.com.



FANUC

have been the popularity of the FANUC R-2000iC series, the LR Mate 200iD series, and the new CR-35iA, collaborative green robot," says Cicco.

The R-2000iC is a family of industrial robots, including pedestal and rack mount versions with a variety of payloads designed for material handling and welding applications.

The family of LR Mate 200iD mini-robots is a versatile and cost-effective solution for a wide range of manufacturing operations, including those requiring access into small spaces. The robot offers six-axis articulation, extremely fast speeds and a four to seven kilogram wrist load capacity, making it an ideal alternative to SCARA-type robots typically used for assembly applications.

The new CR-35iA robot is the indus-

try's first 35 kg payload force limited collaborative robot designed to work alongside humans without the need for safety fences. The CR-35iA robot was developed to help manufacturers solve ergonomic challenges by handling applications that are physically demanding for humans, such as heavy lifting.

"We're very proud to have achieved this world record in robotics," says Cicco. "FANUC is committed to developing innovative automation products that deliver the highest levels of quality, productivity and value to our customers." For more information, visit www.fanucamerica.com.



CONNECTED MACHINES FUEL THE SMART MANUFACTURING REVOLUTION

BY CONRAD LEIVA, VP PRODUCT STRATEGY AND ALLIANCES, IBASET

In the 1970s and 80s we witnessed a revolutionary wave of productivity improvements in manufacturing. New technologies, including personal computers (PCs), numerically controlled (NC) machines, programmable logic controllers (PLCs), and computer aided manufacturing (CAM), combined with new process improvement ideas like Total Quality Management (TQM), Just-In-Time, and Six Sigma yielded new levels of productivity and efficiency in many manufacturing industries.

In this decade, we are seeing a convergence of technologies and process improvement initiatives of a similar scale with the potential to radically improve the way manufacturers thread processes and systems in the enterprise and the way they deliver customization and services to customers.

Organizations that bring together manufacturers, technologies and information systems, like the Manufacturing Enterprise Systems Association (MESA), the Industrial Internet Consortium (IIC), the Digital Manufacturing and Design Innovation Institute (DMDII), and the Smart Manufacturing Leadership Coalition (SMLC), are working on initiatives including the Industrial Internet of Things (IIoT) and Smart Manufacturing to coordinate this convergence of technologies and realize the process improvement potential sooner rather than later.

Smart Manufacturing is an initiative to bring about a revolution in manufacturing business strategy, turning traditional factories from cost centers into profitable innovation centers, through the integration of industrial automation, IIoT, and information technology (IT) including cloud services, 3D models, mobile computing, intelligence, and integration platforms. Smart Manufacturing initiatives include the following goals:

- Achieve new levels of efficiency to support **new services and business models** including mass customization (highly configured products) and product-as-a-service.
- Ability to **receive published data from equipment** using secure open standards, analyze and aggregate the data.
- Provide data from connected manufacturing equipment and processes directly into **new analytics and event triggering capabilities** into systems of record and process workflows that can loop back and trigger programming, tuning or maintenance changes on connected equipment.
- Enable more autonomous and **distributed decision support** at the plant floor level as smart machines are equipped with their own processing abilities and connectivity to enterprise systems.
- Promote the use of machine-to-machine (M2M) and application-to-application (A2A) connectivity standards in order to make these advanced capabilities accessible to manufacturers of all sizes and in all industry sectors, at **acceptable levels of cost and implementation complexity**.

To achieve the above goals for the Smart Manufacturing revolution we are counting on the following building blocks:

• SMART MACHINES AND ADVANCED ROBOTICS

Smart machines communicate with manufacturing systems and display a high level of autonomy. These machines recognize product configurations and diagnostic information, and make decisions and solve problems without human intervention. Robots with enhanced sensors, dexterity and intelligence can perform tasks without being

pre-programmed as they can learn from experience. Sensors make them aware of the environment and safer for the people around them.

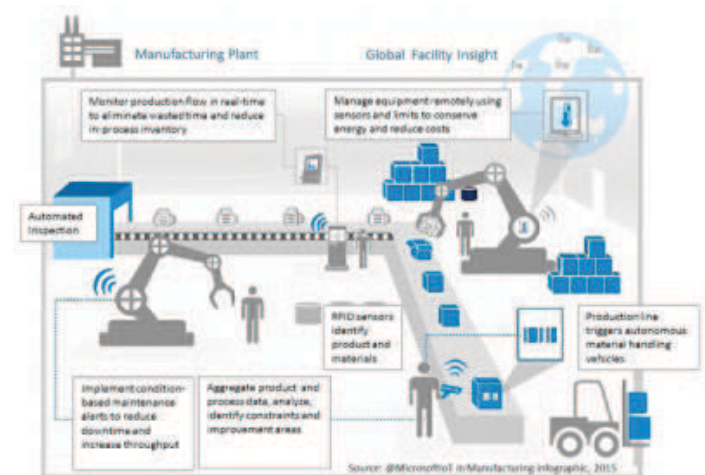
• INDUSTRIAL INTERNET OF THINGS (IIOT)

Manufacturing devices with network and internet connectivity— from mobile tablets to smart shelves to sensors embedded in automation controls to smart machines – are all active participants in event-driven self-tuning manufacturing processes integrated with open standards that support connectivity via the internet.

• ENTERPRISE INTEGRATION PLATFORMS

Enterprise integration platforms, like Enterprise Service Buses (ESBs), Manufacturing Service Buses (MSBs), and API Managers, have the ability to receive data broadcasted from equipment via secure open standards, analyze and aggregate the data, and trigger process controls and business processes across the enterprise. Internet cloud services enable new connection capabilities across the enterprise and into the supply chain.

As an example, imagine a process where (a) RFID tags embedded in products broadcast the product configuration information to machines, (b) automated parts placement, assembly and inspection machines switch programs based on the received product information from each unit, (c) defective product is routed out of the regular assembly line to a rework station, (d) defect information is messaged to the integrated enterprise quality system, and (e) materials are ordered based on consumption reported by machines and delivered to the machine via automated material handling equipment.



Connected cognizant resources and systems drive automated processes in the Smart Manufacturing plant

However, there are some challenges on the journey and organizations are working on Smart Manufacturing initiatives because we are still falling short in some areas to achieve the desired levels of connectivity in manufacturing processes. If we want these solutions to be broadly available to small and medium size manufacturing companies, we will need to work on the following areas:

- Broad adoption of machine-to-machine (M2M), application-to-application (A2A), and business-to-business (B2B) integration standards that will enable **multi-vendor hardware and software plug and play** solutions with open integration platforms to the internet.



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²Includes a bonus 5% online processing discount. Full details available at www.PartnerShip.com/54ntma/FedExdiscounts.

Organizations like ISO, IEC, NIST, and OAGi play a key role in establishing and promoting standards for connectivity.

• Data messaging standards that create a **digital thread of communications** from product definition in engineering systems to manufacturing and inspection processes. Standards that not only distribute the product 3D definition but also communicate changes and record production history for

traceability and archival purposes.

• **New workforce skills** will be required for the smart factory. Workers will need to learn how to configure and maintain smart machines and robots. IT personnel will need to learn about manufacturing systems, protocols for equipment integration, and how manufacturing data flows into business intelligence and corporate metrics.

To accelerate progress on the Smart

Manufacturing revolution, organizations can work towards resolving the above gaps. To be on the forefront of adoption and a step ahead of the competition, organizations can get involved with some of the initiatives and organizations listed in this article.



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THE NEW YEAR'S RESOLUTION YOU MUST KEEP

BY BILL PADNOS, NTMA DIRECTOR OF YOUTH ENGAGEMENT



According to the University of Scranton Journal of Clinical Psychology, only 8% of people are successful in achieving their New Year's Resolution.

Therefore, by the time you are reading this article, you have already broken this year's resolution. I have. My resolution was to not to finish what my kids leave on their plates after a meal. It drives me crazy that they waste all of that good food. And, my ever expanding stomach is proof of it.

I have found a resolution for every NTMA member to make and stick with. Jennifer McNelly, president of the Manufacturing Institute, recently published "A Resolution for the Manufacturing Workforce." She outlined three goals that you must set this year to close the manufacturing skills gap.

1. Change the perception of careers in manufacturing to reflect its true status as the most advanced, high-tech industry in the country.

2. Re-establish the U.S. as the global leader of manufacturing education.

3. Advocate for education and job training policies that strengthen the U.S. manufacturing workforce.

NTMA members can no longer afford to sit on the sidelines and wait for everyone else to close the skills gap; now is the time to recruit, educate and train the next generation of manufacturing workers.

NTMA's National Robotics League (NRL) is unique because it was created by industry to solve its biggest issue – recruiting a future workforce. The NRL is not some outside organization; it is a part of the framework of the NTMA. The NRL engages students in an experiential learning project where they become skilled at the manufacturing process. No other robotics program can claim these facts.

The NRL has been successful in raising awareness of manufacturing careers— but there's still work to do. We understand the importance of attracting, preparing and empowering the next generation of manufacturing workers. The simple truth: manufacturing provides rewarding career opportunities and well-staffed companies become thriving companies. That ensures a bright future for American Manufacturing and our national economy.

The NRL 2016 National Competition

is taking place at the California University of Pennsylvania, May 20-21. Student teams from across the country will be testing their manufactured robotic creations and battle for national supremacy. Teams not only earn points for their arena battles, but are also evaluated by industry experts on their engineering binder. The team's documentation binder and presentation points weigh heavily in the crowning of the National Competition's Grand Champion. We invite all of you to come and be a part of the action.

The NRL is looking for NTMA member companies to be our partners in our efforts to infuse the manufacturing industry with talented students, who are the future workforce, in a fun and challenging learning

environment. Your support of the NRL National Competition will provide program the influx of financial resources it needs to grow.

The time is now to make the resolution that you will ensure the future of your company and of American manufacturing. Support the NTMA's efforts to build a new manufacturing workforce that is technically skilled, enthusiastic and eager to become the next generation of industry leaders. For more information on how to get involved, contact Tiffany Bryson at tbryson@ntma.org, or visit <http://gonrl.org/get-involved/sponsor-support/>.



OMAX NAMES DISTRIBUTION PARTNERS FOR FABRICATORS IN MID ATLANTIC, SOUTHERN STATES

OMAX Corporation, the leading total solutions provider of the world's most advanced abrasive waterjet technology, has signed exclusive distribution agreements with Mid Atlantic Machinery and Southern States Machinery to market, sell and support premium OMAX JetMachining® Centers and versatile MAXIEM® JetMachining Centers to fabricators in the Mid and South Atlantic regions.

These top-tier distributors offer everything fabricators need to gain a competitive advantage in today's challenging global marketplace using OMAX's abrasive waterjet technology. This includes the broadest range of table sizes, pumps, accessories and software available on the market and top-notch engineering expertise, applications support, spare parts services and training for all OMAX and MAXIEM JetMachining Centers.

"We take great care in selecting distribution partners that have proven success in both selling machine tools and supporting customers after the sale," says Mike Ruppenthal, vice president of North American sales. "Mid Atlantic Machinery

and Southern States Machinery are well established, highly respected distributors, and we are confident they will far exceed our customers' expectations with their problem-solving expertise and complete turnkey systems."

With its main office in Harrisburg, Pennsylvania, Mid Atlantic Machinery is the premier machine tool distributor of superior technologically advanced machines for fabricators on the East Coast. The company serves customers in Pennsylvania, Maryland, Delaware, Southern New Jersey, parts of Virginia, and West Virginia.

Southern States Machinery is headquartered in Greensboro, North Carolina and serves fabricators in Virginia, North Carolina, South Carolina, Georgia and Florida. The company specializes in assisting job shops and OEMs in the transportation, agriculture, medical, tobacco, racing, construction and building, telecommunications, material handling and aerospace markets. For more information, visit www.omax.com.





TCI PRECISION METALS ADDS LATEST DUPLEX MILLING TECHNOLOGY

TCI Precision Metals announced the installation of its newest high tech milling machine. The new Amada, THV430 represents the pinnacle of technology and precision in duplex milling. The THV430 provides a 4X increase in throughput over traditional milling machines and will help TCI shorten customer lead time and handle increased demand for its Custom Machine-Ready Blanks™.

TCI Machine-Ready Blanks are milled in width and length using the THV430's specially designed twin spindle in one setup instead of two. This reduces set up time and increases efficiency. One or more Machine-Ready Blanks can be produced together, up to the machines overall dimensional capacity of 16.93"W x 16.93"L x 5.91"H. The value is passed to TCI customers through shorter lead-times and competitive pricing. Quality from TCI Precision metals is a given, of course.

Founded in 1956, TCI is a third-

generation family-owned value-add wholesale plate and sheet distributor, producing precision Machine-Ready Blanks from aluminum, stainless steel and other alloys. "We continuously refine our equipment and processes to maximize quality and efficiency," says TCI Precision Metals President, Ben Belzer. "As a result, we are able to provide customers with cost effective, high value, Machine-Ready Blanks that can reduce a shop's overall cost by as much as 25% on a given production job."

Custom Machine-Ready Blanks are precision milled to the customer's net specifications and can be furnished as close as $\pm .0005$ " dimensionally and as close as $.0002$ " in flatness, squareness and parallelism. Each Machine-Ready Blank is deburred, cleaned and vacuum packaged – ready to go directly from receiving into CNC machining centers. Machine-Ready Blanks eliminate material prep and reduce set up time, part



Amada Duplex Mill

movement, scrap and wear and tear on machine tool inserts and cutters used to square material in process. For more information, visit: <http://tciprecision.com>.



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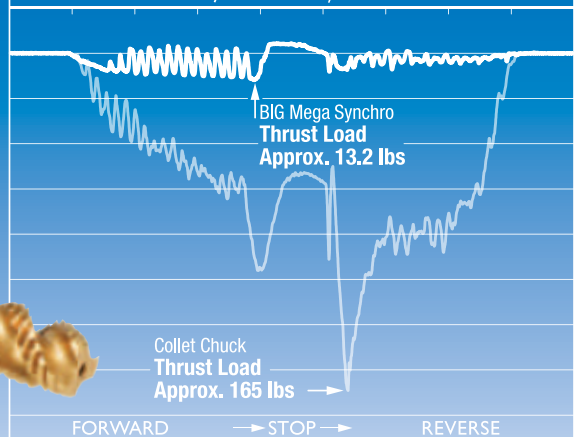
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RETIRED GENERAL ISSUES CALL TO ACTION: HELP US HELP YOU HIRE VETERANS



Brig. Gen. (ret.) Marianne Watson has a new mission – to help small businesses access the services and help they need to hire more veterans, National Guard, and Reservists.

After 30 years in the National Guard, the former Director of Manpower and Personnel, (J-1), at the National Guard Bureau, Gen. Watson is now leading Center for America's initiative to improve veteran hiring – and is calling on CEOs to make hiring veterans a high priority in 2016.

Watson, who was deployed to Bagram Air Base, the largest U.S. military installation in Afghanistan, joined the AJAH campaign Advisory Council as vice-chair upon retirement in 2013. The highest-ranking National Guard officer overseeing personnel matters for the Army National Guard and the Air National Guard, Gen. Watson spent a great deal of time ensuring that organizations like Center for America and many others understood the issues surrounding National Guard unemployment to improve private sector recruiting and hiring.

"This is close to my heart, and represents one of my most important duties as a military officer," says Watson. "We must continue to evaluate and improve the ways that employers find, recruit and hire our veterans and Guard members."

"The bottom line is that many of the

efforts by government, nonprofits, and the private sector to help employer, particularly small businesses, have been too general or too time-consuming to fully meet the need – one million veterans currently seek full-time employment. To significantly increase veteran hiring, a smart, data-informed approach must be developed to provide the tailored help employers need," says Watson.

In many cases, the services are available to help employers succeed in military hiring, but time and availability of staff limit the reach and effectiveness of the services. In other cases, industry-specific requirements and geographic location can make job posting and connecting with veterans a random and frustrating experience.

"The key to reducing veteran unemployment going forward is making sure businesses have the specific resources they need to succeed efficiently. This is going to require some real innovation to unclog the system. The national CFA Employer survey we're completing now and will report on shortly to NTMA members, gives us a unique opportunity to develop tailored resources to address these needs. These may include webcasts, guides, networking connections, panel presentations, conference calls and answer hotlines," says Watson. "I'm grateful to the many members of NTMA who have partici-



Brig. Gen. (ret.) Marianne Watson

pated in the survey."

"We're thrilled to have General Watson helping to lead our efforts to build greater collaboration among the many teams in the military, veterans' organizations, nonprofit support groups and the private sector," says Steve Nowlan, president of Center for America. "Her leadership and practical experience is making a major difference in our ability to deliver help, contacts and support to employers."

You can contact General Watson with your ideas and suggestions at MWatson@CenterForAmerica.org or Steve Nowlan at SNowlan@CenterForAmerica.org, 201-513-0379.



MAZAK WEBINAR OUTLINES FOUR SIMPLE STEPS TO PROFITABLE GEAR PRODUCTION



Shops interested in taking on gear work that will ensure future business growth will benefit from Mazak's "Close the Loop in Gear Cutting" webinar on February 18 at 2 p.m. EST.

Mike Finn, national applications engineering manager at Mazak, will host the free 45-minute presentation and discuss how recent advancements in manufacturing equipment and processes make gear production an easy, profitable endeavor.

As part of the webinar, Finn will explain Mazak's new four-step closed-loop pro-

duction process, which makes it possible to cost effectively machine tight-tolerance gears in hours, instead of days.

OTHER WEBINAR HIGHLIGHTS TO INCLUDE:

- How advancements in Multi-Tasking technology and CNC programming can productively produce gears at AGMA 8-10 quality levels.
- How the latest in gear design and analysis software contributes to faster design-to-manufacturing times as well as maintain parts traceability requirements.
- How modern CMMs and metrol-

ogy software work together to make complex inspection measurements simple as well as ensure consistent, accurate gear production.

Registration for the "Close the Loop in Gear Cutting" webinar is now open at mazakusa.com/webinar/close-the-loop-in-gear-cutting/. Once registered, all it takes to participate is a computer, an Internet connection and a web browser.



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LIVERS BRONZE CO. CELEBRATES ITS 70TH ANNIVERSARY



Today, the third generation of Livers is at the helm of the Kansas City-based company, which has become the nationwide leader in handrailing product design with manufacturing capacity that is second to none. To mark its 70th year in business, family-owned Livers Bronze Co. has introduced new handrailing designs, a Revit family file system, and field measuring using laser scanning.

“Being one of the few companies in the U.S. to manufacture handrailings from the initial design to engineering and installation, we have the facility, equipment and know-how to allow for more imaginative systems,” says President Deuce Livers. “Combined with our focus on functionality and eco-consciousness, our systems are distinctive and innovative.”

In conjunction with the 70th anniversary, Livers

Bronze published its latest product catalog featuring the company’s distinctive railing systems, latest designs and innovations. In addition to all of the new systems, custom design is always an option for those who want to make their unique signature on a commercial project.

Since 1946, the company has introduced some of the most cutting-edge features in railing systems. The latest, Illume LED lighting, highlights any architectural style and is an energy efficient technology option with any Livers Bronze handrailing design. Illume LED fixtures are fully integrated and recessed into rails, making them a popular choice for exterior and interior applications.

In 2016, Revit family systems and field measurements using laser scanning will join the Livers Bronze lineup of

industry-leading offerings.

Revit family systems’ customizable parameters allow control of the height and rotation of a handrail’s balusters, glass line and supports. Once unpinned, balusters, glass line and support elements slide on the host rail to the desired location, with the visibility option of turning them on or off or copying if needed. Revit files will be available for all Livers Bronze railing systems, and architects will be able to download the files then drop them into the actual project drawings.

Field measuring via laser scanning is even more accurate compared to traditional methods using tape measures. A dimension may be shown on the construction drawings, but the actual dimension may vary, from very small to large increments, depending on jobsite conditions. Field measuring allows for greater accuracy in

manufacturing, installing the railing system and proper fitting. It saves time and money, ensuring the system is accurate when it arrives on the jobsite without requiring field modification.

“What continues to set us apart is our steadfast focus on handrailing system innovations, along with Revit and field measurements using laser scanning, especially since handrailings manufactured overseas are homogenized,” says Deuce. “Livers Bronze stands for American-made quality and ingenuity. Our staff’s combined years of experience in handrailing design, manufacturing and installation totals nearly 1,000 years.” To learn more, visit www.liversbronze.com.



ADVANCED TOOLING, INC. NOMINATED FOR MANUFACTURER OF THE YEAR



Congratulations to NTMA member company, Advanced Tooling, Inc., for their 28th Annual Manufacturer of the Year nomination in December. This nomination, which recognizes world-class manufacturers in Wisconsin, follows the company’s acceptance of the Marian’s Entrepreneur of the Year award during Marian University’s 34th annual Business and Industry Awards in October.



In his acceptance speech during the Business and Industry Awards, Advanced Tooling, Inc. President Tom Pankratz called on the crowd of scholarship winners to consider a career in manufacturing. “We deal in a very precise business,” Pankratz

said. “We can’t have employees that don’t care, and all of our employees care. I hope that some of you at least look into doing something in manufacturing.”

Pankratz started the Advanced Tooling, Inc. in garage in May 1996. Now in their

20th year, the manufacturer of standard and special cutting tools for a variety of industries – including aerospace, automotive, mold-making, agricultural, industrial, and medical – occupies a 21,000 square foot facility in the village of Mt. Calvary. ATI employs over 30 employees, 24 CNC grinders, and state of the art inspection equipment.



HOW APPRENTICESHIP WORKS FOR TODAY'S TOOL AND DIE MAKERS

ORIGINALLY PRINTED BY THE U.S. DEPARTMENT OF LABOR BLOG

For decades, the skilled trades have led the way in developing and refining apprenticeships in America and providing businesses a strategy to train for the skills they need. Since its founding in 1976, Rockford Toolcraft Inc. in Illinois has used apprenticeship as a pathway to its tool and die maker positions.

"It's the only way to find skilled tool and die makers," Tom Busse says of his company's philosophy. "My grandfather was an apprentice, as were both my father and I; we have a duty to train to fill our shoes."

Rockford Toolcraft was founded by Tom's father, Jerry, and has grown from a two-man tool and

ny, Tom says. "Many are in production jobs and they get to know the company and the skilled work we produce and then apply to be an apprentice. We find this works very well because they know the business and we know their work habits."

One current apprentice is Paul Powers, a 33-year-old former iron worker and brick layer who started in Rockford Toolcraft's production department after he had been laid off. Now in his second year as an apprentice, Paul says tool and die making is a great fit as a career and is helping him to provide well for his family. His sentiments were echoed by Steven McIlory, a

former youth pastor who moved to Illinois from Georgia in search of a job that would provide a better future for his young family. Steven also started in the company's production department and is now a first-year apprentice.

Shayne Barnes started in the stamping department and worked on die repair when he decided to take the aptitude test and apply as a tool and die maker apprentice. He has recently

completed all requirements and will soon receive his journeyman card. "I like the work and it is challenging. I feel I have a great future ahead of me," Barnes says.

Tool room manager John Watson completed his apprenticeship at the facility 21 years ago and has continued to grow with the company. "It is a specialized skill and I enjoy teaching others about the trade and watching them grow in the industry," he says. "It has been a great fit for me."



Shayne Barnes works at a milling machine. He has recently completed all requirements and will soon receive his tool and die maker journeyman card.

die shop to about 350 employees between its two Rockford, Illinois, facilities, which today produce heavy gauge stampings and high quality metal stamping dies for the agriculture, automotive, heavy trucking, recreational vehicle and electrical industries.

Today, the company has seven active apprentices at its facility, working toward completion of the four-year program registered with the Labor Department. Most apprentices apply from within other areas of the compa-



From left: Apprentice James Peterson; tool room manager John Watson; apprentices Trey Munson, Jory Dalsanto, Shayne Barnes, Steven McIlory, Nick Dietmeier, Paul Powers; and Rockford Toolcraft President Tom Busse.

The apprentices must complete 10,000 hours of on-the-job training and 68 credit hours of instructional learning at Rock Valley Community College in classes such as math, metallography and computer design. They receive a certificate of completion as well as an industry-issued, nationally recognized certificate from the Rock River Valley Tooling and Machining Association, a local

chapter of the NTMA.

All of that training is worth it. "These apprentices will be earning a minimum of \$50,000 a year and have no educational debt when they earn their journeyman card – which is a golden ticket for their future," Tom says, adding, "We have never laid off a tool and die maker in the company's history."



FASTEMS INTRODUCES NEW STANDARD PRODUCTS AND INCREASES REPRESENTATION

Fastems LLC, an independent supplier of flexible manufacturing systems and robotics-based automation to the metal cutting industries that automates manufacturing and finishing processes, has introduced two new products that allow manufacturing firms to easily automate their machine tools to perform three shift operations with limited interaction.

FMS ONE and FPC PLUS utilize a new methodology that enables customers to choose from standardized peripherals to configure automation for existing or new machine tools. This allows faster delivery and cost effective pricing for even quicker returns on investment. FMS ONE is a fully configurable machine tool pallet automation system with a broad selection of

modules that can be built according to the specific production needs. FPC PLUS is the answer when you need a compact, flexible production cell to integrate into your process. With FPC PLUS, you can add additional modules including deburring and washing operations, tracking features and much more.

Fastems also strengthened their North American team by adding two Sales Area Managers: Mr. Risto Niemi and Mr. Syed Ali. Risto and Syed, along with the rest of the team members, are eager to serve clients by advising them on how Fastems can increase efficiency and modernize operations. For more information, visit www.fastems.com.



IMPORTANT TAX FIGURES FOR 2016

Every year, the dollar amounts allowed for various federal tax benefits are subject to change based on inflation adjustments and legislation. Here are some important tax figures for 2016, compared with 2015, including the estate tax exemption, Social Security wage base, qualified retirement plan and IRA contribution limits, driving deductions, allowable business write-off amounts, and more provided by Barnes Wendling.

Social Security/ Medicare	2016	2015
Social Security Tax Wage Base	\$118,500	\$118,500
Medicare Tax Wage Base	No limit	No limit
Employee portion of Social Security	6.2%	6.2%
Individual Retirement Accounts	2016	2015
Roth IRA Individual, up to 100% of earned income	\$ 5,500	\$ 5,500
Traditional IRA Individual, up to 100% of earned income	\$ 5,500	\$ 5,500
Roth and traditional IRA additional annual "catch-up" contributions for account owners age 50 and older	\$ 1,000	\$ 1,000
Qualified Plan Limits	2016	2015
Defined Contribution Plan limit on additions on <i>Sections 415(c)(1)(A)</i>	\$ 53,000	\$ 53,000
Defined Benefit Plan limit on benefits (<i>Section 415(b)(1)(A)</i>)	\$210,000	\$210,000
Maximum compensation used to determine contributions	\$265,000	\$265,000
401(k), SARSEP, 403(b) Deferrals (<i>Section 402(g)</i>), & 457 deferrals (<i>Section 457(b)(2)</i>)	\$ 18,000	\$18,000
401(k), 403(b), 457 & SARSEP additional "catch-up" contributions for employees age 50 and older	\$ 6,000	\$ 6,000
SIMPLE deferrals (<i>Section 408(p)(2)(A)</i>)	\$ 12,500	\$12,500
SIMPLE additional "catch-up" contributions for employees age 50 and older	\$ 3,000	\$ 3,000
Compensation defining highly compensated employee (<i>Section 414(q)(1)(B)</i>)	\$120,000	\$120,000
Compensation defining key employee (officer)	\$170,000	\$170,000
Compensation triggering Simplified Employee Pension contribution requirement (<i>Section 408(k)(2)(c)</i>)	\$ 600	\$ 600
Driving Deductions	2016	2015
Business mileage, per mile	54 cents	57.5 cents
Charitable mileage, per mile	14 cents	14 cents
Medical and moving, per mile	19 cents	23 cents
Business Equipment	2016	2015
Maximum Section 179 deduction	\$500,000	\$500,000
Phase out for Section 179	\$2 million	\$2 million
Transportation Fringe Benefit Exclusion	2016	2015
Monthly commuter highway vehicle and transit pass	\$ 255	\$ 250
Monthly qualified parking	\$ 255	\$ 250
Standard Deduction	2016	2015
Married filing jointly	\$ 12,600	\$ 12,600
Single (and married filing separately)	\$ 6,300	\$ 6,300
Heads of Household	\$ 9,300	\$ 9,250
Personal Exemption	2016	2015
Amount	\$4,050	\$ 4,000
Personal Exemption Phaseout	2016	2015
Married filing jointly and surviving spouses	Begins at \$311,300	Begins at \$309,900
Heads of Household	Begins at \$285,350	Begins at \$284,050
Unmarried individuals	Begins at \$259,400	Begins at \$258,250
Married filing separately	Begins at \$155,650	Begins at \$154,950
Domestic Employees	2016	2015
Threshold when a domestic employer must withhold and pay FICA for babysitters, house cleaners, etc.	\$ 2,000	\$ 1,900
Kiddie Tax	2016	2015
Net unearned income not subject to the "Kiddie Tax"	\$ 2,100	\$ 2,100
Estate Tax	2016	2015
Federal estate tax exemption	\$5.45 million	\$5.43 million
Maximum estate tax rate	40%	40%
Annual Gift Exclusion	2016	2015
Amount you can give each recipient	\$14,000	\$14,000



MANUFACTURING AMERICA'S FUTURE

2016 NATIONAL EVENTS AND TECHNICAL SEMINARS

February 10th

Sales & Marketing Workshop, Dallas, TX

February 17th

Financial Managers Roundtable, Atlanta, GA

February 28th-March 1st

Chapter Leadership Summit, Palm Springs, CA

March 2nd-5th

MFG, Palm Desert, CA

March 23rd

Employee Management & Benefits Workshop, Indianapolis, IN

April 11th-13th

Legislative Conference w/ Emerging Leaders, Washington, D.C.

April 17th-24th

Japan Tech Tour

April 27th

Financial Managers Roundtable, Akron, OH

May 20th-22nd

NRL Competition, California, PA

May 20th

Workforce Development Roundtable, California, PA

June 8th-10th

Emerging Leaders Conference, Chicago, IL

June 8th

Financial Managers Roundtable, Denver, CO

September 12th-17th

IMTS, Chicago, IL

September 28th

Sales & Marketing Workshop, Philadelphia, PA

October 12th-15th

Fall Conference, Charlotte, NC

October 26th

Plant Managers Roundtable, Boston, MA

November 2nd

Sales & Marketing Workshop, TBD

November 2nd-3rd

Supply Chain Network Fair, TBD

November 16th

Plant Managers Roundtable, Denver, CO

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