

NTMA THE RECORD



DECEMBER IS WRITE A BUSINESS PLAN MONTH: HOW TO INCLUDE YOUR MARKETING STRATEGY

December is National Write a Business Plan Month - so designated to encourage unhappy employees to become their own satisfied bosses. -p10

IMPROVING LEADERSHIP THROUGH THE BRAIN-TO-BELLY NERVE

You've heard the expressions: "He lost his nerve;" "He doesn't have the stomach for it;" "No guts." —p17

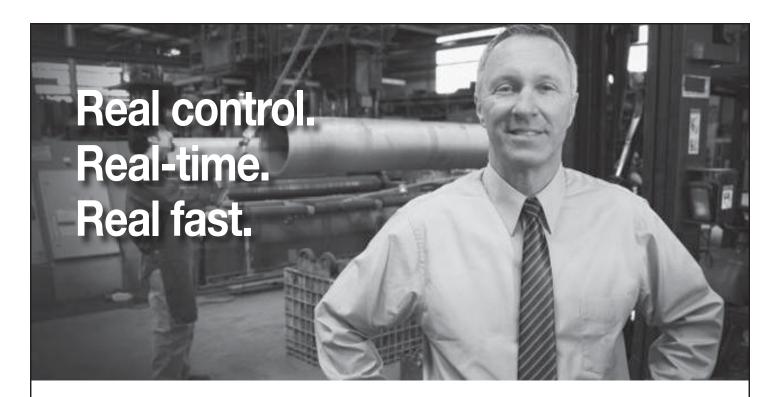
MAKE SURE YOUR HANDBOOK IS NOT AN EMPLOYMENT CONTRACT

Your employee handbook can be interpreted as creating express or implied contracts, says Attorney Allan H. Weitzman; however, disclaimers and receipts can help prevent that from happening. -p19

SENATORS LAUNCH EFFORT TO PUT **FOCUS ON MANUFACTURING JOBS**

A group of 22 U.S. senators have come together to launch a campaign to get Washington to refocus on manufacturing jobs. —p46





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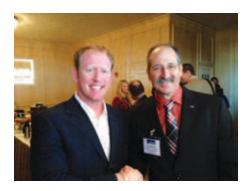


CHAIRMAN'S CORNER

ROBERT MOSEY / NTMA CHAIRMAN OF THE BOARD

NTMA's theme for 2013 is "Stewardship of the Manufacturing Industry". Our four main focuses are; Membership Value, Industry Advocacy, Workforce Development, and Governance. As I travel this year and visit many of our chapters, I will be reporting to you all of the great stewardship activities that are occurring across the United States.

As many of you are aware, I like to run. I know. I don't get it either but for some reason it makes me feel really good. When we first started planning the 2013 Fall Conference (over a year ago!), Boston was chosen as a location for its reputation of beauty in the fall with the all of the trees changing their colors as well as being a central location for many of our members. Being the home of the infamous Boston Marathon was just a plus for me. I have not vet run a marathon but I know all about the Boston and its history. Then there was April 15th when the unthinkable happened and a couple of nuts took lives and injured innocent bystanders that were there only to support their family and friends on the



Keynote Speaker Rob O'Neil and Chairman Bob Mosev

26.2 mile journey through historic Boston. This event rocked the running world, even



NTMA Chairman Bob Mosey opening the board of trustees meeting at Boston Fall conference

us lowly joggers that only dream of running the Boston. As I ran through the streets of Boston, along the Charles River, and around Boston Commons, I couldn't help but think of those folks that will never run again. I will never understand the thought process that goes into the planning and execution of an act like this. I never want to. Take a moment, right now if you can, and say a prayer for all of those people that were affected by this senseless act. Thanks.

On with the conference! If you did not make it to the Fall Conference, I'm sorry. You missed one of the best conferences that I have ever attended and I'm not just saying that because I'm the Chairman this year. Over the last several years, the Chairman had to be intimately involved in the planning of the conferences. About a month into the process, I realized that I was getting in the way. Our new staff took over and put together a program that I would never been able to imagine. From

speakers, tech suites, breakout sessions, receptions, and evening events, was all top shelf. I won't go into detail here as there is a more complete report later in the Record but leave it to say that the staff did an outstanding job on this conference. Thanks to all of them!

I also want to thank all of our Industry Partners for their support. Through their stewardship, not only financial but educationally, the program content was made possible. Without their support, this wonderful conference would have not been possible.

Directly following the conference, JoAnn and I were off to visit both the Tri-State and Michiana Chapters. Never a dull moment! Flying to Dayton, we rented a car and were greeted by an ice scrapper in the trunk! "What is that for?" I asked. My lovely wife, being from Utah, explained that it was to scrape ice and snow from the windshield. Really? I tossed it aside and loaded the luggage. Little did I know that it would come into play later in our trip.



Al Schaeper, Bob Mosey, AJ Schaeper

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THE RECORD

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The next morning, we met up with the TTMA Chapter President, the infamous AJ Schaeper, General Manager of Tomak Precision. AJ treated us to breakfast and then off to tour Tomak. What a wonderful shop! Very clean and organized with current technology including One and Done mill turn Mazaks. Together with his father, Al Schaeper, they have created a niche in smaller round parts and proprietary value added assembly. This kind of thinking is what brings value to the customer. Great Job AJ!

The next stop was Atlas Machine & Supply, Inc. where we met Sonny Welker, Ohio Regional Manager – Machine Shop. Sonny began our tour in the conference

room where he explained all of the services Atlas provides and there are many. They specialize in large industrial equipment



Sonny Welker and Bob Mosey

CONTINUED ON - P6





David Seilkop, Bob Mosey, Ken Seilkop

repair both in-shop or out in the field with portable equipment. They can also apply several types of industrial coating to build up worn components and then machine them back to factory specs. They also sell, rent and service large air compressors. What a great and diverse operation!

Sonny then treated us to lunch and we were off to see David Seilkop, Vice President of Epcor Foundries, a division of Seilkop Industries owned by Ken Seilkop. David is 3rd generation but you wouldn't know it. He operates Epcor as though he had been there his whole life. Maybe he has! This was the first foundry that JoAnn had ever been in and what a great example for her to see. I think any other foundry we visit will be compared to this one. We were so impressed with the automation and overall cleanliness of the facility. Epcor mainly produces castings for the automotive market but we also saw molds for waffle irons and other non-automotive industries. Even though I made my first sand casting in High School, I am still amazed at the process. Great operation David!

That evening was the Chapter meeting where I was the guest speaker. Oh the pressure! As many of you know, TTMA is a Non-Affiliated chapter so many of its members are not members of the NTMA. This was a first for me and I wasn't sure how my expounding on all of the NTMA activities and benefits would be received. I was pleasantly surprised that most everyone there was attentive and seemed genuinely interested in what I was saying. I am certain that after hearing about all of the great things NTMA is doing, they will become NTMA members. Wouldn't that be nice!

The Chapter is very active in its Stewardship of the industry.

WORKFORCE DEVELOPMENT

The TTMA supports all efforts of the local version of the National Robotics League, XtremeBots. They not only contribute cash directly to Ohio Robotics but their members also work with local XtremeBOTS teams by mentoring the students and providing materials for the BOTS. The lion's share of the work is done by a few dedicated Board members including AJ Schaeper of Tomak Precision, Sonny Welker of Atlas Machine & Supply and Great Oaks Institute who strongly supports the XtremeBOTS competitions. In addition, other members such as General Tool Company and Earle M. Jorgensen Co. have provided mentoring and materials respectively to BOTS' teams. In addition, there are a few outstanding instructors who encourage their students to participate in XtremeBOTS, Shop Tours and Job Shadowing programs.



Bob Mosey, John Bloom, Kelly Schneider

INDUSTRY ADVOCACY

Several of the chapter shops held tours on Manufacturing Day. RB Tool/EDM hosted 69 people, Tomak Precision hosted several visitors, Atlas Machine & Supply opened their doors on Manufacturing Day. General Tool Company conducts regular shop tours for local schools and other organizations throughout the year. In addition, General Tool Company conducts bi-annual job shadowing opportunities for local high school juniors and co-op opportunities for local high school seniors.

MEMBERSHIP VALUE

A new website was recently designed to market the TTMA and its members, and they are creating social media tools along with the site that we hope will enhance benefits to members.

Great Stewardship TTMA!

The next morning we headed northwest towards South Bend but not before stopping in my home town of Richmond Indiana. We had dinner with my cousins and stayed in a B&B next door to where I lived just before we moved to California – weird!

The next morning, we drove north to South Bend Indiana to visit the Michiana Chapter (MCNTMA). I've said this before and will probably say it again; we certainly do live in a beautiful country. We arrived early enough in the evening for a quick run around Mary's College before it started sleeting. I'm beginning to remember why Dad moved us to California.

We were up bright and early the next morning and waiting in the lobby for MCNTMA Chapter Executive, Kelly Schneider who took us to our first stop. We were to visit prospective member, John Bloom of Mishawaka Sheet Metal in Elkhart. Not only did we visit with John but we were also treated to a tour of their facility where they prepare precut sheet metal for trailer manufacturers. I learned that Elkhart is the trailer capital of the world. This explained why "Mishawaka" Sheet Metal was located in "Elkhart". It's always great to be located near your customers! John also made it to the chapter meeting that evening and I am confident that after networking with all of the members at the meeting he will become part of the fold.

Kelly then took us to see Pam Rubenstein and Eric Kuvzal of Allied Specialty Precision. We were given a tour



Eric Kuvzal, Bob Mosey, Pam Rubenstein

of Allied and got to see all of the niche parts that they manufacture of their aerospace customer. Utilizing some very propriety processes, they have created a very good position with their customer base. I would go into greater detail of what I saw but then I would have to... well you get the idea. After our tour, Pam and Eric treated us to lunch at the famous Legends of Notre Dame restaurant on the Notre Dame campus. We even got to see Touch Down Jesus from afar. Very cool!

Following lunch, we were handed CONTINUED ON - P8



Whether you are a small shop or a large company, the National Tooling and Machining Association (NTMA) knows the workforce you manage and the best interests you serve. We know the valuable equipment used to hone your products, the facilities you maintain on a daily basis, the concerns you face – and we know how to guard against them.

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off to Paul Bonin, our very own NTMA Government Affairs Team Leader, MCNTMA Chapter President/Trustee, and owner of Bertrand Products (Is there anything this guy doesn't do?). Paul took us to meet his son BJ Bonin. BJ gave us



Paul Bonin, BJ Bonin, Bob Mosey

tour of their super clean shop where they manufacture highly complex components for the helicopter market. They have created a niche with a process for manufacturing the shafts for driving the tail rotors and the flex couplings for the blades. I'm probably not explaining this exactly correct but leave it to say that their customers won't be taking their work anywhere else for some time. They are working hard at improving their on-time delivery by developing teams that focus on this challenging aspect of our businesses. We also discussed the future of Bertrand and how Paul and BJ are working on succession. Great Governance! Keep up the good work Paul and BJ.

Paul then drove us over to Schafer Gear Works where we met up with Stan Blenke,



Stan Blenke, Bob Mosey, Tom Troyan

Executive Vice President of Schafer Industries. Stan is also on the Chapter Board of Directors. As the name implies, Schafer manufactures gears; all kinds of gears, large and small. O.D., I.D., bevel, you name it and they make it. What a terrific plant! They are currently performing Kaizen events throughout the company. Through these efforts, and have shortened lead-times significantly and through value stream mapping, have freed up floor space to allow them to bring in new equipment and increase capacity without adding buildings.

That evening the Chapter meeting was

held at the University of Notre Dame Oak Room where we honored nine former Chapter Presidents including (from left to right in photo): John Razzano (1994-1997),Larson (1987), Fred Binder (1975-1977),Ken Kasner (1992),Paul Bonin (2013 -2014), Marty Pingel (2007-2008), Garry Rice (2002-2003), Tim Mead (2011-2012),Dave Razzano (2004-2006).

What a room full of great Stewards of the

Manufacturing Industry! Speaking of great stewards, Kelly did a spectacular job of organizing the evening covering every detail including a shuttle to and from the parking lot and signage showing us the way to the meeting. "I"s dotted, "T"s crossed! Thank you Kelly!

From a chapter perspective, the Michiana chapter is being a great Steward of the Manufacturing Industry. Here is just a few of the efforts that they are focusing on:

WORKFORCE DEVELOPMENT

The Michiana Chapter has spent the past six years bridging the gap between area employers and educators regarding skills training. Over the past year, they have made significant strides to foster civil relations and used the economic channel to boost awareness. They have improved their relations with Ivy Tech and their Machine Tool Institute is growing strong. They have a large presence on their Advisory Board and are developing a graduate posting program on their future website entitled 'wINd' Workers In Demand for NTMA

members to have 'first-dibs' on new graduates. This work is being led by Workforce Development Team Leader, Ann Voll of Sibley Machine, assisted by team members: Paul Hartz of Mack Tool and Engineering, Tim Clifford of Exacto-Inc, Dave Razzano of Fulton Industries and Kelly.

INDUSTRY ADVOCACY

Great strides have been made over the years in their relationships with local elected officials. MCNTMA President, Paul Bonin, also serves as GAT Leader. Many members of the chapter routinely attend the Legislative Conference and are active in the media and political fronts.



MCNTMA Past Presidents

MEMBERSHIP VALUE

In an effort to increase member value, the MCNTMA is launching a new website this year to be more aligned with National's branding. It will be interactive so to deliver local and national programs, services and benefits. Jack Sukup, is an NTMA Insurance Program Certified Agent and is delivering member value by engaging with members as a viable option to their business protection needs through the NTMA Insurance program. Kelly conducts regular email communications as well as conducting shop visits each year. The chapter conducts approximately six events per year: Member Value meeting (via shop tour), Government Affairs meeting via shop tour (and Omar from One Voice), Workforce Development meeting, Budget and Finance meeting, a golf outing (partnering with SW Michigan Chapter AMBA) and Presidents Night w/National Chairman. They also incorporate a few breakfast/lunch roundtables. Their associate members provide additional workshops and programs.

Member Value Team Leader, Stan Blenke of Schafer Gear Works head up these efforts along with team members: MCNTMA VP, Andy Jordan of Exacto-Inc of South Bend, Jack Sukup of Cassady, Neeser, Brasseur, and Kelly K. Schneider, Chapter Executive.

GOVERNANCE

The MCNTMA will re-visit their strategic plan at the end of 2013 to realign with current focus on NTMA initiatives - Workforce Development, Advocacy and Member Value. This effort is being championed by President, Paul Bonin and Chapter Executive, Kelly K. Schneider.

Great work!

While we were in South Bend, we saw a little weather with some light snow and some sleet. Nothing too bad. As we approached the car in the morning, I noticed that it had rained and that the car looked wet. No worries, just a little rain water. Then I tried to open the door. Stuck! Hmmm. I had to beat on the door just to get it open. Oh! So that's what the ice scraper was for. Ok. I'm ready to be back in California!

We headed back to Dayton airport but not before stopping off to visit long time member and Past NTMA Chairman, Dave Dysinger. Along with Dave's lovely wife Doris, we enjoyed a late lunch together. Great people! Dave led us towards the airport and we were off. Another great trip! If only I hadn't forgotten my prescription sunglasses in the rental car.

Next month I will be reporting on my visit to the St. Louis and Philly Chapters. In the mean time, keep up the good work in your own chapters and communities!

JoAnn and I wish you all Happy Holidays, a Merry Christmas, and a Happy New Year!

Peace,

ROBERT MOSEY / CHAIRMAN



NTMA

WELCOMES NEW MEMBERS

ASIGMA CORPORATION

Mr. Darryl Chudomelka 2930 San Luis Rey Rd Oceanside, CA 92058-1220

BACKERWORKS MANUFACTURING, LLC

Gina Shufelt 5809 Jefferson St Ne Albuquerque, NM 87109-3411

COSMODYNE MANUFACTURING, INC.

Mr. Richard Lopez 9904 Cochiti Road S.E. Albuquerque, NM 87123

DIE CAST TOOL, LLC

Ms. Laurel McGeorge P. O. Box 610 Perrysburg, OH 43552-0610

THE EDM SHOP,

Mr. Franz Klarer 1321-B East St. Gertrude Pl Santa Anna, CA 92705

ENCHANTED MACHINE WORKS LLC

Mr. Eric A Lorenzen 6220 Edith Blvd. NE Albuquerque, NM 87107

HARTWIG. INC.

Mr. Nick Berilla 10617 Trenton St Louis, MO 63132-1208

HUBBS MACHINE & MANUFACTURING, INC.

Mr. William Hubbs PO Box 540 Cedar Hill, MO 63016

JACKSONVILLE MACHINE INC.

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KEARNY HIGH SCHOOL

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Ms. Jamie Anderson 300 E. Russell Rd Tecumseh, MI 49286

SAN JUAN COLLEGE / TRADES & TECHNOLOGY

Mr. Chris Schmitt 4601 College Blvd. Farmington, NM 87402

SAN PASQUAL HIGH SCHOOL

Mr. Beau Haubruge 3300 Bear Valley Parkway Escondido, CA 92025

TAYCAR ENTERPRISES, INC.

Mr. David Smith 8410 Firestone Lane NE Albuquerque, NM 87113

VENANGO MACHINE

Mr. David Tullio 14118 Route 8 89 Wattsburg, PA 16442

December is Write a Business Plan Month: How to Include Your Marketing Strategy

By Marsha Friedman

December is National Write a Business Plan Month - so designated to encourage unhappy employees to become their own satisfied bosses. Whether your goal is to own your own business, become a consultant, a speaker or an author, you'll need to start with a business plan.

Even if you launched your business years ago, it's important to revisit and refresh your plan. In recent years, the economy, technology and consumer habits have changed rapidly and dramatically, affecting every aspect of your business. That makes it absolutely vital to re-evaluate your short- and long-term strategies.

One of the most critical elements of any business plan is your marketing strategy. Too often, people don't think through that all-important component with the same rigor they tackle aspects like projected cash flow and long-term goals.

Or, they do put thought and effort into planning for market research, promotion and positioning - and then never follow through on their great ideas.

One problem is that most entrepreneurs (or professionals or authors) don't have marketing experience. They may be skilled tradesmen, savvy financial advisers or talented writers - the expertise they plan to build their business around - but they're not marketers. Some don't realize that executing a solid marketing strategy is essential to any venture's success; others



Marsha Friedman

know it's important but don't know where to begin.

Here's why it's so important: You may have the book that changes the way business is done, or the product that solves a problem for lots of consumers, but if no one knows about it, they can't come looking for it. Marketing is the fundamental building block of any business; it's what drives the business, so it can't be an afterthought.

The marketing component of your business plan should include a budget for time (if you're going to tackle the job yourself) and/or money. You need a timetable and a professional website that attracts visitors and makes it easy for them to learn more about you, your product, book or service -- and equally easy to purchase what you're selling.

Here are some other points to consider as you're developing your marketing plan:

• WHAT IS MY MESSAGE?

Your message needs to be more than "My product is great." What's the problem it solves? If you're a professional, what's the value you and your service offer? How are you different from your competition? As an example: At EMSI, we create visibility and credibility for our clients using a pay-for-performance model that guarantees media exposure and sets us apart from our peers.

WHO IS MY AUDIENCE?

Unless you have a niche product, consider your potential audience in terms of ever-expanding ripples. For instance, a collapsible coffeepot may be just the thing for a college student's tiny dorm room. That's your initial target audience. But his parents and grandparents, who are helping outfit that dorm room, might also be audiences. If they've downsized their living quarters, they might just want one for themselves, too. In fact, it could be great for campers, boaters - anyone living in a small space.

• WHICH ARE THE APPROPRIATE MEDIA OUTLETS FOR A PR CAMPAIGN?

Social media is great for niche products because online forums build communities around common interests. Daytime TV talk shows tend to have audiences with lots of women. Most newspaper readers are now 55 or older. Once you have decided who your audience is, figure out what they're watching, listening to, reading, and doing online, then customize your message for that medium and audience.

• WHAT'S YOUR BUDGET?

When you've answered these questions, you should be able to determine how much marketing you can do yourself (if you'll be doing any at all) and how much you'll need help with. If you're handling it yourself, budget for the time it will take to do things like keeping your website active with fresh blog posts once or twice a week; posting content on social media; developing pitches to get print, radio or TV interested. If you plan to pay a professional for marketing services, use your marketing plan to explore the costs and timetable, and budget accordingly.

Whether you're launching a dream or strengthening your existing business, you need to lay a good foundation with a solid plan. If marketing isn't an important component of that plan, your rocket to the moon will likely fizzle and fade.

NTMA



PLEASE COMPLETE YOUR ONE VOICE ADVOCACY SURVEY!

For those who are frustrated with what is going on in Washington; we need to hear from you!

For those who are concerned about implementation of the Affordable care act, concerned about hiring skilled workers or concerned about how tax reform might impact your business; we need to hear from you!

For those who are concerned about the voluminous number of OSHA, EPA, NLRB and other onerous regulations; we need to hear from you!

In mid-December you will receive our annual One Voice Advocacy survey. It is

critical we hear from you about the issues you care most about. The survey results determine what issues we advocate for in Washington.

A few years back during the economic meltdown, banks tightened their lending practices. This became a top issue in our survey and we immediately went to work developing the Small Business Lending Fund that was signed into law and allowed banks to provide the capital necessary to fund manufacturing operations.

More recently, we have worked to rewrite the federal job training programs to prioritize funding to portable industry credentialed programs.

Our activities before Congress and the Administration are prioritized by you the Membership.

So we look forward to hearing from you. Look for the survey in your inbox under "One Voice Advocacy Survey."

John Guzik is a founding partner at The Franklin Partnership, LLP, a bi-partisan government relations firm retained by the National Tooling and Machining Association in Washington, D.C.



NTMA REACHES OUT THROUGH TRADITIONAL AND SOCIAL MEDIA



This year's NTMA annual meeting in Boston featured many of the stand-out offerings that mark the annual gatherings: great speakers, informative panel discussions, educational briefings from our Washington advocacy team – our lobbying team The Franklin Partnership and public relations firm the Policy Resolution Group at Bracewell & Giuliani – as well as tremendous networking opportunities and the chance to just enjoy the company of fellow NTMA members.

But this year also offered the opportunity for NTMA to get its voice out through the media as the Bracewell team invited NPR reporter Chris Arnold to attend a good deal of the meeting himself, where he spoke with a number of members about the issues they are currently facing, and put together a story on the challenges for business owners to plan ahead in the face of government uncertainty.

The story featured three NTMA members – 2013 NTMA chairman Bob Mosey of Mosey Production Machinists in Anaheim, CA, Patrick Schraeder of

Arundel Machine in Maine, and former NTMA chairman Grady Cope of Reata Engineering and Machine Works in Englewood, Colo – sending out a clear message that Washington brinksmanship is not good for business.

Bob Mosey spoke about Congress' failure to firmly resolve the budget and debt ceiling situations leading to the "uncertainty of not being able to plan for the future." Patrick Schraeder, whose company supplies the defense industry, spoke about the need to play it safe at present: "We have hiring on hold right now. Until we know what's going to happen, we're not looking to grow the company." Finally, as Grady Cope put it, the showdowns in Washington are making customers nervous: "Our customers start wondering, do they need to hold back and not purchase? So there's a chain reaction ... I hope Congress understands that they're playing with fire."

In addition to traditional media outreach, NTMA is strengthening its social media efforts with a new Twitter account "@NTMATalk." Managed by

NTMA staff and Bracewell & Giuliani, @NTMAtalk offers daily updates about NTMA events and activities, industry trends, links to NTMA member companies in the news and highlights about developments in Washington that impact manufacturers. If you're on Twitter, follow @NTMAtalk and we'll follow you back!

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 Affairs Administrative Government Fund which supports the work done by The Franklin Partnership and Policy Resolution Group at Bracewell & Giuliani LLP. Additionally, NTMA members can make limited personal donations to the Committee for a Strong Economy (CFASE) PAC, which supports pro-manufacturing Congressional candidates.



FREIGHT CLASSIFICATION AND ROUTING MANAGEMENT



Trying to decipher an invoice for a palletized shipment – also known as a less-than-truckload (LTL) freight shipment – can be confusing and a bit mysterious. Why would 100 lbs. of feathers cost more to ship than 100 lbs. of bricks? Why does it cost more to ship into a location than it does to ship out? Why does one carrier charge so much more than another to ship from Point A to Point B? By knowing more about how classification rates and routing management affect your invoice, you'll have a better understanding and will most likely save money on your shipping charges.

The rate that you pay for an LTL shipment is based on the weight of the shipment, the product classification, and the route/lane used to get it from its origin to its destination. When calling the freight carrier to schedule a pickup, you'll need to tell the carrier what's being shipped, an estimated total weight, and the ship-to location.

Once the carrier has your shipment information, your load is grouped into one of 18 classes based on the product that you are shipping – from a low of class 50 to a high of class 500. The class is based on an evaluation of four transportation characteristics: density, stowability, handling, and liability. Together these characteristics establish your product's transportability;

the lower the product class, the lower the rate per pound.

The designated classes, determined by the evaluation, are provided by the National Motor Freight Traffic Association, and are considered standard in the ground transportation industry. Once your freight class has been determined, it will be used as part of the equation to calculate your freight charges. Here's a quick definition for each of the four criteria used to determine your product's class:

DENSITY

The more compact the product is based on weight, the less space it will take up in the truck. Bricks are much more dense than feathers, so they take up significantly less room per pound and result in a lower freight classification.

STOWABILITY

Is your product capable of being stored for a considerable amount of time in a trailer or warehouse without loss of usability?

Handling – The more special handling your shipment requires, the higher the class will be. Is your product fragile, or is it palletized and easy to transfer to trailers and warehouses?

LIABILITY

If your product will cause additional liability to the carrier, such as a hazardous material or a product with a high dollar value, this will cause the class to be higher, even if the other three evaluation factors would designate a lower class.

Next, you'll want to make sure that you are using the least expensive carrier for your particular route. Much like the airline industry, carriers usually "price" their routes depending on two things; where their hubs are located in the country and how much freight traffic they typically ship to and from a particular destination.

If you're scheduling a shipment to a destination for the first time, get estimates from at least two national carriers in order to do an apples-to-apples comparison for that particular route. Remember, the lowest cost carrier may not always provide the best level of service, so you'll need to keep your specific delivery needs in mind as you are comparison shopping.

If you have additional questions regarding how your product would be classified by freight carriers, or if you'd like to have a route comparison done for your shipment, call PartnerShip at 800-599-2902 or email select@PartnerShip.com.

NTMA

AKRON NTMA BOARD MEETS WITH YARDE METALS

The Akron NTMA Board recently received a tour of Yarde Metals as a part of their efforts to educate NTMA members on their growth and expansion efforts. Yarde Metals showcased their territory strategies going west. Yarde Metals has been a regional associate member of the Akron Chapter for many years.





ST. LOUIS NTMA HOSTS CHAIRMAN BOB MOSEY — ELECTS NEW BOARD

St. Louis enjoyed the visit of Chair Bob Mosey in early November. Bob toured several St. Louis shops, then addressed the St. Louis membership at their annual meeting. He spoke of his vision of stewardship – for companies, individuals and the industry, and shared with everyone how NTMA serves and represents their interests. November is installation month for the Chapter's Board of Directors, so Bob officiated over their oath of office. St. Louis would have liked to offer him a World Series Championship cap, but instead presented him a St. Louis Cardinals baseball cap to wear home.



New Board of Directors installed (terms November 2013 – October 2014)





Bob Mosey



Jacksonville Machine (rejoin) membership plaque

VALEO INNOVATION CHALLENGE: JUST 3 MONTHS TO GO!

Engineering students around the world have just three months to take part in the global Valeo Innovation Challenge. Projects must be submitted to the contest's dedicated website by February 14, 2014. Participants can sign up now at the Valeo Innovation Challenge website. https://valeoinnovationchallenge.valeo.com/

The goal of the Valeo Innovation Challenge is to design equipment that, between now and 2030, will make cars more intelligent and intuitive. Students taking part in the challenge must develop bold, revolutionary solutions for the cars of 2030.

To date, 91 teams of engineering students from 17 countries have signed up

for the contest and people from over 129 countries have connected to the Valeo Innovation Challenge website.

On April 15, 2014, the 20 teams short-listed by the Valeo experts will be named. Valeo will grant each team 5,000 euros to create a functioning prototype. The three teams that submit the most innovative projects will be chosen on September 17, 2014 and will present their project to





a jury chaired by Jacques Aschenbroich, Valeo Chief Executive Officer, and comprised of members of the Group's senior management team as well as eminent figures from the worlds of science and design. The jury will designate the winning team, which will receive €100,000, with the second and third-place teams each receiving €10,000.

With the Innovation Challenge, Valeo is demonstrating once again that innovation and R&D are top priorities for the Group. Indeed, innovation guides the teams who, every day, are inventing the automobiles of tomorrow.





ENERGY MARKET SNAPSHOT

DID YOU KNOW? ...

Natural gas production from the Marcellus Shale region, particularly in Pennsylvania and West Virginia, has reached 12 billion cubic feet per day, which is more than production in Iran or Saudi Arabia, according to the U.S. Energy Information Administration (EIA).

ELECTRICITY

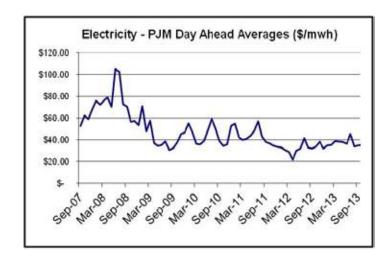
- Electricity prices are slightly lower across most of the U.S. today, except in Texas, where prices are higher.
- Normal and above-normal temperatures are forecast in November for most regions of the U.S., which is curbing demand for the early heating season.

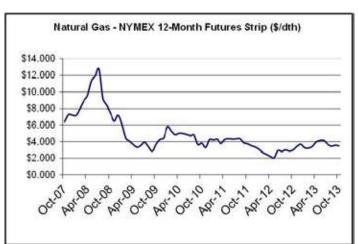
NATURAL GAS

- The November 2013 monthly Natural Gas NYMEX price, which expires today, is flat at \$3.57 per MMBtu.
- Last week, the EIA reported an injection of 87 Bcf into natural gas storage. Storage is now at 3,741 Bcf.
- The EIA is rethinking rig count as a metric of natural gas production. Advanced methods of extraction cause natural gas production to steadily rise, while the number of active drilling rigs falls.

CRUDE OIL

- The December 2013 Crude Oil NYMEX price is down \$.77 to \$97.90 per barrel.
- The EIA reported that in 2011 and 2012, more than 50% of new wells produced both oil and natural gas.





2013 MARKET TRENDS

(Arrows indicate if market prices are driven upward or downward.)

Shale gas storage inventory: Storage injections are expected going forward, which will start the winter heating season at a strong level. Natural gas storage is near a record high level.

Drilling: Domestic production remains historically high.

Gas-fired power plants: Many power plants have switched from coal to natural gas for electricity generation. Gas demand for generation drives prices upward.

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NTMA MEMBERS CAN SAVE MONEY ON ENERGY COSTS BY CONTACTING NTMA'S ENERGY PARTNER APPI.





FABTECH 2013 LARGEST SHOW IN HISTORY

FABTECH, the largest metal forming, fabricating, welding and finishing event in North America, announced today that its recently completed show in Chicago set records for numbers of attendees and exhibitors as well as for floor space. A total of 40,667 attendees visited 1,573 exhibitors to see live equipment demonstrations, compare products side-by-side to find cost-saving solutions at product displays spread across 650,000 square feet of exhibits at McCormick Place.

Attendees also benefited from the FABTECH educational conference held simultaneously with the four-day expo that included an unprecedented number of expert-led sessions on some of the hottest topics in manufacturing.

"While breaking our own records is impressive, most important were the reports we received from attendees and exhibitors," said John Catalano, FABTECH show co-manager. "Attendees were impressed with the record size and scope of the show and the number of new products and innovative technologies on display. Exhibitors were enthusiastic and report that sales activity was brisk and leads were plentiful."

FABTECH attendees and exhibitors in Chicago also raised more than \$15,000 for the victims of the severe storms and tornados that devastated Washington, Illinois and other areas of the state on November 17th. The five FABTECH co-sponsors made a financial commitment to start the campaign with all funds collected going to the American Red Cross to help victims of the storms.

"We send our condolences to the residents of Illinois, our host state for FABTECH 2013, and we know that many are struggling to recover from the physical and economic damage caused by these storms that hit on a set-up day for the show," said Catalano. "Some of our exhibitors and attendees were directly impacted by this tragedy, and we wanted to show our support. We are continuing to collect donations www.crowdrise.com/fabtechexpocares and encourage the manufacturing community to contribute."

FABTECH 2013 in Chicago sets the tone for the upcoming year of international programming by the FABTECH Partners. FABTECH Canada, will take place March 18-20, 2014 at the Toronto Congress Centre. On April 10-12, the inaugural FABTECH India, co-located with the India Institute of Welding's Weld India Exhibition, will take place in New Delhi. OnMay 6-8, 2014, FABTECH Mexico will take place at the Centro Banamex in Mexico City.

The five FABTECH co-sponsors represent a wide variety of expertise and include: SME, the American Welding Society (AWS), the Fabricators & Manufacturers Association, International (FMA), the Precision Metalforming Association (PMA), and the Chemical Coaters Association International (CCAI). Together, these associations bring unmatched technical proficiency and industry insight to FABTECH. Read more about FABTECH's co-sponsors here. FABTECH 2014 will be held on November 11-13, 2014 in Atlanta, GA. Additional information can be found at www.fabtechexpo.com.



WorkNC 3X

High End CAM for a Mid Level Price

WorkNC 3X provides a high-end 3 Axis

CAM solution at a price often lower than
other mid-level CAM systems.

- Advanced Stock Model Management
- Automatic Re-Rough & Re-Machine
- Tool Holder Collision Avoidance
- Machine Simulation





We've got a vision for your part, and it's something you never imagined.

With superior technology, progressive techniques and a little creative problem solving, you can have the speed, accuracy and efficiency to make the competition sweat. It's possible with the widest breadth and depth of machine technology in the world.



Improving Leadership through the Brain-to-Belly Nerve

Business Execs Should Embrace

Mind-Body-Business Connection, Says Veteran Consultant; Offers Tips

DREELENS

Stephen Josephs

You've heard the expressions: "He lost his nerve;" "He doesn't have the stomach for it;" "No guts."

"As it turns out, those expressions are anatomically accurate," says Dr. Stephen Josephs. "The nerve that you lose when you're afraid is the vagus nerve, which runs from the belly to the brain. It transmits messages about whether the world is a safe or dangerous place. What we now know about the functioning of this nerve has direct applications making leaders more effective and all of us happier and more courageous."

Josephs, author of the new book, "Dragons at Work," (www. Dragons At Work.com), teaches executives how to reliably create states of optimal performance by achieving control of the vagus nerve. When making decisions about resources, leading teams or talking with the board of directors, courage and poise in the face of rapidly changing business environments are essential for a leader.

"Rather than losing your

nerve, you can strengthen it. Courage is a skill you can learn and a capacity you can systematically build. The vagus nerve has been linked to everything from digestion issues to stress and depression," he says. "A benefit of inner body balance includes the projection of true poise; authentic confidence from a leader is what

can create a business culture that breeds financial success because employees and clients trust the person in charge to make important decisions from a stable perspective."

Using specific techniques from martial arts, meditation and other mind-body disciplines, Dr. Josephs guides executives to build resourcefulness and courage as a habitual response to challenge.

He offers tips for business executives to promote a healthy, vagus nerve-friendly environment:

• WHEN ANGRY OR AFRAID, TAKE A HIGH QUALITY BREATH:

People might tell an agitated person to "take a breath," but it's the quality of the breath that makes all the difference. For someone who has practiced breathing has wired in an automatic relaxation response, one breath immediately begins to calm them. To practice do this when you're not under stress: As

you inhale, relax your belly and the muscles of your torso, and soften your muscles on the inhale. On the exhale become still. Widen your peripheral vision – take in more of

the room, and rest in a more wide open awareness. At this point, your vagus nerve will be sending you messages that the world is a safe place and your ability to respond intelligently will be greatly enhanced.

MOVE FORWARD WITH A RELAXED VAGUS NERVE.

Now, in a calmer, more resourceful and masterful state,

you can apply a saner perspective to a variety of tasks: connect with employees; complete the agenda; let good ideas emerge from employees, with less pressure from management, so they affirm their own competencies. Acknowledge what's already working well by giving individuals and teams credit. Enjoy your work, knowing that whatever emerges, you can handle it.

• GET OVER THYSELF AND LIGHTEN UP:

See how much you can accomplish with the least amount of force. And drop self-importance. Remember, unless you're Donald Trump or Miss Piggy and self-aggrandizement is part of your brand identity, it's bad for business. It introduces unnecessary noise into the system and distorts communication. Drop self-importance and you'll hear critical bad news faster, and people will trust that you can handle it.



CO2 LASER OPTICS FOR PRECISION GASKET CUTTING

A line of direct field-replacement CO2 laser optics for Amada®, Coherent®, Cincinnati®, Epilog®, Mazak®, Synrad®, and Universal® laser systems are available from Laser Research Optics of Providence, Rhode Island.

Laser Research CO2 Laser Optics include lenses offered in 1/2" to 1" O.D. sizes with 1" to 12" focal lengths and laser mir-

rors 1/2" to 10 mm thick made from silicon, copper, and molybdenum for extra dirty environments. Suitable for lasers used in cutting precise, high-temperature gaskets requiring clean edges, these optics meet OEM and ISO-10110 specifications.

In-stock for overnight shipment, Laser Research CO2 Laser Lenses and Mirrors are direct field replacements for lower power lasers and are optimized for use at 10.6 microns. To aid system alignment, the lenses are available anti-reflective coated with dual-band coatings.

Laser Research CO2 Laser Lenses and Mirrors are priced according to type, configuration, and quantity. Delivery is from stock within 24-hours.





THE GRAND OPENING CELEBRATION OF SANTE FE SPRINGS NTMA TRAINING CENTER

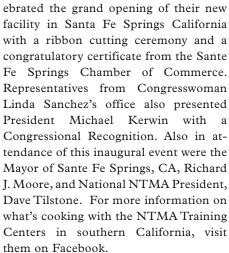












The NTMA Training Centers cel-





Make Sure Your Handbook is NOT an Employment Contract

Your employee handbook can be interpreted as creating express or implied contracts, says Attorney Allan H. Weitzman; however, disclaimers and receipts can help prevent that from happening.



Attorney Allan H. Weitzman

EMPLOYEE HANDBOOKS: EVERY WORD COUNTS

One important thing to remember when it comes to handbooks and whether they create contracts is that state law controls, so you need to check with your state for the details. However, in general, Weitzman says, handbooks may create implied contracts of employment where:

• The handbook sets forth a progressive discipline plan or corrective

action procedures.

• The handbook distinguishes between "probationary" and "permanent" employees and provides for discharge of "permanent" employees only after specific preconditions are met (e.g., "written notice and a 30-day opportunity for improvement required before termination because of unsatisfactory work performance").

Weitzman, a partner in the Boca Raton office of the law firm Proskauer Rose LLP, offered his tips at the SHRM Annual Conference and Exposition in Chicago.

DISCLAIMERS ASSIST IN PREVENTING THE CREATION OF IMPLIED CONTRACTS

A disclaimer in the handbook (see suggested language below) will help to prevent problems with handbooks being

interpreted as contracts, says Weitzman, especially if you:

- Prominently display the disclaimer in the handbook.
- Advise employees that the policies and procedures are not intended to create a contract.
- Obtain a signed receipt upon distribution of the handbook.
- Reserve the right to modify or discontinue the policies and benefits set

forth in the handbook at any time, without notice.

SAMPLE DISCLAIMER

Here's a sample disclaimer from Weitzman:

There are several things that are important to keep in mind about this handbook. First, it contains only general information and guidelines. It is not intended to be comprehensive or to address all the possible applications of, or exceptions to, the general policies and procedures described. For that reason, if you have any questions concerning eligibility for a particular benefit or the applicability of a policy or practice to you, you should address your specific questions to the Human Resources Department.

Neither this handbook nor any other Company document

confers any contractual right, either express or implied, to remain in the Company's employ. Nor does it guarantee any fixed terms and conditions of your employment. Your employment is not for any specific time and may be terminated at will, with or without cause and without prior notice by the Company, or you may resign for any reason at any time.

No supervisor or other representative of the Company (except the President, in writing) has the authority to enter into any agreement for employment for any specified period of time or to make any agreement contrary to the above.

Second, the procedures, practices, policies, and benefits described here may be modified or discontinued from time to time. We will try to inform you of any changes as they occur.

Finally, some of the subjects described here are covered in detail in official policy documents. You should refer to those documents for specific information since this handbook only briefly summarizes those benefits. Please note that the terms of the written insurance policies are controlling.

SAMPLE RECEIPT FOR AN EMPLOYEE HANDBOOK

I acknowledge that I have received a copy of XYZ Company's Employee Handbook. I agree to read it thoroughly, including the statements in the foreword describing the purpose and effect of the Handbook. I agree that if there is any policy or provision in the Handbook that I do not understand, I will seek clarification from the Human Resources Department.

I understand that XYZ Company is an "at will" employer and as such, employment with XYZ is not for a fixed term or definite period and may be terminated at the will of either

party, with or without cause, and without prior notice.

No supervisor or other representative of the company (except the President, in writing) has the authority to enter into any agreement for employment for any specified period of time or to make any agreement contrary to the above.

In addition, I understand that this Handbook states XYZ's policies and practices in effect on the date of publi-

cation. I understand that nothing contained in the Handbook may be construed as creating a promise of future benefits or a binding contract with XYZ for benefits or for any other purpose. I also understand that these policies and procedures are continually evaluated and may be amended, modified, or terminated at any time.

DISCLAIMERS DON'T SOLVE EVERY PROBLEM

Finally, says Weitzman, even with a disclaimer, it is important for an employer to follow its handbook policies.



"WE ESTIMATE WE'VE SEEN
A 40 TO 60 PERCENT REDUCTION IN
CYCLE TIMES ON ALL JOBS MOVED
TO THE MAKINO CELL."

"THE MACHINE'S RAPID ACCELERATION/
DECELERATION RATES AND 0.9-SECOND
TOOL CHANGES HAVE REDUCED PART
CYCLE TIMES BY 50 PERCENT."

"WITH THE MAKINO MACHINING
CELL, WE REPLACED FIVE MACHINES
WITH TWO, WHILE DOUBLING
PRODUCTION CAPACITY AND IMPROVING
QUALITY AND FLEXIBILITY."

When you talk to people who make what matters, the bottom line on what matters most to them is just that—the bottom line.

See why, for so many manufacturers, Makino and productivity are two words for the same thing. Read their stories. Watch their videos and cutting demos at Makino.com/productivity.







WITTENSTEIN APPOINTS DR. LARS ALDINGER TO VICE PRESIDENT, PRODUCTION AND WELCOMES HIM TO THE U.S.



WITTENSTEIN

WITTENSTEIN North America welcomes Dr. Lars Aldinger to the United States, as he begins a new role as Vice President of Production, after serving as Director of Technology Development at WITTENSTEIN AG in Switzerland. Dr. Aldinger will be responsible for all supply chain activities within the WITTENSTEIN group in North America, including machining, assembly, purchasing, logistics, quality assurance and repair/maintenance service.

Dr. Aldinger's primary objective is to transform U.S. manufacturing operations into a more flexible and faster responding partner to meet customers' demands. This has been a main objective for WITTENSTEIN North America for some time. For example, the com-pany has recently announced 5-day shipments for WITTENSTEIN alpha LP Gearheads.

THE NEW UP OF PRODUCTION HAS A STRATEGY TO

THE NEW VP OF PRODUCTION HAS A STRATEGY TO ACCOMPLISH THIS GOAL, WHICH INCLUDES:

1. Adopting the new manufacturing concepts recently implemented in the innovation factory in Harthausen, Germany, and in WITTENSTEIN's urban production facility in Fellbach, Germany, where the company has a leading role in the

"Industry 4.0" research framework to support innovation in the production environment. "My in-tent is to identify and implement a new production concept that meets the chal-lenges of the local market," says Dr. Aldinger.

- 2. Expanding U.S. manufacturing operations to increase production in the U.S. mar-ket.
- 3. Engage with key U.S. scientific institutions, industry networks and universities re-lated to manufacturing technologies and processes, in order to enhance relationships, grow company resources and support WITTENSTEIN initiatives using new innovative manufacturing concepts.

Peter Riehle, President and CEO of WITTENSTEIN North America, states "The role of WITTENSTEIN as an innovation leader has been strengthened in recent years by new organizational concepts and innovative management methods, especially in the area of production technologies. Dr. Aldinger's experience in this area will allow him to combine our existing expertise on the product side with this new approach on the production side. As a result, we will be in an excellent position

to meet the market demands of the future."

Dr. Lars Aldinger has worked with WITTENSTEIN in various positions. During the last 3 years he served as Head of the Technology Development WITTENSTEIN AG, Grüsch, Switzerland. He was responsible there for the ramp-up and technical processes of the company's rack factory. In addition, he was part of a new department at the company headquarters in Harthausen, Germany, which conducts research on new production tech-nologies and prepares implementation programs for the use in WITTENSTEIN plants. Prior to WITTENSTEIN, Dr. Aldinger worked at Fraunhofer Institute for Manufacturing En-gineering and Automation IPA in Stuttgart as a consultant in advanced Industrial Engi-neering. During that time he also became a Doctor of Engineering. He also holds a degree in Mechanical Engineering. Dr. Aldinger has moved to the U.S. with his wife, Anna-Katharina Wittenstein, who also works for WITTENSTEIN North America, and their two children.

NTMA

MOUNTED POINTS FOR SAFER SHEET METAL FABRICATION

Two types of mounted points that are designed for edge-breaking stainless steel sheet metal to permit safer handling and fabrication by workers are being introduced by Rex-Cut Abrasives of Fall River, Massachusetts.

Rex-Cut® Mounted Points for Stainless Steel Edge-Breaking include a non-woven cotton fiber type which leaves a smooth finish and a rubber version that produces a finer finish. Both are self-dressing to the workpiece and help make it safer for workers who handle stainless steel sheet metal.



Simply run over the edge of the sheet metal, Rex-Cut® Mounted Points for Stainless Steel Edge-Breaking include the A54GFX Cotton Fiber type which is more aggressive than the W222 Medium Rubber. Available in a 1" x 2" size for this application, they are also offered in several other sizes.

Rex-Cut® Mounted Points for Stainless Steel Edge-Breaking are priced according to type and quantity. Free samples are available upon request.



ARUNDEL MACHINE TOOL COMPANY HOSTS SENATOR COLLINS ME (R)

INDUSTRY ROUNDTABLE WITH MAINE COMPANIES IN ATTENDANCE

Arundel Machine Tool Company and NTMA Member hosted nine manufacturing companies to an industry and regional round table with US Senator Collins (R). With assistance from our One Voice Partnership, Senator Collins was able to participate in a tour of the Arundel Machine Tool Company facility with the other area companies. The group had an extensive dialogue with companies on sequestration, tax reform, ACA and other regulatory issues.





EXPLORING MEADVILLE'S TOOL AND INDUSTRY LEGACY

By Keith Gushard, Meadville Tribune

Albert Foriska looked at some of Meadville's industrial names and shook his head with a wry smile.

"It's kind of neat — I didn't realize some of these were here," said Foriska, who had about 45 years in the tooling and machining trade before retiring about 18 months ago. "The Meadville Wrench Co. — I never heard of that."

Foriska was one of dozens of people who crowded into the Meadville Market House on Sunday afternoon for the opening reception of "Tool City Voices," a collaborative community project that tells the history of tooling and machining in the Meadville area.

The Foriska family tooling history goes back to 1926 when Albert's father, Frank, began working in a small tooling shop on West College Street.

It started out as McNair Tool Co. making wrenches in the late 1800s. It was known as Davenport's Machine Shop when Frank Foriska began working there right out of eighth grade in 1926 and then became Foriska's Machine Shop when Frank bought it in 1962. The elder Foriska retired from the business in 2000 with Albert retiring from it in 2012.

"For anyone to work in one spot for 74 years is quite an achievement," Albert said of his father.

Preserving tooling and machining's history is important for the Meadville community because of the industry's global impact, according to River Branch, a communication arts professor at Allegheny College.



The public got a chance to listen to 'Tool City Voices,' a collaborative community storytelling project at the Meadville Market House.

Tooling companies have been involved in everything from zippers on space suits to aerospace components to parts for everyday items like cellular phones and electronics to medical equipment, she said.

"It's important to us as a community because tool and die has such a rich history. In one way or another we're all impacted by tool and die. People have family members or friends who are in the trade.

Ken Kuhn, president of the northwestern Pennsylvania chapter of the National Tooling and Machining Association, a trade association, agrees.

"This is something we've highly supported since it began," said Kuhn, who also owns Kuhn Tool & Die of Meadville. "This dovetails with the NTMA's own initiative to do a chronology."

Branch and fellow Allegheny faculty member Emily Yochim began the project last spring as a collaboration among Crawford County tool and die shops, Crawford County Career and Technical Center, Allegheny College students and other community partners.

The display, at the Market House in downtown Meadville through January, features multiple short documentaries featuring community members contributing their own stories to the project and interacting with community-produced stories.

"So often history that is passed down is 'tribal history' where people are formally trained," said Elisabeth Smith, director of strategic operations at Acutec Precision Machining Inc. "So much training is through tribal knowledge. What the industry has to do is take that knowledge and standardize it. Hopefully, this will collect history and pass it down."

That's what the project is aiming to do, according to Branch.

"We want it to be an ongoing storytelling process," she said, noting people will have a chance to add their own stories to the display at the Market House.

"We're going to do more recording of stories," she said. "We're going to develop a website in the coming weeks so people can interact with it."

The community-produced installation will travel to local high schools and other venues after its debut at the Meadville Market House.

"The tool and die industry wants it to travel throughout the region," she said. "It's going to be an ongoing process of adding to history."







AMERICA MAKES AND LOCKHEED MARTIN STRENGTHEN PARTNERSHIP

Youngstown, Ohio - November 14, 2013 - America Makes, the National Additive Manufacturing Innovation Institute, and Lockheed Martin (NYSE: LMT) have agreed to strengthen their partnership to spearhead innovation in additive manufacturing and 3D printing. Lockheed Martin has also upgraded its membership in America Makes to a Lead Tier and pledged to contribute \$2.5 million to the Institute over the next five years.

America Makes, a public-private partnership with member organizations from industry, academia, government, and workforce development resources, is driven by the National Center for Defense Manufacturing and Machining (NCDMM). Lockheed Martin was one of the Institute's original members.

"We look forward to a successful longterm partnership with America Makes," said Jeff Wilcox, vice president of Engineering for Lockheed Martin."Lockheed Martin is driven by a passion for innovation to help solve our customers' most challenging problems. Our collaboration with America Makes will help us shape the future and contribute to our nation's global manufacturing competitiveness."

America Makes, which marked its first anniversary in August 2013, has achieved much since its inception. The Institute's leadership role, performance, and progress to date convinced Lockheed Martin to upgrade and extend its membership, and invest in the Institute beyond the annual membership fee.

"On behalf of all of us at America Makes, we are of course delighted that Lockheed Martin recognizes the importance of additive manufacturing and 3D printing to its portfolio of core competencies, along with the benefits available from being an active member of America Makes," said

America Makes Director and NCDMM Vice President Ed Morris.

"As the national accelerator for additive manufacturing and 3D printing technologies, the support of and collaborative efforts among the America Makes member community are instrumental to our success," added Morris. "Lockheed Martin's long-term membership commitment and financial investment in America Makes represent a much appreciated endorsement of the significant work that we are spearheading."

America Makes offers three levels of membership-Lead, Full, and Supporting. Each membership tier features invaluable benefits. For information on how to become a member, visit http://americamakes.

NTMA



MACHINISTS VOTED DOWN THE BOEING CONTRACT. WHAT'S NEXT?



AFTER THE MACHINISTS UNION REJECTING A CONTRACT PROPOSAL IN A 2-1 VOTE RECENTLY, BOEING SAYS IT WILL OFFER ITS 777X WORK IN A COMPETITION RATHER THAN COMMIT TO EVERETT. THE UNION NEEDS TO MAKE THE NEXT MOVE.

This isn't a usual labor negotiation, in which the "no" vote sends the ball into management's court under the threat of a strike. There can be no lawful strike until the old contract expires in 2016. And management has already hit the ball back to the union by saying it will offer the 777X work in a competition to Salt Lake City, Long Beach, Calif., and Huntsville, Ala., just for starters. And, sure, Everett can try for it.

Is Boeing bluffing? It wasn't in 2009, when it demanded a 10-year no-strike deal to keep the second 787 line at Everett. The company took its billion dollars of investment to a right-to-work state. Boeing is making 787s with nonunion workers in South Carolina.

Is Boeing bluffing this time? The Machinists just voted to find out.

Many union members were sore at the

suddenness of a vote. It was sudden. Union President Tom Wroblewski was not helpful by standing with Gov. Jay Inslee to ask the Legislature to make big tax concessions, which it swiftly did in a special session. Then Wroblewski stood with "Fighting Machinists" in denouncing the contract offer as "crap," and issued a statement to members saying, "This is an opportunity we will never see again to secure thousands of good-paying jobs in the State of Washington."

If the Machinists want those jobs in Everett, send your negotiators back to management. Boeing officials said Thursday they'll be back in touch with the union in a couple of years to negotiate when the current contract expires. Meantime, they begin in earnest to find a place to build the 777X.

Union members need to understand

where management is coming from. To Boeing, the decision about where to build the 777X is about how to price the airplane today for delivery in the early 2020s. The company has to figure out how much it can charge for a 777X and how much it must pay to get it built. Boeing's offer to the Machinists was aimed to fix a price.

By saying "no," the union has set a higher price for building the airplane in Washington.

Is all lost for building the 777X in Everett? That's unclear. But if District 751 wants to build that plane here, the union — leadership and rank and file together — should make the next overture to Boeing, and soon.

NTMA

OPINION: TAX PROPOSAL FOR AN ECONOMY NO LONGER ROOTED IN MANUFACTURING

By Victor Fleischer, The New York Times

A tax proposal released on Thursday by the chairman of the Senate Finance Committee, Max Baucus, addresses a topic that tends to make my students' eyes glaze over: cost recovery.



Chairman of the Senate Finance Committee, Max Baucus

Cost recovery is a technical topic but one that may shape our economic future, because it affects the calculations of every business manager making a decision about what projects to pursue and what assets to buy.

Under current law, cost recovery (better known as depreciation) is accelerated, meaning that the value of assets can be written off for tax purposes faster than the assets actually decline in value in economic terms.

Accelerated depreciation has a long history rooted in the goals of the 20th century manufacturing economy. Facing the rising threat of world war, Congress introduced accelerated cost recovery in 1940 to encourage investment in property considered necessary for the national defense. (Before acquiring property that would benefit from accelerated depreciation rules, taxpayers had to seek a certificate of necessity from the War Production Board.) Liberal depreciation allowances were expanded with the enactment of the 1954 Internal Revenue Code. The current accelerated depreciation system

was in place by the 1980s, and revised in the 1990s, again with an eye toward encouraging investment in productive machinery, equipment and other tangible assets.

But it is no longer clear that we should use the tax system to encourage investment in tangible assets. After all, a system that encourages investment in tangible assets makes investments in other assets — intangible assets and human capital — look worse by comparison. The Baucus proposal aims to make the tax system match economic reality, removing the tax distortions from the equation. It would group tangible assets into just four different pools, with a fixed percentage of cost recovery applied to the tax basis of each pool each year, ranging from 38 percent for short-lived assets to 5 percent for certain long-lived assets.

This policy change is more important than it sounds. Imagine three types of assets a business might invest in: (1) tangible assets, like office furniture, livestock and manufacturing equipment; (2) intangible assets, like patents, technology licenses, customer lists and marketing rights; and (3) human capital in the form of salaries and training for employees. If the goal is to improve our long-term economic growth and prosperity, which type of investment is most important?

It would be hard to make the case for giving the priority to tangible assets, and yet that is precisely what current law does by allowing rapid depreciation. At a minimum, the tax depreciation system should strive for neutrality and not discourage investment in intangibles and human capital. If we want to give incentives to a particular activity that generates positive effects beyond the company making the investment — an argument often made in favor of subsidizing research and development — then refundable tax credits, scientific grant programs or other indirect government expenditures are better approaches.

Cost recovery provides an uneven benefit to taxpayers, making it an especially weak instrument to subsidize activities that we want to encourage. For companies that pay little income tax, like many start-ups, accelerated depreciation offers little benefit. Net operating losses increase through the use of accelerated depreciation, but the value of those losses is deferred and often lost because of limitations that kick in when the company is acquired or goes public. And yet these start-ups are often the companies that engage in the innovative research and development that can build a healthier economy in the long run.

As with Senator Baucus's international tax proposal, revenue raised from modernizing cost recovery would be used to pay for a reduction in corporate tax rates. Industries that benefit from the current rules, like the oil and gas industry, are expected to denounce the change. The prospects of the legislation moving forward are uncertain in the short term, but the proposal shifts the burden onto old economy companies to explain why their industries should be subsidized at everyone else's expense.

Victor Fleischer is a professor of law at the University of San Diego, where he teaches classes on corporate tax, tax policy, and venture capital and serves as the director of research for the Graduate Tax Program. His research focuses on how tax affects the structuring of venture capital, private equity, and corporate transactions.



U.S. MANUFACTURERS NOTCHED OCTOBER GAINS

By Jeffrey Sparshott, The Wall Street Journal

U.S. manufacturers are slowly increasing production after a spring lull, a sign of modest but steady improvement in the economy.

Manufacturing output increased 0.3% in October, the third straight monthly gain, the Federal Reserve said Friday. The mild number was dragged down by lower auto output, a pullback that may only be temporary.

Overall factory production is now 3.3% higher than a year earlier, the healthiest pace of growth since the end of last year.

"While far from inspiring, that beats the virtual stagnation of the spring and early summer," said Michael Montgomery, U.S. economist at IHS Global Insight.

The latest manufacturing figures are among the first measures of economic activity in October, a month that saw consumer and business sentiment hit by a partial government shutdown and debt-ceiling standoff.

The confrontation had little apparent effect on factories. The manufacturing sector gained 19,000 jobs in October, according to a separate Labor Department report out earlier this month, led by companies making motor vehicles and parts, wood products and furniture. Still, the sector's employment is little changed since February, a reflection of slow overall growth through much of the year.

Manufacturing accounts for a relatively small share of total economic output in the U.S., but the sector is closely watched as a bellwether of business and consumer willingness to make big purchases.

Rising demand for industrial goods

"U.S. manufacturing is very much impacted by both the strengths and weaknesses in the world,"

Cliff Waldman, Senior Economist.

would offer a welcome boost to the economy. Friday's report showed that production of metals, furniture, computers and plastics all posted healthy gains last month.

Defense- and space-equipment output rose 0.5% from the prior month, the third straight increase. The sector was squeezed by mandatory government



spending cuts earlier in the year but now appears to be back on track.

Other recent measures of manufacturing have been mixed amid uncertainty in Washington and weak global demand.

The Institute for Supply Management earlier this month reported its October manufacturing index inched ahead to its highest level since April 2011.

But on Friday the Federal Reserve Bank of New York's Empire State Manufacturing Survey declined to -2.21 in November, the first negative reading since May. A reading above zero indicates expansion.

The Manufacturers Alliance for Productivity and Innovation, a trade group, said a cloudy outlook for Europe and China, coupled with uncertainty in Washington, was holding back the manufacturing sector. "U.S. manufacturing is very much impacted by both the strengths and weaknesses in the world," said Cliff Waldman, the group's senior economist.

Overall industrial production, which measures the output of U.S. manufacturers, utilities and mines, decreased a seasonally adjusted 0.1% from September, the Fed said in its Friday report. Capacity utilization, a gauge of slack at industrial firms, fell 0.2 percentage point to 78.1%.

Friday's report showed that utility output fell 1.1% during the month, a drop likely related to the weather.

Mining output, the third component of industrial production, decreased 1.6% in October, its first decline in seven months.

"Temporary shutdowns of oil and gas rigs in the Gulf of Mexico in advance of Tropical Storm Karen contributed to this decline," the Fed said.



OPINION: NEW VOICES ON MANUFACTURING COUNCIL WILL STRENGTHEN ECONOMY

By Nancy McLernon, Roll Call

The U.S. Manufacturing Council, created in 2004 by President George W. Bush, serves as the principal private sector advisory committee to the secretary of Commerce on the U.S. manufacturing sector. It provides a critical forum for finding solutions to industry-related problems, and it's intended to keep America as the premier destination for investment in manufacturing throughout the world.

Ironically, "insourcing companies" — or companies that are headquartered in other countries and invest in the United States and employ millions of U.S. workers - have been excluded from serving on the council. That means nearly 1 in 5 American manufacturing workers have no voice on vital issues that affect their livelihoods because their employer has been barred from participating. That is despite the fact that foreign direct investment flows more into manufacturing than any other industry sector in the United States a staggering \$900 billion and supports about 2 million hardworking Americans with high-paying jobs and excellent benefits.

The Organization International Investment just released an economic report, "Insourcing Companies: How They Raise Our Game," which provided a first-ever analysis of the role foreign companies have played in the U.S. economy over a 10-year period. The findings were striking: It found that insourcing companies, as a group, outperformed the economywide average in nearly every relevant economic indicator over the past decade. For example, the report showed that insourcing companies increased their contribution to U.S. gross domestic product by 25.2 percent over the past decade, nearly double the private sector's 14.3 percent increase.

As the report cites, the vast majority — about 84 percent — of insourcing companies entered the United States over the past two decades through mergers and acquisitions of U.S. companies. When a foreign company acquires a U.S. company, they raise their industries' economic performance, invest heavily in research and development, buy material locally, establish innovative workforce training programs, increase compensation and benefits for hardworking American, and pay a disproportionate amount of U.S. taxes.

For example, the Volvo Group acquired Mack Trucks in 2001 and has been investing in the brand's success ever since. The Volvo Group invested more than \$425 million in a new North American engine program, resulting in EPA-certified Selective Catalytic Reduction emissions control technology in 2010 - allowing its commercial vehicles to meet the world's most stringent diesel engine emissions standards. Just last month, the Volvo Group announced a \$30 million expansion of its plant in Hagerstown, Md., which includes adding 100 to 140 jobs. Since 2001, the Volvo Group has invested more than \$350 million in that plant alone, which currently

employs more than 1,300 people.

Beyond providhigh-quality ing insourcing jobs, companies invest in local towns and cities they are a part of, and those investments have spillover effects that spur economic development those communities and support downstream jobs. For example, insourcing manufacturers are

increasing their purchases of locally produced supply material by 48 percent, compared to just 13 percent for U.S. manufacturers overall. Their investments in local infrastructure bring their goods to market, and training programs prepare the next generation of high-skilled manufacturing workers help attract other businesses to these local communities. They also pay more than 17 percent of the taxes paid by all U.S. manufacturers, while they make up less than 12 percent of the manufacturing sector's taxable income.

Insourcing companies have played a critical part in keeping our economy running and in recognition of their positive impact on the overall economy — especially the manufacturing sector — the Obama administration announced last week that it would allow U.S. executives of insourcing companies to participate as members of the Manufacturing Council.

The announcement came during the administration's SelectUSA Investment



Ms. McLernon, President & CEO of the Organization for International Investment (OFII).

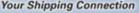
Summit, a two-day conference intended to help make up for lost ground in attracting more foreign investment in America. Allowing insourcing companies to join the Manufacturing Council is a clear signal that the Obama administration recognizes the value insourcing companies have brought to the U.S. economy and want to capitalize on their knowledge and expertise.

The OFII has advocated for fairer treatment of these companies and applauds the Commerce Department for making this change. Insourcing companies in the manufacturing sector have a vested interest in promoting a strong, vibrant and innovative industry in America. While this announcement is great news for hardworking Americans who earn their living in the manufacturing sector, other agencies could benefit from allowing insourcing companies to join the conversation.











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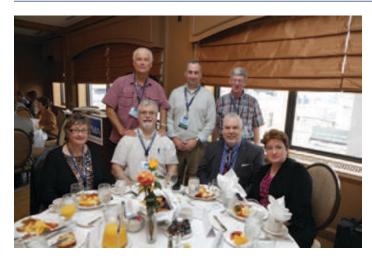
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FALL CONFERENCE BOSTON 2013- FIRST TIMERS KICKOFF



Valerie Spencer Hotujac, Bob Hotujac, Incoming National NTMA Chairman Ted Toth and his wife Mickey, Standing: Hank Epstein, Chris Keilb, Nathan Coin



Bottom row I to r: Chris and Jim Bradshaw, Herb and Lisa Homeyer, Standing: Christine Hansen, the Churchills and Todd Krell



Dave and Kim Tilstone, Jay Kozody, standing: Marty Urban, Joe Koenig, and Don Anrasik

David Boyle, Roger and Juanita Atkins, NTMA CFO Doug DeRose, standing: Daniel Bras, Kelly K. Schneider, Ken McCreight







Frank and Lynn Chesek, Omer Gingras, Tom, Scott Schmidt, Gisbert Ledvon, Dave and Janet Sattler, Emily Lipovan

Pete Borden, Ed Fitzgerald, Don Hemler, Standing: Daniel Meyer, Bill Anderson



Gretchen Homeyer, Dana Super, Emily Lipovan, Chris Kaiser, Mike from Midaco, Standing - Mike Munao, David Jewett, Robert O'Conner, Kim Sidelman



Joshua Pregent, Tiffany Bryson, John Copolino, D'anna Jones Standing, Brad Cushner, Doug Reed, Joanne and Bob Mosey



FALL CONFERENCE - GENERAL ASSEMBLY AWARDS AND RECOGNITION



The William E. Hardman Award is given annually at the Fall Conference of the NTMA. This award is given to an NTMA Member company or individual who has consistently demonstrated strong support and active participation in structure training for precision custom manufacturing industry. The 2013 recipient was awarded to Frank Dworak of Hobson & Motzer, Inc. of Durham, CT.

Hartman Award – Bob Mosey, Frank Dworak, Dave Tilstone



Bob Mosey and Richard Milika



Bob Mosey, Garth Grover, Chris Hester



Service Awards - Bob Mosey and Michael Pasciuto



Service Awards - Bob Mosey and Don Andrasik



Service Awards – Bob Mosey and Michael Tamasi



Service Awards - Bob Mosey and Frank Chesek



Technology Awards – Grady Cope and Matt Wordle



Bob Mosey and Marty Urban



Bob Mosey, Peter Borden, Dave Tilstone



Attendees participate in the "Duck Tours" of Boston



Allan Curran, Don Lane, Current NTMA Chairman Bob Mosey, NTMA Past Chairman John Belzer



Stephanie and Eric White



Sam Griffin making his mark on the silent auction



The Seilkop's and the Bachman's



Emily Lipovan and Carl Meyer



Alan and Joyce Ortner Standing: Normand Goulet, Jr.



Michelle and Andy Borst



Gretchen and Lisa Homeyer and Mrs. Bachman



Thom Busse and his lovely wife Susan



Mike Munao, Doug Reed, Chris Kaiser, Gisbert Ledvon



Sitting: Cheryl Bagley, Grady and Anne Cope, standing Dan Bagley, Kim and **Dave Tilstone**



Doris Dysinger, Sharon Kelly, Cathy Sweatman



Emily Lipovan and Kelly Schneider promote high bids at live auction



Shannon Sweatman, Reid Leland, Dana Super



Mike Retzer and Past National Chairman of NTMA, Roy Sweatman



John Watkins and Ken Kuhn



Dinner at the Gala



Nils Kjell, Michael and Kim Pasciuto, Wendy and Tim Martens



John Guzik, Paul Bonin, Omar Nashashibi



Western MA CE Angie Beavis, RI CE Chuck Paul, Boston NTMA CE Cindy Zylkuski Norris



A J Shaper, Paul Bonin, Bruce Dworak



Bob and Susan Roseman



Steven and Mary Beth Tamasi





Carl Meyer, Ron Overton, Kevin Ahaus



Bev Mittler, Alice Overton, Ken McCreight



Florida West Coasts, Tori Pederson, Kelly K. Schneider, NW PA member, NW PA Member, Tami Adams, Maegan Rozinsky, Sally Safranski



Rich and Cynthia Ditto, Keith Koherly



John Dalrymple and Juanita Atkins



Pete Borden, David Tyler, Louise Borden



Bob O'Donnell, Tim Martens, Emily Lipovan and Ed Fitzgerald



Vice President Ken McCreight and Alice Overton and Bob Hotujac



Mark Benedeth and Paul Breniser



Emily Lipovan, Doug DeRose, Michelle Marquard, Kelly k. Schneider



First Time attendees Shannon Adolph and Joel Christian of FM Machine with Dave Sattler of the NTMA Executive Team



Normand Goulet, III and Melanie Boutwell



Shawn Schwartz and Todd Krell



Patricia and Ron Borst

FALL CONFERENCE - KENNAMETAL TAKES OVER BOSTON AQUARIUM







MTCONNECT CHALLENGE 2 GAINS FOUR INDUSTRY SUPPORTERS: DMG MORI SEIKI USA, ITAMCO, MAZAK CORPORATION, OKUMA AMERICA CORPORATION

The National Center for Defense Manufacturing and Machining (NCDMM) and AMT - The Association For Manufacturing Technology proudly announce today that four manufacturing organizations - DMG MORI SEIKI USA, ITAMCO, Mazak Corporation, and Okuma America Corporation - will support the MTConnect Challenge 2 by providing participants access to data generated by their equipment for development and testing of manufacturing intelligence applications.

Sponsored by the U.S. Department of Defense - Defense-Wide Manufacturing Science and Technology (DMS&T) ManTech Program, this second MTConnect Challenge: Creating Manufacturing Intelligence is seeking the development of software applications that harness innovation and manufacturing intelligence breakthroughs utilizing data acquired via the MTConnect® standard. NCDMM, AMT, and the United States Army are overseeing the Challenge to overcome the existing and widespread interconnectability difficulties within manufacturing enterprises.

MTConnect is an open, royalty-free communications standard intended to foster greater interoperability between manufacturing equipment, devices, and software applications thereby harnessing a wealth of information and data available from the shop floor. The MTConnect Institute manages the development and further adoption of the standard.

"This is an exciting step forward for the MTConnect Challenge 2, which opened this pastJuly 1st," said John Wilczynski, NCDMM Program Manager. "By making equipment data streams available from machines through MTConnect compliant Agents, these corporations are allowing the MTConnect community to pull real-time data from equipment. We believe that allowing access to actual machine information will open this challenge to more developers, accelerating the development of new and innovative software applications which, naturally, is the focus of Challenge 2."

Links to the MTConnect data streams are available in the Rules section of the MTConnect Challenge 2 Web site.

MTConnect Challenge 2 began July 1, 2013, and will close on January 31, 2014. Winners will be announced at the [MC]2 2014 Conference that will take place April 8-10, 2014, in Orlando, Fla. The grand prize of \$100,000 will be awarded for the top submission. The second place award recipient will receive \$75,000, and the third place finisher will receive \$50,000.

Those seeking additional details about this competition can learn more athttp://MTConnect2.challenge.gov.

NTMA

SHAFT COLLARS AND COUPLINGS WITHSTAND HIGHLY CORROSIVE APPLICATIONS

A full line of shaft collars, couplings, spacers, and mounting devices made from corrosion-resistant materials for use in oil & gas, petrochemical, and process applications and other harsh environments is available from Stafford Manufacturing Corp. of Wilmington, Massachusetts.

Stafford Corrosion-Resistant Shaft Collars, Couplings and Mounting Devices can be made from 316SS, Hastelloy®, and similar materials for use in harsh environments where they will be exposed to chemicals and high temperatures. Products include one- and two-piece clamp-type collars, one-, two-, and three-piece couplings, spacers, and various flange mounting devices.

Suitable for power transmission systems, conveyors, and other machinery, Stafford Corrosion-Resistant Shaft Collars, Couplings and Mounting Devices can be modified to customer requirements with special bores, keyways, holes, flats, hinges, threads, and more. Collars and flange mounts are available in sizes up to 14" I.D. and couplings up to 6" I.D.

Stafford Corrosion-Resistant Shaft Collars, Couplings and Mounting Devices are priced according to configuration. Pricing is available upon request.





NATIONAL SAFETY COUNCIL PRODUCES WHITE PAPER BY CAMPBELL INSTITUTE



Metrics like OSHA recordable injuries and workers' comp expenses—known as trailing or lagging indicators—tell you what happened and how much it cost. But they don't indicate how well you're doing at preventing accidents.

A new white paper tells safety professionals how they can use leading indicators, such as safety audits and safety perception surveys, to improve performance at their worksite.

The document was produced by the National Safety Council's (NSC) new Campbell Institute for excellence in environmental, health, and safety management. It defines leading indicators as "proactive, preventative, and predictive measures that monitor and provide current information about the effective performance, activities, and processes of an EHS management system."

These in turn drive the control or elimina-



tion of risks that cause injuries. Examples of leading indicators are new control measures, safety training, incident investigations, behavioral observations, and job safety analyses.

According to the Campbell Institute, many safety and health professionals continue to rely on injury rates, absenteeism, and other trailing indicators "despite a growing acceptance of the fact that these failure-based measures are ineffective in driving improvement efforts."

Those that do use leading indicators as a tool find they can help prevent or eliminate risks, monitor performance, motivate safety behavior, and communicate results to management and workers. Some businesses even consider leading indicators in performance assessment and compensation for EHS mangers.

DO THIS

The white paper identifies factors that contribute to successful use of leading indicators, including:

- Executive buy-in regarding the value of leading indicators,
- Communication about the predictive value of leading indicators by safety and corporate leaders,
 - Technology to track leading indicators,
 - · A proactive safety mindset, and
 - Linking leading indicators to incentives.

One of the items on the Occupational Safety and Health Administration's (OSHA)

regulatory agenda for 2013 and beyond is the development of a federal Injury and Illness Prevention Program (I2P2) standard.

In recent comments on I2P2, OSHA Chief Dr. David Michaels said that given the fact that the agency doesn't have enough inspectors to visit every workplace to ensure that health and safety rules and best practices are being followed all the time, a better plan to compliment inspections is to require employers to create and implement a plan for identifying and remediating hazards.

Most safety professionals believe that it is just a matter of time before OSHA rolls out I2P2 requirements, similar to those that are in place in other states such as California. Although it may take some time for OSHA to finalize its vision, due to its slow and cautious approach, understanding the I2P2 process and using the elements to improve your existing safety program is something that you can do now.

Don't wait for an OSHA inspection or a workplace tragedy to address workplace hazards. Prepare now, and in doing so, get a leg up on complying with the likely I2Ps framework.



VACUUM LIFT TUBE CLAMPS EASILY, FITS TIGHT & LASTS LONGER

A new vacuum lift tube which is extruded with an encapsulated high tensile steel wire for long life and features heat weld cuffs for easy clamping and an air tight seal is being introduced by FLEXAUST of Warsaw, Indiana.

Flexadux® LVAC Lift Tube is an advanced copolymer extruded vacuum tube with an encapsulated high tensile steel wire that provides up to six times longer life than traditional neoprene PVC wrapped constructions, claims the firm. Featuring factory-installed heat weld cuffs on both ends for easy clamping and a tight fit, this tube fits virtually all vacuum lift equipment.

Ideally suited for use in environ-



ments requiring frequent wash-downs, Flexadux® LVAC Lift Tube offers excellent chemical resistance and operates from -40°F to 225°F. Available in 4.7" to 8" I.D. (120mm to 200mm) sizes and standard 108", 120" custom lengths, this rugged, long-life vacuum lift tube is available in standard safety-orange and -yellow colors.

Flexadux® LVAC Lift Tube is priced according to size and quantity. Price quotations and samples are available upon request.





BEST PRACTICES: ELECTRICITY PROCUREMENT

ENERGY

In April 2013, the Energy Research Council (ERC) conducted a survey of 1,254 middle-market companies in states that have deregulated energy procurement to assess how they procure electricity supply. "Electricity costs have a major impact on manufacturers' operating budgets," said Walter Moore, President/CEO of the National Tooling and Machining Association's endorsed energy consulting firm, APPI Energy. "Manufacturing companies should compare competitive electricity supply prices to the local electric utility's rate, and review expenditures on a frequent basis." HOW DIFFICULT IS IT TO COMPARE COMPETITIVE ELEC-TRICITY SUPPLIERS?

Perhaps the most complex issue in selecting the right electricity supplier is comparing "apples-to-apples" regarding pricing and contract terms & conditions. While most price quotes are based on a fixed price per kilowatt hour (kWh), many variables and pass-through items in electricity supply contracts can impact the final bill. Two fixed-price contracts could produce different electricity charges. "Before signing a contract,

conduct due diligence to determine what will happen if your business uses drastically more or less energy than in the past, and what happens when the contract expires," said Walter Moore.

Because electricity market prices change on a daily basis, most companies review multiple price quotes. ERC research shows that only 21% of middle-market companies sign an electricity supply contract based on a single price quote. Most (62%) require at least two to three price quotes before selecting a supplier.

HOW FREQUENTLY SHOULD MIDDLE-MARKET COMPANIES EVALUATE ELECTRICITY PRICES AND ALTERNATIVE SUPPLIERS?

Negotiating an electricity supply contract is only one part of managing your electricity needs. ERC research shows that almost one quarter (22%) of middle-market companies continually evaluate their electricity expenditures and pricing. Two-thirds report that they review their energy expenditures at least annually. Combined, that means three quarters of the middle market evaluates their energy costs on a regular and frequent basis. Only

one quarter of the companies surveyed by the ERC review energy costs less than once per year, presumably based on internal needs or exposure to external opportunities.

Many manufacturing companies review electricity supply pricing regularly to secure future contract prices when market rates are low. Early termination penalties prohibit simply switching suppliers, but manufacturers can commit to a new contract for a future timeframe, based on current dips in the market. Opportunities to capture market dips come and go quickly, making it important to monitor market conditions regularly. "Manufacturing companies should continually monitor the electricity market for buying opportunities," said Walter Moore. "Manufacturers can take advantage of today's prices in a supply agreement that begins when their current contract expires, even if the expiration date is one or more years in the future." For more information, contact APPI Energy at 800-520-6685 or wmoore@appienergy.com.



ONSET ANNOUNCES LOW-COST ENERGY MONITORING SOLUTION

Onset, a world leader in data loggers, today announced the HOBO® kWh Monitoring Kit, a low-cost, portable system for measuring and recording energy consumption in buildings. The new kit, which bundles a matchbox-sized HOBO State data logger with Continental Control System's revenuegrade kWh and current sensors, gives energy engineers, auditors, building commissioners, and others a simple and cost-effective way to log building electric use at a fraction of the cost of meter-based solutions.

As one of the industry's lowest-cost kWh data logging solutions, the kit provides rapid deployment and high accuracy measurements, and is ideal for use in commercial, industrial, and residential applications. Key advantages include:

• Flexibility to log up to 500,000 single or three phase measurements running 240 to 480 volts

- LCD display to enable easy viewing of latest kWh readings
- HOBOware Pro software (priced separately) for easy logger set-up and scaling of kWh measurement data

"This new kit makes energy monitoring fool-proof and accessible by providing users with all the elements needed in a flexible configuration for permanent or temporary data collection," said Jessica Frackelton, senior



manager of product marketing for Onset. "This will make it easier than ever for our building performance customers to identify energy-use patterns and quantify savings."

POWERFUL SOFTWARE

The HOBO kWh Monitoring Kit leverages the power of Onset's HOBOware® software, enabling users to plot and analyze equipment power consumption data in a few simple steps. The software, which runs on Windows or Mac, features time-saving tools that allow users to batch-configure and readout multiple loggers in a fraction of the time it would take with previous generations. Additionally, the software features simple-to-use export tools that allow users to pull their data files to text format for use in spreadsheets and other programs.





2014 NRL COMPETITION

CLEVELAND, OHIO

MAY 16-17

Lou Higgins Center at Baldwin Wallace College

THE PREMIER NATIONAL ROBOTICS COMBAT LEAGUE

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The newly renovated Lou Higgins Center is the centerpiece of the BW athletic facilities. The 170,000 square-foot complex houses the Ursprung Gymnasium, Harrison Dillard Track, Natatorium, updated workout spaces, a state-of-the-art athletic training facility, classroom space, and offices for coaches and faculty

Mark your calendars, and plan to join us in Cleveland, May 16-17 for the 2014 NRL National Competition. The event will be held in the Lou Higgins Center at Baldwin Wallace College, a venue that offers easy airport access, free parking and plenty of space for up to 100 teams, 500+ spectators, two arenas, as well as exhibit space for sponsors to interact with students and spectators.

The move to Cleveland also means the teams from many of our most active regions will spend considerably less time on the bus, and everyone can expect to pay less than \$100 per room for overnight accommodations.

Stay tuned for more information about this event. We have some cool things planned for you and can hardly wait to see you there!

Check it Out

Servo Combat Zone is looking for articles by combat robot builders like you! Stories



about recent events, favorite parts or tools, as well as build tips are welcome. Remember, if you are a High School or College rising senior, there's nothing better than

a few published articles on your resume to rise out of the slush heap!
E-mail Kevin Barry, the Servo Combat Zone editor for more information @
legendaryrobotics@gmail.com

Rules Update

Over the summer, the NRL rules committee will be reviewing and updating our technical regulations and competition rules, and we want to make sure we address

the concerns of everyone in the league. To that end, if you have a rules change request please email



Maureen Carruthers

mcarruthers@ntma.org and let her know which rule(s) you'd like us to consider changing, and your rationale for the change.

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These companies and organizations gave \$1,000 or more to help make the 2013 National Competition a reality. Want to join them? E-mail Tiffany Bryson @ tbryson@ntma.org for help finding the perfect package for your

package for your company.



SPONSOR SPOTLIGHT

DEPCO exists to challenge the idea of a general education model that marches students through a uniform curriculum. DEPCO's approach to educating today's youth stands to revolutionize the education environment by offering engaging curricula that takes the intimidation and confusion out of the learning for both students and instructors.





Automatic Door Openers



- For single and double doors on mills, lathes and other machinery.
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- ☑ Ideal for robotic applications.









Automatic and Manual Pallet Changers and Door Openers for Every Machining Center









San Fernando Valley NTMA Hosts Summer Picnic — Over 500 in attendance



CLEVELAND NTMA MEMBERS HOST OHIO STATE SENATOR MIKE DOVILLA (R)

On Monday, November 18, Members of the Cleveland NTMA Chapter who reside and work on the southwest side of Cuyahoga County, hosted Ohio State Representative Mike Dovilla (R) at NTMA member company Exact Tool & Die in Brook Park, Ohio. Cleveland NTMA Chapter President, Don Andrasik, Vice President Tanya DiSalvo and Past President Frank Chesek hosted Representative Dovilla with NTMA Managing Director and Chapter Executive, Emily Lipovan to discuss the opportunities to partner with NTMA both nationally and locally. Representative Dovilla was especially interested in NTMA efforts in working with Baldwin Wallace College, his alma mater,



State Senator Mike Dovilla and Frank Chesek

as its host of the 2014 NRL Competition next May. In addition, NTMA members learned how well versed Representative Dovilla is on manufacturing and the ad-



State Senator Mike Dovilla Tanya DiSalvo Frank Chesek and Don Andrasik

ditional resources needed for work force development and vocational training.



FLATE'S EDUCATOR WORKSHOP SPURS DEVELOPMENT OF K-8 STEM CURRICULUM

FLATE's curriculum and professional development tools are geared to equip educators, students, and industry with knowledge and skills that promote technician education and training. One of the focus of FLATE's professional development efforts have centered not only on a regional, but a national push to engage girls in STEM. This has culminated over the years in a number of workshops that have enabled educators to refine and/or certify their knowledge base within manufacturing, and develop STEM based curricula for their schools that have long-term impact on technical education.

Christine Danger, STEM resource teacher and elementary science teacher at Hillsborough County Public School was one such person who took advantage of the resources offered by FLATE. According to Danger, FLATE's "Recruiting Girls to STEM Pathways" workshop offered in June



served as a turning point in her quest to get more students engaged in STEM. "The research about why girls choose particular career pathways served as an eye opener for me" says Danger. In that it helped her get a better perspective why most girls choose a career where want to make a difference. The information presented during the workshop led her to show her students, particularly girls, how "being an engineer can help (or possibly even save) lives, animals, and the earth."

The SEM, or the Science, Engineering, and Mathematics in STEM, are all interesting, but what really gets students excited about these subjects is "technology," or the "t" in STEM. As a teacher, Danger found children love to play with technology. Armed with the knowledge she gained at the STEM workshop, and as part of Danger's role as the first science resource teacher for SDHC, Danger set out to for-



mulate a K-8 STEM program at Turner Elementary School and Bartels Middle School in Tampa.

As part of this effort, Danger has setup engineering design challenge centers in all K-5 classrooms at Turner Elementary School that integrates STEM concepts and engineering challenges into mainstream curriculum. "Our goal is to add connections to STEM careers into all subject areas" said Danger. Danger is creating a STEM lab where students can engage in hands-on engineering activities that complement science standards they are learning in class. Danger is also developing a robotics elective at Bartels Middle School and plans to start a robotics team in the school, and working on integrating technology into language arts by creating video games, and using technology to create presentations and videos. "My long term goal is to help teachers understand how to teach engineering, and to get students and encourage students to exercise their creativity."

In a quest to position STEM as fun, Danger collaborated with FLATE's partner, Scientific League of Super Heroes (see October 2013 FLATE Focus) to develop STEM based curriculum for fifth grade SDHC students. "The superhero theme is working to attract both boys and girls" said Danger. Using the "Super Heroes theme," she has developed curriculum where students can research different STEM careers online that they find most interesting, and corresponding skills-set, or "superpowers" like curing diseases, reducing pollution, developing new energy sources, improving communication systems, and growing food more efficiently. "In general, I found girls are attracted to STEM careers when they find out that they can be creative, hands-on, collaborative, and the work they do can help people and the planet." Boys on the other hand she notes, love to build things and compete. Danger hopes to eventually have 50% girls and 50% boys enrolled in the robotics/STEM elective.

Given her research and experience with STEM curriculum development, Danger presented her findings about engaging women/girls in STEM at the annual Florida Association of Science Teachers conference in Miami. For more information about FLATE's STEM based curriculum and workshops visitwww.madeinflorida.org and www.fl-ate.org, or contact Dr. Marilyn Barger, executive director of FLATE atbarger@fl-ate.org. For information on the SDHC K-8 STEM curriculum currently offered at Turner Elementary and Bartels Middle School in Tampa, contact Christine Danger atChristine.Danger@sdhc.k12. fl.us.

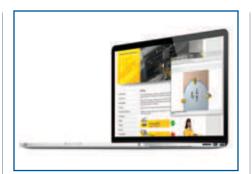
NTMA

SANDVIK COROMANT OFFERS METAL CUTTING TECHNOLOGY E-LEARNING PROGRAM

Sandvik Coromant, the world's leading producer of cutting tools for the metal cutting industry, is pleased to announce its interactive Metal Cutting Technology (MCT) e-Learning program is now available. This comprehensive online program was developed by the Sandvik Coromant Academy and was based on the needs of manufacturing personnel all over the world. The 75-course curriculum is packed with information and expertise about the metal cutting process. Ideal for engineers, programmers, operators and students, it provides first rate insight and knowledge to improve productivity and profitability.

This unique training and education program explains the fundamentals of metal cutting and specifically teaches about internal and external turning, parting and grooving, milling, drilling, threading, boring and tool holding. Understanding the metal cutting process plays an increasingly important role in manufacturing to boost productivity and cut costs. This program provides vital information on how to plan the best metal cutting process for a component, choose the right cutting tool for the job and understand the basics of production economics. It also teaches how to recognize different types of tool wear and their remedies, as well as how to optimize cutting data and cutting tool life.

"The knowledge in the new Metal Cutting Technology e-Learning program is only part of what Sandvik Coromant does to help our customers," says Jamie Price, President of Sandvik Coromant US. He



continues, "This program will help people who want the most up-to-date information get the most value and productivity from their tools. They can learn at their own pace and as they want to learn it. We are using the latest training techniques to help people understand the best ways to use their cut-

ting tools."

Designed to allow users to work at their own pace on their own schedule, the MCT e-Learning program can be accessed at www.metalcuttingknowledge.com through the Sandvik Coromant Academy portal. This program combines multiple learning formats including video, animation and question and narration to provide in-depth instruction and guidance on the "what, how and why" of metal cutting. Users can test their knowledge and receive a "Certificate of Completion."



OKUMA AMERICA'S VIRUS PROTECTION SYSTEM PREVENTS INFECTION BY VIRUSES FROM NETWORKS OR USB FLASH DRIVES

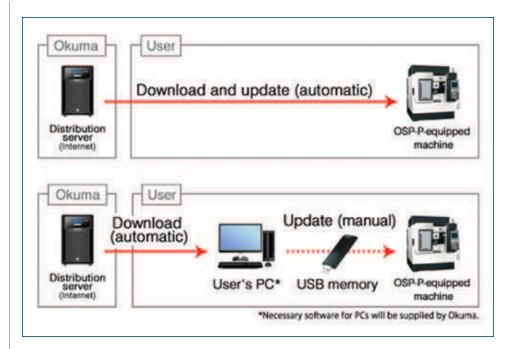


THE OKUMA OSP VIRUS PROTECTION SYSTEM USES VIRUS SCANNING APPLICATION TREND MICRO TO PROVIDE RELIABLE, SAFE, AND USER-FRIENDLY PROTECTION AGAINST HARMFUL COMPUTER VIRUSES.

Okuma America Corporation, a world leader in CNC machine tools, offers OSP Virus Protection System (OSP-VPS) that embeds a virus scanning application programming interface (VSAPI) from Trend Micro for Okuma OSP-P controls (OSP-P300/P200A/P200/P20) to prevent infection by viruses from networks or USB flash drives.

FEATURES OF OKUMA'S OSP-VPS INCLUDE:

- Reliability- Before virus pattern file is distributed and the search engines are updated, operations are verified in advance by Okuma to prevent CNC software detection errors.
- Maintainability- The system issues an alarm (D) when a virus is detected. On the display screen, operators can easily check the corrective actions taken.
- Safety- Virus scans are performed after completion of automatic and MDI operations to prevent slowing of screen responses due to scheduled virus scans.
- Usability- Pattern files and search engine updates can be done either manually via the operator's PC or automatically via the internet. The option



to update through the operator's PC or USB memory can be used for machines not connected to a LAN or those on a closed LAN.

OSP-VPS is available as a factory or field option on all OSP-P300/P200A/P200/P20 control machines. For more information on the OSP

Virus Protection System, visit http://www.okuma.com/okuma-virus-protection or contact your local Okuma distributor,http://www.okuma.com/distributors.







Member Benefits

- ELECTRICITY PROCUREMENT
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- GREEN ENERGY







"APPI provided us with not just one option, but several different options from which we could choose and saving us thousands over the term of the contract. Effort on my part was minimal and required no upfront cost, as APPI took care of all the necessary paperwork and will continue to provide ongoing customer service to my account. I would recommend APPI Energy to all NTMA members."

Steve Staszak, President Esterle Mold and Machine Company NTMA Member Stow, OH

The Association's trusted energy consultants.

10 STEPS MANAGEMENT CAN TAKE TO IMPROVE SAFETY CULTURE AND PREVENT ACCIDENTS

In a strong safety culture, everyone feels responsible for safety and pursues it on a daily basis. Employees go beyond "the call of duty" to identify unsafe conditions and behaviors, and intervene to correct them.

For instance, in a strong safety culture any worker would feel comfortable walking up to the plant manager or CEO and reminding him or her to wear safety glasses. This type of behavior would not be viewed as forward or over-zealous but would be valued by the organization and rewarded.

Likewise co-workers routinely look out for one another and point out unsafe behaviors to each other.

Companies with strong safety cultures typically experiences few at-risk behaviors, consequently they also experience low accident rates, low turnover, low absenteeism, and high productivity. They are usually companies who are extremely successful and excel in all aspects of their business.

Here are 10 steps you and your management can take to build a strong safety

culture, thereby improving safety performance and preventing accidents:

- 1. Define safety responsibilities for all levels of the organization (e.g., safety is a line management function).
- 2. Develop upstream measures (e.g., number of reports of hazards/suggestions, number of committee projects/successes, etc.).
- 3. Align management and supervisors through establishing a shared vision of safety and health goals and objectives vs. production.
- 4. Implement a process that holds managers and supervisors accountable for visibly being involved, setting the proper example, and leading a positive change for safety and health.
- 5. Evaluate and rebuild any incentives and disciplinary systems for safety and health as necessary.
- 6. Ensure the safety committee is functioning appropriately (e.g., membership, responsibilities/functions, authority, meeting management skills, etc.).
- 7. Provide multiple paths for employees to bring suggestions, concerns,

or problems forward. One mechanism should use the chain of command and ensure no repercussions. Hold supervisors and middle managers accountable for being responsive.

- 8. Develop a system that tracks and ensures the timeliness in hazard correction. Many sites have been successful in building this in with an already existing work order system.
- 9. Ensure reporting of injuries, first aids, and near misses. Educate employees on the accident pyramid and importance of reporting minor incidents. Prepare management for initial increase in incidents and rise in rates. This will occur if under-reporting exists in the organization. It will level off, then decline as the system changes take hold.
- 10. Evaluate and rebuild the incident investigation system as necessary to ensure that it is timely, complete, and effective. It should get to the root causes and avoid blaming workers.

NTMA

CUSTOM VALVE COMPONENTS PRECISION MACHINED TO ASSURE TIGHT SEALING

Custom machined valve bodies, heater blocks, manifolds and related parts requiring close tolerances and tight sealing for critical applications are being introduced by Specialized Turning, Inc. of Peabody, Massachusetts.

Specialized Custom Pressure and Flow Valve Components are machined using proprietary tooling to achieve one-directional striations along with all thread milled internal threads rather than tapped to assure tight sealing. Featuring honed inside diameters down to 0.0005" and 8 RMS surface finishes, with no tool marks or scratches, they can be produced from 316 stainless steel, Inconel®, titanium, and other high temperature alloys.

Precision machined in sizes ranging

from 0.250" up to 6" dia., Specialized Custom Pressure and Flow Valve Components are available in prototype to production quantities. Suitable for a wide range of hydraulic, pneumatic, and vacuum systems, typical components include valve bodies, heater blocks, manifolds, junction valves, valve stems, and pressure relief valves.

Specialized Custom Pressure and Flow Valve Components are priced according to configuration and quantity. Kanban and other inventory management programs are offered.





Senators Launch Effort To Put Focus On Manufacturing Jobs

Manufacturing Jobs for America features 40 bills from 22 senators



A group of 22 U.S. senators have come together to launch a campaign to get Washington to refocus on manufacturing jobs. The Manufacturing Jobs for America initiative aims to build bipartisan support for legislation that will modernize America's manufacturing sector, help American manufacturing sector, help American manufacturing grow and create jobs, and assist American workers in getting the skills to succeed in the next generation of manufacturing jobs. Together, the lawmakers have contributed 40 bills — many with bipartisan support — to the effort around four organizing principles:

- Strengthening America's 21st century workforce
- · Opening markets abroad
- Creating the conditions necessary for growth
- Expanding access to capital

"Washington needs to refocus on manufacturing jobs, which pay better and contribute more to our economy than new jobs in other sectors," U.S. Senator Chris Coons (D-Del.) said. "This campaign is designed to help manufacturing-jobs legislation that can make a real difference in our communities earn the bipartisan support needed to be-

come law. There are too many Americans still looking for work for Congress to continue to waste time lurching from crisis to crisis. Manufacturing can power our economic recovery, but Congress needs to do its part to see that potential realized."

"In order to have a strong economy and strong middle class in our country, we must continue to make things and grow things," U.S. Senator Debbie Stabenow (D-Mich.) said. "It's absolutely critical that Congress focus on a bipartisan manufacturing

strategy that will help our businesses develop advanced technologies and create new high-tech manufacturing jobs. The Manufacturing Jobs for America initiative will promote American innovation, job training opportunities, and the right tax policies to help our businesses and workers be successful in the global economy." Senator Stabenow is chair of the Senate Manufacturing Caucus.

"We must continue to revitalize our manufacturing base to create good-paying, high-quality jobs, and our bipartisan bills in this package do just that," U.S. Senator Sherrod Brown (D-Ohio) said. "My legislation cracks down on China's currency manipulation and creates a level-playing field for American workers and manufacturers. If our workers have the proper tools and resources, they can out-innovate the rest of the world. The time to revitalize American manufacturing is now, and I am proud to work with this committed group to make it happen."

The senators will work over the next few months to build support from Republicans and Democrats for these bills, and committee and subcommittee chairs have pledged to convene hearings on these issues.

Over time, added emphasis will be placed on bills that garner strong bipartisan support, and additional bills may be added to the effort.

The campaign's focus on manufacturing reflects the sector's reputation for providing high-quality jobs that lead to gains throughout the economy. Workers in manufacturing jobs earn 22 percent more in annual pay and benefits than the average worker in other industries, according to the National Association of Manufacturers. Every new manufacturing job created adds another 1.6 jobs to the local service economy, and for every dollar in manufacturing sales, another \$1.34 is added to the economy. Investments in manufacturing have a stronger impact than investments in any other economic sector.

"The Manufacturing Jobs for America initiative that supports pro-growth, pro-jobs policies in energy, tax, regulatory and workforce policy and other areas has the potential to provide a critical path towards bipartisan agreement on issues facing manufacturers and their employees," National Association of Manufacturers President Jay Timmons said. "The manufacturing sector is still

struggling to recover from the 2.3 million jobs lost during the difficult recession of 2008 and 2009. While 500,000 jobs have since been created, we still have a long road to travel. A growth agenda, that includes some of the bills that are part of the Manufacturing Jobs for America effort, is key to creating an environment that encourages job creation."

"The AFL-CIO applauds the Senate Democrats for pulling together this broad legislative package to support domestic manufacturing," AFL-CIO President Richard



U.S. Senator Chris Coons (D-Del.)

Trumka said. "This is an example of the results-oriented approach Congress should be taking to invest in growth and create jobs, rather than engaging in divisive ideological campaigns. We strongly support many of the themes that run through these bills, including action on currency manipulation and evasion of import duties, measures to increase the reshoring of production, more resources for skills and training, improved access to capital, help for start-ups, and domestic content requirements for government purchases. We look forward to working with the Senate to enact much of this legislation. The manufacturing sector in the United States has finally begun to heal, but we must create the conditions for a long-term recovery. A comprehensive approach like this one can move us a long way in that direction."

In addition to Senators Coons, Stabenow, and Brown, senators contributing policy to the Manufacturing Jobs for America campaign include Senators Tammy Baldwin (D-Wis.), Mark Begich (D-Alaska), Richard Blumenthal (D-Conn.), Dick Durbin (D-Ill.), Joe Donnelly (D-Ind.), Al Franken (D-Minn.), Kirsten Gillibrand (D-N.Y.), Kay Hagan (D-N.C.), Mary Landrieu (D-La.), Carl Levin (D-Mich.), Ed Markey (D-Mass.), Claire McCaskill (D-Mo.), Jeff Merkley (D-Ore.), Chris Murphy (D-Conn.), Mark Pryor (D-Ark.), Jack Reed (D-R.I.), Brian Schatz (D-Hawaii), Jeanne Shaheen (D-N.H.), and Mark Warner (D-Va.).

In addition to the National Association of Manufacturers and AFL-CIO, Manufacturing Jobs for America has earned the support of the Alliance

for American Manufacturing; American Automotive Policy Council; American Manufacturers Small Coalition: Association for Manufacturing Technology; Bloom Energy; BlueGreen Alliance; Dow; DuPont; Ford Motor Company; General Electric; the Information Technology & Innovation Foundation; National Association of Development Organizations; National Skills Coalition; One Voice - National Tooling & Machining Association, and Precision Metalforming Association; Progressive Policy Institute; STEM Education Coalition; Third Way; the United Autoworkers; and the United Steelworkers.

American Jobs

for America's

NTMA



HELP YOUR COMPANY CLAIM THE FEDERAL TAX CREDITS IT DESERVES



FEDERAL CREDITS MAY NOT BE EXTENDED INTO 2014 - HIRE BY DECEMBER 31, 2013

This new free publication for employers prepared for the campaign by Caplin & Drysdale provides a clear and concise understanding along with step-by-step guidance. It includes links to the

required IRS and DoL forms employers need to submit. Whereas most media articles generalize and leave out key eligibility and filing details, this guide includes what you need to know to decide if your company is eligible and how to file. The guide covers four federal tax credit programs: Returning Heroes, Wounded Warrior, Activated Military Reservist Credit for Small Businesses, and the Federal Empowerment Zone Employment Credit.

Download at: http://www. CenterForAmerica.org/tax_benefits.html

NTMA





TOTAL QUALITY LOGISTICS BENEFITS FROM HIRING NATIONAL GUARD MEMBERS

Total Quality Logistics (TQL) is the nation's second



National Guard Center for America Career Network



MIRANDA HOLLOWAY-BARRENTINE

Miranda has been with TQL since July 2012 and is a mem-

ber of the Kentucky Army National Guard. Her unit spent time in Afghanistan, returning home in March 2010. Miranda is part of the Kentucky chemical, biological, radiological, nuclear and high yield explosive (CERFP) team and is responsible for decontamination of people and equipment. The logistics industry is a fast-paced, challenging

world, and employees must have the ability to easily adapt to constantly changing situations. Miranda's manager feels she is better equipped to handle that world due to her National Guard experience. "She is able to deal with the workload and prioritize the demands on her time," says her manager, Lindsay Archer. Team leader Robby Kochhar says she is a good team player, always helping others out when they need it.

MICHAEL PRUITT

Michael is Logistics Coordinator on one of TQL's largest accounts. SPC Pruitt also is a Combat Engineer in the Ohio National Guard. He began work for TQL in the spring of 2011 and, just a few months later, Pruitt's unit received deployment orders to Afghanistan. Pruitt returned to work at TQL in October 2012. According to his manager, Michael



is morally centered and has an exceptional work ethic. He gives his customers the highest level of customer service, doing everything the right way and truly caring about his work. Michael nominated three employees of TQL for a Patriot Award for their support during his deployment.

Total Quality Logistics has received a Patriot Award for its exemplary support of employees in the National Guard and Reserves. The award is sponsored by the National Committee for Employer Support of the Guard and Reserves (ESGR). TQL is actively involved in recruiting fairs and job posting programs aimed at military applicants.

FOR MORE INFORMATION:

Kristine Glenn, Sr. Public Relations Specialist, 513-831-2600, x. 56757, KGlenn@tql.com

Matthew Disher, Military Hiring Specialist, 513-831-2600, x. 56884, MCDisher@tql.com





Military Spouse Corporat Corporate America Supports You





largest freight brokerage firm based on revenue. Founded in 1997 by Ken Oaks, the company has grown to

2,300 employees working in 20 offices in 10 states. "We hire National Guard members and veterans because

they bring talent and commitment to the job, and it's a priority



for our company to hire these qualified men and women," said Matthew Disher, Total Quality Logistics military hiring specialist and a Marine Corps veteran. "Members of the military possess the most important skills that we are looking for in our account executives. They have an outstanding work ethic, they are quick to learn new skills, and they find success in

any situation."

"The federal tax credits available when we hire qualified military are also an incentive for employers. We use federal tax credits to help fund our training programs to transition people into our company," said Disher. "We're glad to be participating in

the American Jobs for America's Heroes campaign because it enables us to post jobs for Guard members through one source for openings in our many locations."

"As an employer hiring National Guard and veterans, it's been our experience that qualifying for the available federal tax credits is a lot easier when you understand the process," said



Kristine Glenn, TQL's senior public relations specialist. "The AJAH Employer Guide for Veterans Tax Benefits is a great tool for employers to help simplify and streamline the process of qualifying for the tax credits available."

SOME OF THE TQL EMPLOYEES IN THE NATIONAL GUARD ANDREW CARPENTER



Andrew is a Sales Team Leader in the Cincinnati Office. Carpenter joined TQL in May 2009. He enlisted in the National Guard in the fall of 2010 and had to dedicate eight of the next 12 months to military training. According to Carpenter's manager, "Joining the Guard pushed Andrew's development significantly. He returned to TQL as a responsible, strong leader." Andrew is now in charge of the team's logistics

trainees and his manager is very excited about Andrew's potential as an emerging leader at TQL.



CONNECTICUT BUSINESS AND INDUSTRY ASSOCIATION RECOGNIZES FAMILY BUSINESS LEADERS

NOVEMBER 12 EVENT HONORS ACHIEVEMENTS FROM ACROSS THE STATE

The Connecticut Business & Industry Association honored more than a dozen family business leaders from across the state at a special event in Southington.

CBIA's Celebrate Connecticut's Family Business event is designed to spotlight the achievements and successes of a key component of the state's economy.

"Family businesses generate a significant share of the state's economic output, providing good jobs, while contributing greatly to local communities and our quality of life," CBIA economist Pete Gioia said today.

"We're delighted to have the opportunity to recognize the numerous achievements of Connecticut's family owned businesses and honor the many stars working for and leading these firms."

THE HONOREES INCLUDE:

- · Abercrombie Burns McKiernan & Co, Darien (Chris McKiernan and Pamela Saleh)
- Allied Printing Services Inc., Manchester (John "JR" Sommers)
- Bartlett Brainard Products, West Hartford/Farmington Valley (Darek Bouzyk, Mary Little, Jim Lynch, Neil St. Pierre and Eric Landon)
- Design Professionals, South Windsor (Peter R DeMaillie)
- Horst Engineering, East Hartford (Stanley, Steven, and Adeline Livingston)
- Hubbard Hall Inc., Waterbury (Jim Benning, Lydia Del Cerro, and Adrien Gomes)
- Lux Bond & Green, West Hartford (Bruce Skauen, Gail Gold, and Rhonda DiGiacomo)
- Motorlease Corporation, Farmington (Joe Pelehach)
- Paine's Recycling & Rubbish Removal, East Granby (Robert Higley)
- Parker Medical, Inc., Bridgewater (William and Geraldine Holland)
- Reynolds' Garage & Marine Inc., Lyme (Marty Radomski)
- The Siemon Company, Watertown (Nancy Jones)
- Windsor Marketing Group, Suffield (Kevin Armata)

The event is part of CBIA's Family Business Program, launched in 2012 to support and grow the state's thousands of family businesses. The program is sponsored by CohnReznick, First Niagara, and Reid & Riege LLC.



CONNECTICUT BUSINESS AND INDUSTRY ASSOCIATION HONORS LIVINGSTON FAMILY

The Connecticut Business & Industry Association honored the second generation leaders of the Livingston Family for their contributions to family business. CBIA's Family Business program was started in 2012 to support Connecticut's thousands of family owned businesses.

STANLEY LIVINGSTON

The oldest Livingston brother, has worked at Horst Engineering since the early -1960's. His nearly 50 years of service are marked by so many accomplishments. He is a fantastic salesperson and is well known in the aerospace manufacturing community. He has generously mentored many other businesspeople during his long career.

STEVEN LIVINGSTON

The middle Livingston brother, has also worked at Horst Engineering since the early-1960's. He is our historian and story-teller. His engineering and manufacturing expertise laid the groundwork for many of our technology investments. His diligence set the tone for a culture of high precision. He gives his time to many community organizations.

ADELINE LIVINGSTON

Stanley's spouse, has worked at Horst Engineering since 1982. For more than 20 years, she was the hub of our operations. She had her pulse on all of our accounting, human resources, and administration func-



tions. She established many of our business processes and was a major influence. She also supported the extended family, helping Horst Engineering's founders, Harry and Sylvia Livingston. She exemplifies the Horst Engineering work ethic.

Horst Engineering, Sterling Machine, Thread Rolling Inc., and the Livingston Family are honored to be mentioned with the other Connecticut-based distinguished family firms.





FLATE AWARDEES: A SYNERGISTIC ALLIANCE TO EDUCATE & TRAIN FLORIDA'S HIGH-TECH WORKFORCE

FLATE's outreach strategy encompasses working with industry leaders and educational partners across the state. These synergistic alliances have enabled FLATE to expand its outreach initiatives, streamline curriculum, and offer professional development opportunities that have established crosswalks between academia and industry. While these strategic initiatives are spearheaded by FLATE, there are many individuals who over the years have collaborated with FLATE in its mission to promote, educate, and train Florida's high-tech workforce. These individuals deserve special mention, and are recognized by FLATE each year during the Manufacturers Association of Florida, Manufacturers Summit.

This year's awardees join a distinguished group of educators and industry professionals who have made significant contributions in enhancing technician training and education in Florida. Starting on the secondary education level, Dale Toney, recipient of the 2013 FLATE Secondary Educator of the Year Award, exemplifies qualities sought in an educator. Toney who is the robotics and automation teacher at Marion Technical Institute (MTI) in Ocala has been teaching engineering technology for several years.



Toney transfers his passion for engineering by finding creative ways to capture students' interest. He has established strong partnerships not only with local industry, but with teachers and community college educators across Florida. His program at MTI is aligned with the industry driven, MSSC CPT certification which has added to the skills set of his

students, making them better qualified for higher paying jobs. Toney is big on handson projects, and regularly takes students on local industry tours, or invites industry professionals to provide first-hand, realworld perspective to students. Most recently, he won a scholarship to attend the HI-TEC conference in Austin where he participated in conference sessions about new technologies, student recruitment/retention, and strengthening industry/workforce partnerships.

On the post-secondary education level, Dr. Alessandro Anzalone, professor and



director of the A.S. degree in engineering technology (A.S.E.T), has been a leading factor in driving enrollment of students into the A.S.E.T program at Hillsborough Community College in Brandon. "Dr. Anzalone's excellent teaching, mentoring and outreach efforts have done much to dramatically expand the ET degree and certificate program at HCC" said Sabrina Peacock, dean of Arts & Sciences at HCC. Under him, enrollment into the A.S.E.T program has sharply risen from two students to 180, and is steadily increasing every academic year.

Anzalone believes the strength of the A.S.E.T degree lies in its industry-centric focus which has helped all graduates to either get a better job, or climb up the corporate latter. "The degree is also adaptable and flexible, and offers transferability of skills and knowledge across various engineering sectors." He credits FLATE for being a driving force in ensuring the success of the program at HCC and those offered at 13 state and community colleges across the state. "The most important

contribution of FLATE is transforming manufacturing technology into engineering technology" said Anzalone. "This has not only dispelled negative connotations attached to old world manufacturing, but aligned it with engineering so students/parents view it in a slightly different perspective" Anzalone said.

Outside his role as an educator, Anzalone is involved in a number of hightech projects. Anzalone is well-connected with other institutions of higher education, local manufacturing industry. He has been working on an innovative project at USF to design, build, and test prototype of a product that can be used primarily in developing countries. He is also involved in the ETAM educational project partnering with Polk State College, Tallahassee Community College and State College of Florida. "I believe this cross pollination between schools is very important as it leads to a better streamlined curriculum that prepares students for the workforce."

On the industry end of the continuum, Roy Sweatman, president and CEO of Southern Manufacturing Technologies, a leading high-tech manufacturer in Tampa, has been a prominent figure in representing



the voice of local industry, and establishing a platform for industry to engage with students as well as educators. Sweatman has hosted many "Made in Florida" industry tours for middle and high school students in Pinellas, Pasco and Hillsborough counties. Through these tours, Sweatman has met, hired as well as mentored many students for part time work giving them a real-world view about manufacturing careers. Sweatman is on the advisory committee of the Pinellas Technical Education

Center's machining program, the Florida West Coast Apprentice Board, and several other local workforce and education advisory committees. "Sweatman has promoted a very open and receptive culture, making SMT a warm and welcoming place for students to get a first-hand view of advanced manufacturing operations and careers supports industry at all levels" said Dr. Marilyn Barger, executive director of FLATE.

At the national level, Roy Sweatman is an appointed member of the U.S Department of Commerce's Manufacturing Council for the past two years as well as that organizations' subcommittee for workforce development. In that capacity, he and 24 other industry leaders advise the Secretary of Commerce on all aspects of competi-



tiveness and respond to regular input/ request from Florida manufacturers and regional organizations to represent their interests at the national level. Roy has also served in numerous leadership roles in the National Tooling and Machine Association (NMTA) for over 20 years, focusing on both the manufacturing industry and its workforce issues. Within Florida, Roy participates in the Manufacturers Association of Florida (MAF) annual meeting, and focuses on impacting/ influencing state legislators for manufacturing friendly policies and regulations.

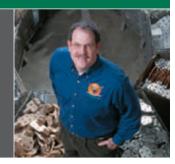
2013 marks the seventh year of the FLATE awards. Since the implementation of the awards program in 2006, FLATE has recognized 14 educators in secondary and post-secondary educational institutions, and seven industry partners. For more information on the FLATE awards, or to nominate an awardee for next year, visit www.fl-ate.org, or contact Dr. Marilyn Barger, executive director of FLATE at barger@fl-ate.org/813.259.6578.



Helping manufacturers produce results. A Right-From-The-Start™ ERP success story.

"The busier we got, the more we needed a powerful ERP system up and running. Out here, there's no time for down time."

> Andy Bubulka, Manufacturing Plant Manager H-J Enterprises, St. Louis, MO



The First Time

"That's why we went with Global Shop Solutions. They were in, they were out, and we were seeing major new efficiencies—right from the start. What a tremendous difference their ERP system, and their people, made in accelerating our workflow, lowering overall costs, and setting the stage for unconstrained growth. Very powerful. Only regret is that we didn't go with them years ago."

For a **FREE** copy of "Get ERP Right The First Time" call 1-800-364-5958 or visit www.GlobalShopSolutions.com.



SANDVIK COROMANT APPOINTS EDUARDO MARTIN AS PRESIDENT OF MARKET AREA AMERICAS

Sandvik
Coromant, the
world's leading producer
of cutting tools
for the metal
cutting industry, recently
a p p o i n t e d
E d u a r d o
Martin as
President of



Market Area Americas (MAA), which includes Argentina, Brazil, Canada, Chile, Mexico and the United States. Eduardo, who previously led Sandvik Coromant Company in Italy, succeeds John Israelsson who moved to the position of President within Sandvik Hyperion.

Eduardo began his career with Sandvik over 25 years ago and brings insight and experience to his new post. Starting as a machinist, he has also worked in quality control and as a drilling specialist. He spent three years of his career in Sweden, working in product management at Sandvik Coromant. Eduardo was responsible for the Iberica region (Spain and Portugal) for Sandvik Coromant before serving as president of Italy, Spain and Portugal markets. Earning his MBA in Madrid and truly skilled as an international communicator, Eduardo is fluent in Spanish, Swedish, English, Portuguese and Italian.

"It is exciting to be part of a growing market with a lot of innovation and diversity," says Eduardo. "I've always wanted to work in a large market that is agile and technologically advanced, where developments happen fast." Eduardo continues, "I look forward to working with a very talented and dynamic team. From Argentina to Canada, one of our greatest strengths in the Americas is our people."



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Hannover Messe 2014

APRIL 7-11, HANNOVER, GERMANY

WELCOME TO THE WORLD'S LEADING TRADE FAIR FOR INDUSTRIAL TECHNOLOGY.

A PERFECT NETWORK OF SEVEN FLAGSHIP FAIRS

International appeal, coverage of all the relevant issues and a concentration of senior decisionmakers make HANNOVER MESSE the premier destination for doing new business and making new contacts – and the first choice for industry professionals, politicians and the scientific community.

The core display categories at HANNOVER MESSE are inspired by global megatrends and drivers of growth such as energy and environmental engineering, mobility and urbanization. All these themes are addressed in the 7 leading trade shows in the 2013 line-up.

If you are interested in attending this show, please contact Emily Lipovan at elipovan@ntma.org



2014 TRADESHOW LINEUP

SYNERGISTIC TECHNOLOGIES. GET THE FULL PICTURE AT HANNOVER MESSE. WWW.HANNOVERMESSE.DE



ENERGY

The energy industry worldwide is facing the need for change.

At the trade fair Energy trade visitors from across the globe can discover how, with the right mix and control, state-of-the-art

technology and solutions can meet this challenge. This is the only trade fair for the energy sector which covers the entire value chain – from energy generation, supply and storage through to transmission and distribution to smart grids. All at one venue.



MOBILI TEC

Leading Trade Fair for Hybrid and Electric Powertrain Technologies, Mobile Energy Storage and Alternative Mobility Solutions

This leading trade fair is now firmly established as

the No.1 business platform for hybrid and electric mobility technologies. The entire industry comes to Hanover to meet its customers worldwide. This is where the key contracts are signed, projects launched and joint ventures further developed.



INDUSTRIAL GREENTEC

Leading Trade Fair for Environmental Technology Following its successful launch, the Leading Trade Fair for Environmental Technology is being further expanded. Themes such as sustainable production,

techniques for safeguarding air and water quality and the recycling industry attract a lot of interest from visitors and the media.

Green technologies, developed by industry for industry, form the core of the exhibition.



INDUSTRIAL AUTOMATION

The international profile of the event and the broad spectrum of topics and trends covered by Industrial Automation offers exhibitors new opportunities to tap into global markets and thus helps secure your

business success.

In 2014 Industrial Automation will again take up the themes that interest trade visitors from various sectors: the networking of automation and IT, process automation, energy and materials efficiency, robotics and systems integration, as well as smart systems offering solutions in assembly and handling.



DIGITAL FACTORY

Leading Trade Fair for Integrated Processes and IT Solutions.

From the very start the integration of all processes in the industrial value chain has been the core

topic of Digital Factory, the Leading Trade Fair for Integrated Processes and IT Solutions.

This focus was reflected by the HANNOVER MESSE slogan in 2013 – Integrated Industry. Embedded software is the most important driver of innovative products, while IT solutions such as those showcased at Digital Factory are the key tools for developing and manufacturing these products.



INDUSTRIAL SUPPLY

Boasting highly specialized expertise and adaptability, industrial suppliers play an important role in their customers' ongoing drive for innovation.

The components and assemblies supplied by these specialist subcontractors are vital for the manufacture of all downstream end products. This symbiotic relationship makes today's industrial suppliers the forerunners of what we now call "Integrated Industry". Exhibitors at Industrial Supply will show how the growing demands of customers can be met through intelligent components and assemblies and collaborative partnerships. Attended by decision-makers from all your user sectors and over 50 nations, this show is the ideal place for you to market your solutions for materials, components, systems and processes.



RESEARCH & TECHNOLOGY

Leading Trade Fair for R&D and Technology Transfer. Industry worldwide faces enormous challenges.

In order to deal with complex issues such as the continuing integration of industrial processes, the transition to renewable energy, the efficient use of resources, sustainability, mobility, lightweight construction and the development of alternative resources and new materials, industry needs science. At the same time, R&D professionals need eff ective partners in industry and government in order to market their innovations successfully.

OKUMA AMERICA'S EDUCATIONAL "VLOGS" NOW AVAILABLE ON YOUTUBE



VIDEO-BLOG SERIES EDUCATING MANUFACTURERS ON HOW TO ADDRESS THE SKILLS GAP ARE NOW AVAILABLE ON OKUMA YOUTUBE.

Okuma America Corporation, a world leader in CNC machine tools, launches a series of videos-blogs ("vlogs") dedicated to helping machinists bridge the skills gap by demonstrating how technology can help end-users increase their overall productivity while maintaining lean operations. The vlogs introduce Okuma-exclusive technology and the technology of the more than 40 members of Partners in THINC.

VLOG TOPICS INCLUDE:

- Collision Avoidance: 5 Keys that Make it or Break it
- Automated Gaging Flexible, Low-Cost Alternative
 - 5 Step Pre-Automation Checklist
 - CNC Lathe Workshop



- Cut the Cord! Wireless Gages Set
- Hot Job? Quick Change Fixturing Can Save Your Day
 - Streamline Your Automated Gaging

of Multiple Dimensions

"Our vlogs serve as a valuable resource to many of our end-users. Viewers are able to learn ways to help them increase their output without increasing manpower – at their leisure, all in less than five minutes," states Jeff Estes, Director of Partners in THINC and host of the Okuma's vlogs.

To watch Okuma's series of vlogs, visit the vlog playlist at http://bit.ly/16SHqAg. If you wish to stay informed and receive updated blogs, e-newsletters, and whitepapers, visit http://www.okuma.com/resources.



You'll Like your odds in the \$25,000 FedEx Advantage Sweepstakes!

Enroll now in the NTMA Shipping Program at

PartnerShip.com/54ntma and you'll receive one entry into the FedEx Advantage Sweepstakes. Once you're enrolled, every eligible FedEx® shipment you make — up to 50 — from Nov. 4, 2013, through Dec. 27, 2013, becomes another chance to win over 100 prizes totaling more than \$25,000.

If you're already enrolled in the NTMA Shipping Program, <u>click here to</u> <u>register today</u> and receive your first entry into the sweepstakes, and to receive additional chances based on your FedEx® shipping during the Sweepstakes time period. For complete details see Official Rules.





This tip is brought to you by PartnerShip®, the company that manages the NTMA Shipping Program. For more information or to enroll in the program, email sales@PartnerShip.com or call 800-599-2902.



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CONFERENCING

With NTMA and Pragmatic Conferencing, you could enjoy:

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- Integrated codes for audio & web
- Easy to use self-serve portal
- Automated billing codes for easy cost allocation
- Emailed invoices
- Earn points/miles with Points.com on audio conference calls

MOBILE

Send us your recent invoice, and we'll provide a complimentary assessment that includes:

- Monthly cellular spend & usage trends
- Cost comparison chart detailing our best-in-market plans from multiple carriers
- Cellular optimization negotiations with your cellular carrier
- Access to favorable roaming rates (can provide 40-60% off)
- Ability to facilitate carrier switch

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NTMA



DID YOU KNOW?

GUIDE TO MEMBER SERVICES

NTMA NOW OFFERS AN ONLINE PRE-EMPLOYMENT MECHANICAL APTITUDE ASSESSMENT

THE COST IS ONLY \$35.00 AND THE RESULTS ARE IMMEDIATE!

THE PRE-EMPLOYMENT MECHANICAL APTITUDE ASSESSMENT IS...

- a validated employment test and assessment tool
- skills-based as opposed to the standard personality or profile testing
- comprised of four topics of mechanical aptitude testing in:
 - Applied Math
 - Basic Spatial Relations
 - Comprehension
 - •Communication Skills

THE PRE-EMPLOYMENT MECHANICAL APTITUDE ASSESSMENT CAN BE USED FOR...

- selecting the best training and development candidate
- reducing employee turnover
- screening employee applicants with a more predictable outcome
- a non-bias supplement to filter out potential employees without the basic skills to be successful in the machine trades.

Structured interviews and/or behavioral interviewing are a very subjective process. By using validated employment tests and assessment tools, a company adds a much needed element of objectivity, especially regarding mechanical ability evaluations.

FOR MORE INFORMATION:

• Contact Rich Basalla at NTMA headquarters (rbasalla@ntma.org or 216.264.2855).





EXACT Jobboss Bom Import

REDUCE HOURS SPENT BY YOURTEAM AND INCREASE ACCURACY OF CONVERTING COMPLEX BOM DATA INTO PRODUCTION REQUIREMENTS

Exact JobBOSS announces the release of the JobBOSS BOM Import, which automates the complex and time consuming process of entering BOM data into production requirements.

The JobBOSS BOM Import captures data from a single or multi-level BOM structure and imports it into JobBOSS to create quotes and jobs. In addition, assemblies and materials listed in the BOM that are not currently entered into JobBOSS, can be automatically created to ensure the material structure is in place for the quote or order.

JobBOSS customers identified a need to reduce the significant number of hours required to manually enter production

"JobBOSS customers indicate a time savings of up to 2 hours per day, per engineer, which provides a quick return on investment (ROI). The reduction of entry hours along with the increased accuracy of production requirements has a significantly positive impact on the shop's overall operations"

Sue Irby, Sr. Product Manager.

data related to a BOM and to reduce the errors that occur during the process.

CALENDAR OF EVENTS

TEAM LEADER MEETING

January 16, 2014 Tampa, FL

CHAPTER LEADERSHIP SUMMIT

January 16-17, 2014 Tampa, FL

MFG MEETING

March 5-8, 2014 Phoenix, AZ

MFG MEETING

March 5-8, 2014 Phoenix, AZ

HANNOVER MESSE TRADE SHOW

April 7–11, 2014

Hannover, Germany

NTMA/PMA ONE VOICE LEGISLATIVE CONFERENCE

May 6-7, 2014 Washington, DC

NATIONAL ROBOTICS LEAGUE COMPETITION

May 16-17, 2014 Cleveland, OH

NTMA PURCHASING FAIR

TBA

NTMA FALL CONFERENCE

October 22-25, 2014 New Orleans, LA

The result is an automated import process which removes the need to manually enter BOM data as production requirements. What would have taken up to a week of engineering and staff time to complete now only takes minutes with the JobBOSS BOM Import. The automation also reduces the downstream consequences of having expensive, inaccurate requirements on the shop floor.

To learn more, please contact your JobBOSS representative.





THE RECORD

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NATIONAL TOOLING & MACHINING ASSOCIATION 1357 Rockside Rd. Cleveland, OH 44134

As we close on the year 2013, our association recognizes that we are nothing without our members, who work everyday with integrity, ethics and leadership helping make the United States a powerhouse in the global manufacturing economy.

Thank you for continue belief in and investment with the NTMA

On behalf of the officers, board of trustees and staff of the National Tooling and Machining Association, we wish you only the best during this blessed holiday season.