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OFFICIAL SHOW NEWS | TUESDAY, NOVEMBER 19, 2013

Economic Forecast: Current Indicators Point to Sustained Growth

Save for a hiccup in the second half of 2014, Economist **Alan Beaulieu** sees continued growth and expansion opportunities for U.S. manufacturers through 2017. Speaking at yesterday's *Navigating The Fiscal Reality* keynote presentation, Beaulieu, president of the consulting firm ITR Economics, said there was a lot to be enthusiastic about. Right now interest rates are low, the Gross Domestic Product is at record highs, and banks are willing to lend. "If you're not happy with the current economy, then there isn't much to be happy about," he said.

Even though 40 percent of Americans think the country is in recession, it's actually expanding, Beaulieu said. Things aren't growing as quickly as they did in the 90s, but there is growth at a normal run rate.

Right now is the best time for manufacturers to borrow money to invest in their companies, he said, as rising interest rates and new Dodd-Frank legislation next year could impede growth and expansion opportunities. Manufacturers can use the dip in the second half of 2014 to install new equipment, train workforces, and ready their companies for the three years of increased growth he sees happening from the beginning of 2015 through 2017.

Reasons To Be Optimistic About Current U.S. Economy

Beaulieu noted strong retail sales, the lowest consumer debt-to-income ratio in 30 years, the lowest consumer credit delinquencies in 23 years, and the Federal Reserve infusing money into the stock market as reasons to have

continued on page 4

DON'T MISS TODAY!

Keynote: Accelerating Performance Through Flawless Execution
8:30 a.m.,
FABTECH Theater,
Grand Concourse

AWS 2013 Robotic Arc Welding Contest
9:30 a.m. – 4:45 p.m.,
Booth N2099

Welding Wars Competition
9:30 a.m. – 4:45 p.m.,
Booth N2293

Professional Welders Competition
10:00 a.m. – 5:00 p.m.,
Booth N2299

Managing the Next Generation of Skilled Machine Operators

Every day 8,000 U.S. Baby Boomers turn 65 and consider retirement. Taking their place in the workforce are Generation Xers and Millennials, the former sharing similar Boomer generation work ethics and values and the latter often confounding their employers.

Finding and keeping the right operator to program and run their two turning center lathes has been a learning experience for Chriss and Tony Buban — owners of Submersible Systems in Huntington Beach, Calif.

Six years ago they hired a qualified graduate from a nearby community college. Their employee skillfully operated the sophisticated equipment but eventually felt he could do better elsewhere and went to work at another shop.

"We didn't know what we were missing until he left," Chriss Buban said, "And finding a replacement was proving very difficult." Within 10 months, however, he was back at Submersible Systems because the other job was "boring" and "offered no creativity."

Welcome to managing Millennials, a population born between 1977–1997 that attracts attention because of its sheer size and marked difference in behavior from previous generations. There are approximately 80 million Boomers (born 1946–1964), 41 million Xers (born 1965–1976), and 75 million Millennials, according to Diane Thielfoldt of The Learning Café, a group that specializes in multi-generational workforces. "The great irony," Thielfoldt says, "Is what we as boomers nurtured in our kids, we don't prefer in our employees."

Millennials have been raised to ask why and to ask for assistance when completing projects, which may give the appearance of incompetence, she says. But this misconception, among many others, is far from true. Mostly, employers will need to deal differently with Millennials. This is a harbinger of a changing workforce as Boomers, and subsequently Xers, begin retiring.

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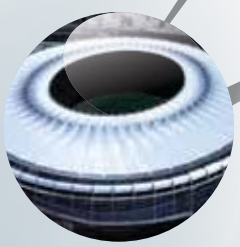

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- Be here for live demos with the Warrior™ multi-process welding machine
- See live demos of PowerCut® manual plasma cutting systems
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- Get a first look at Marathon Pac™ 2 – engineered for productivity and ease of use
- Have a look at our newest PPE, including the Warrior™ Tech welding helmet

To find out how our welding and cutting solutions can help with your next project, **visit esabna.com/fabtech2013** and stop by booths **N1449 and N1145 in the North Hall.**

AT THE CORE FABTECH 2013

ESAB Welding & Cutting Products / esabna.com

Attendees Share Strategies for Future Success

Thousands of attendees flooded the show floor yesterday morning as FABTECH kicked off its largest show in history. Just as the growth of the show reflects improving economic conditions, many of the attending companies share the positive sentiment and are looking to expand production capacity and launch new products. Some are taking advantage of the favorable interest rates to gear up for growth in the next several years.

At the same time, the concerns about the effects of policy and the new taxes going into effect in 2014, as well as the continuing uncertainty in the global markets, remain a powerful incentive to be cautious with the cash reserves. Qualified labor also continues to be a challenge. Manufacturing is expected to make a leap back to the U.S., but not all sectors have seen it yet.

In this complicated balancing act, companies are concentrating on equipment and services that would better position them for growth, with much of the attention going towards cutting-edge technology.

Glenn Hobbs, Field Director, Nashville Fab, Nashville, Tenn.

"We're here to look at the new technology that would make us faster and more efficient," said Glenn Hobbs, Field Director for Nashville Fab in Nashville, TN. "We know the type of machine we want, and we're planning to spend about $200,000 on it."

Hobbs noted that his company is taking advantage of the economic opportunities to take its growth to new heights. "Right now we have to bid the jobs cheap so there's not that much to turn around and reinvest," he said. "We have a line of credit with our bank, and the interest rates are low, so we use it. It's a great time to borrow and gear up for 2015."

Concerned about the effects of the Affordable Care Act and taxation hikes, Hobbs predicts that any changes would be factored into the price of work and passed on to the consumer. The biggest challenge for his company? The lack of a qualified workforce. "You can find workers out there that are either not qualified or they can't pass a drug test," he said. "You go through quite a few before you find the right one."

Nate Pattison and Les Jensen, engineers for Pridgeon and Clay, Grand Rapids, Mich.

Scoping out new machinery was at the top of the list for Nate Pattison and Les Jensen, engineers with Grand Rapids, MI-based Pridgeon and Clay. They were looking to add to

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Current Economic Indicators Point To Sustained Growth

continued from page 1

confidence in the current economy. Additionally, banks have more than $1.9 trillion in reserves. That, and current low interest rates are prime reasons companies should be borrowing to invest in the future.

What To Expect in 2014

Sales for the first half of the year will be positive but there will be a mild contraction in the second half, Beaulieu said. The worst thing most segments of the market will see is level sales, he added, except in the auto industry, which will see drops closer to 6 percent, and anything closely tied to consumer spending. Europe will experience the same trends but Mexico won't. Metal fabricating and metal working machinery could see drops under 3 percent from 2013 levels.

Farm machinery and civilian aircraft manufacturers will see growth next year, he said, as orders are strong in those areas.

Beaulieu stresses that companies shouldn't wait until next year to borrow money, but should do it now so they can get equipment and processes in place during the soft economy.

Wages aren't rising fast enough to keep up with inflation and Beaulieu sees this not only as a problem for consumer spending, but also for decreased productivity from disheartened employees. The Affordable Care Act also will reduce consumer spending, as more out-of-pocket money will be spent on premiums, he said. Plus, higher tax rates that begin in 2014 will have an effect on the economy.

Longer-Term Forecasts

Beaulieu expects that employment will continue to grow but will slow down toward the middle of 2014. He also sees interest rates inching up as the Federal Reserve returns to mean interest rates as the economy needs less government support. Taxes will increase, too. A result will be inflation, which Beaulieu predicts could hit in early 2015. "Dealing with increased interest rates and inflation isn't impossible," he said, "It just takes a different mindset. We did it in the 70s and we can do it again.

The energy sector will be a continued source of jobs and revenue for the United States, Beaulieu said, pointing to fracking and the resulting diminished need for overseas oil.

More manufacturing is returning to the United States and projects like the expansion of the Panama Canal will help companies, especially those on the east coast.

As the approximately 80 million U.S. Baby Boomers retire, Beaulieu points out that the increased strain on Medicare and Social Security will have an effect on the economy.

Beaulieu forecasts the next big economic downturn will happen in 2019. He suggests employers train their Millennial employees (those born between 1977–1997) to cope with inflation, as that too will become a growing concern. This same group also will be saddled with the rising national debt, continued sequestration cuts, and a national budget that isn't predicted to be balanced until 2060, Beaulieu said.

Reform could change the picture and Beaulieu pointed to the Canadian government that has used stimulus funds to successfully grow its economy while also working toward a balanced budget. ■

Sparks Fly at Welding Competition

Welding pros started taking up the torch yesterday in hopes of earning the title of Best Welder in America. With a top prize of $2,500 at stake, welders over the age of 18 are encouraged to sign-up and show off their skills at **Booth N2299.** Spectators are invited to watch from the sidelines.

This is the fifth time the Professional Welder's Competition makes its way to Chicago. Competitors need to create a single-pass fillet weld low-carbon steel within a 5-minute time limit. A panel of certified welding inspectors (CWI) will then evaluate all the weldments to the current AWS D1.1 based on weld size and overall appearance. Speed also will be taken into consideration.

No reservations are required for the competition, which is sponsored by the American Welding Society and coordinated by its Indiana chapter. Participants can stop by Booth N2299 from 9 a.m. to 5 p.m. today. The minimum age requirement is 18 and the entrance fee is $15.

So far approximately 100 contestants have tried out their stick welding skills and a group of students from local colleges will test their skills today.

In addition to the $2,500 grand prize, the second-place winner will receive a $1,000 prize, the third-place winner will receive a $500 prize and each of the top 12 welders will receive an AWS bag with vendor donations and an official AWS Education Services t-shirt. Winners will be announced tomorrow at 11 a.m. in **Booth N2299.** ■

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Careers in Welding Trailer Back at FABTECH

After a five-month tour across 13 U.S cities, the American Welding Society's virtual welding trailer has arrived at McCormick Place.

The 53-foot Careers in Welding Trailer, which was unveiled at FABTECH in 2011, is back on the show floor this year and ready for visitors to put their virtual welding skills to the test.

The trailer features five VRTEX® 360 Virtual Reality Arc Welding trainers which gives participants the chance to practice welding using a virtual welding gun and helmet. FABTECH attendees can don the helmets and practice welding in a virtual environment. And for the competitive welders out there, the system awards points based on your welding skill.

In addition to the simulators, the Careers in Welding Trailer features other interactive educational exhibits, including a display wall featuring trivia questions, fun facts, and industry artifacts; a "Day in the Life of a Welder" exhibit with videos depicting real-life environments in which welders work; a life-size welder highlighting welding as a safe profession; a new video produced by the American Welding Society which depicts women in various welding professions; a social media kiosk allowing visitors to take their photo and email it to themselves; welding scholarship information; and more.

And this year, thanks to a partnership with Lincoln Electric, visitors on the tour stop had the chance to sign up for a contest to win a Lincoln Electric welder or auto-darkening helmet. One of each was given away at every single stop this year.

The trailer tour is part of the American Welding Society's initiative to promote welding and skilled trades to a younger generation. According to Weld-Ed, a National Science Foundation funded center, at least 238,693 new and replacement welding professionals will be needed by the year 2019. The 'Careers in Welding' trailer may be one of the most innovative ways to get youths interested in welding.

"There is a real need for welders in today's workforce, and the Careers in Welding Trailer is a fun and interactive way to go around the country to recruit young people and give them the opportunity to explore what welding is all about," said Monica Pfarr, corporate director, workforce development, American Welding Society.

In 2012, the trailer saw 37,000 visitors and more than 55,000 virtual welds performed. Those numbers are expected to be even higher for this year's tour, which saw the trailer make stops at high-profile events like the Boy Scout Jamboree in West Virginia, the Ohio State Fair, the World Maker Faire in New York City, and the Future Farmers of America National Convention and Expo.

The Careers in Welding Trailer is the only mobile exhibit on the road today that is educating young people about career opportunities in welding and allowing them the chance to virtually experience the act of welding two metals together.

The trailer is expected to hit the road again in the spring of 2014 for another cross-country tour but don't miss your chance to see it right on the FABTECH show floor. The trailer is located at **booth N2499** in the North Hall. ■

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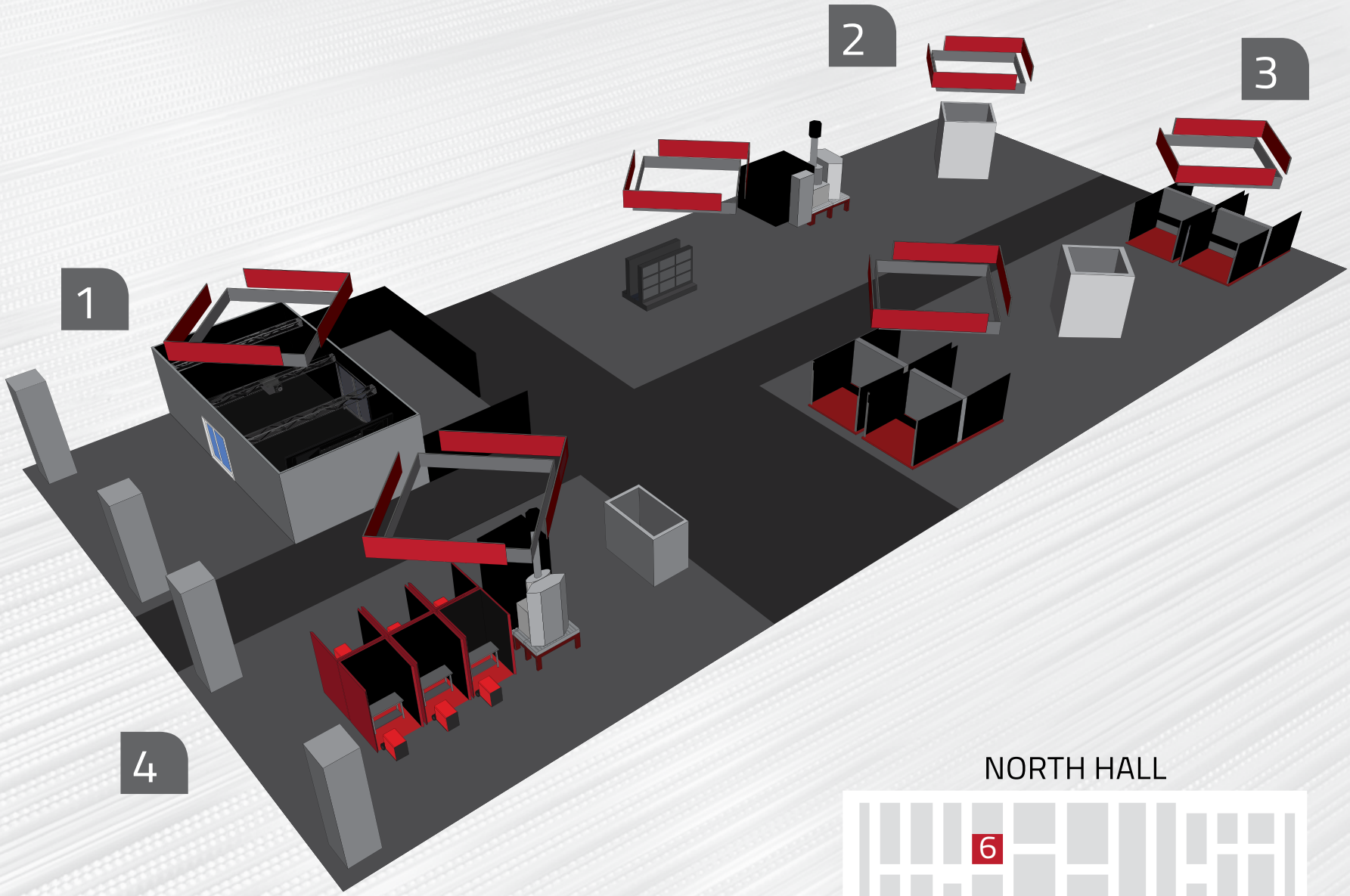

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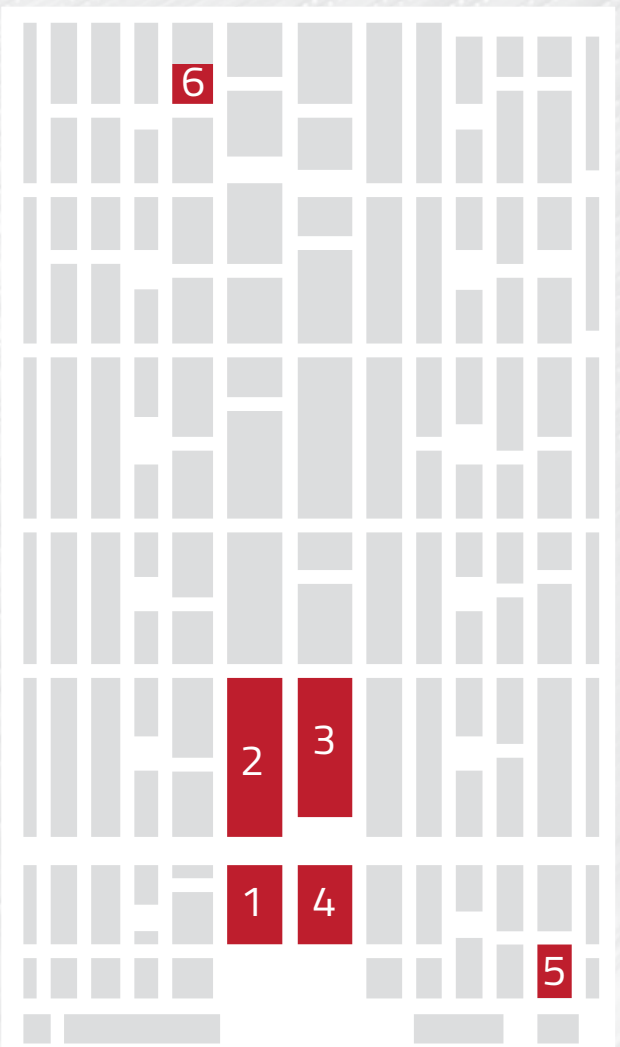

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What Keeps Supply Chain Managers Up at Night?

Thirty years ago, "supply chain management" focused on getting materials in the door to use in manufacturing finished products. Today, the definition of supply chain has broadened to include the entire lifecycle of a product.

From sourcing raw materials to manufacturing finished goods to delivering products to customers to satisfying warranty commitments, successful manufacturers now look at their supply chain holistically. At every step of this new supply chain paradigm, there are opportunities to improve, efficiencies to capture, and risks to manage.

There are multiple aspects of a supply chain that can break down and disrupt operations, especially when working with international suppliers. Consider these examples:

• Will it get to you when you need it? Keeping a manufacturing plant operating at full capacity requires a dependable flow of materials. A plant can be idled unexpectedly when a tsunami in Japan puts suppliers out of business, or volcanic ash high above Europe grounds the air transport scheduled to deliver materials to a manufacturer.

• Will it be what you ordered? Manufacturers issue specifications for both the quality and functionality of materials they expect to get from suppliers. But counterfeit components are a growing concern, as demonstrated by the seizure of 64,000 fake automobile parts in Dubai last year. The parts, which carried the brand names of major automotive companies but were only shoddy counterfeits, were declared a major threat to safety and destroyed. In addition to counterfeits, contamination of raw materials can be an issue, through either the deliberate substitution of cheaper ingredients or the lack of proper handling and quality control by suppliers. Getting the wrong materials, especially if the problem is not caught before the manufacturing process, can severely impact the quality of a company's finished goods.

• Will it affect your reputation? The source of supplies can come back to haunt a company, as the Bangladesh factory collapse did for clothing retailers, or as alleged mistreatment of Chinese factory workers did for a technology company. In today's hyper-connected world, the integrity of a supplier has implications for the manufacturer because customers often react to scandals by shunning the associated products.

These supply chain risks are well-recognized, but many others lurk within a manufacturing operation. The failure of both equipment and human assets can put an operation at risk. While in most cases a broken machine can be repaired or a different worker can be hired, the real risk comes from that single point of failure that can make it difficult for a company to meet their commitments to customers. These are examples of the bottlenecks that must be identified and addressed for effective risk management.

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Kelly®, a leading employment provider, will be on-site at **booth N1299** and in the **North Hall lobby**. Representatives will be on-hand to speak with job seekers about career opportunities nationwide with manufacturers in top industries including automotive, aerospace, pharmaceuticals, petrochemical, medical device, food and beverage, semi-conductors and more. Visit our booth to:

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Corporate offices are located in Beachwood, OH. Facilities are located in Charlotte, Cleveland, Houston, and Phoenix.

See us at FABTECH 2013 Chicago Nov. 18-21 Booth N417

ESAB'S New Combination Waterjet/Plasma CNC Cutting Machine Delivers Best of Both Technologies

ESAB Cutting Systems demonstrates the new Hydrocut™ LX waterjet shape cutting machine, a combined waterjet and plasma cutting system, at FABTECH 2013, Booth N1145. The Hydrocut CNC shape cutting machine uses the patented combination of thermal and non-thermal processes operating on the same gantry, allowing the machine to cut with the high accuracy of waterjet where needed, but employ the high speed and low cost of plasma whenever possible.

Patented System Assures Cutting Speed and Precision

By combining waterjet and plasma on the same machine, both tools can be used on the same parts. High precision contours can be cut with waterjet, while non-critical contours can be cut with plasma. This patented system allows users to obtain precise cuts when needed without sacrificing speed on every cut. Parts that are suited for the waterjet-plasma combination can be cut in a fraction of the time, resulting in dramatic cost reduction and productivity increase when compared to waterjet cutting alone.

The Hydrocut LX is a heavy-duty gantry with a high-stiffness beam design featuring dual precision linear rails and precision rack and pinion drives. It is designed to cover large working areas and full size sheets, and can be equipped with up to four waterjet stations, and can also carry up to two high-definition plasma stations, featuring ESAB's m3 Precision Plasmarc system.

90,000 PSI Ultra High Pressure Waterjet Technology

The Hydrocut LX is equipped with the latest in waterjet cutting technology, featuring KMT's 90,000 PSI capability for increased cutting speed and reduced abrasive consumption. By increasing the water pressure from 60KPSI to 90KPSI the abrasive is accelerated to a higher speed, thereby cutting faster while using less. This helps lower operating cost, because the cost of abrasive can be as much as 75% of the operating cost of waterjet.

Fully Integrated Process Control

ESAB's m3 Precision Plasmarc system provides high precision cutting on carbon steel, stainless steel and aluminum from gauge material up to six inches thick. The most advanced gas control system in the industry, ESAB's m3 system is fully automated by ESAB's Vision® T5 CNC, a Windows® based touch-screen control.

Flexibility in selection and mix of shield gases allows an operator to produce the best cut quality on any material. The operator simply selects the material type and thickness, and the Vision control automatically selects and mixes the optimal start, cut and shield gas combination. Process parameters for most plasma cutting and marking applications are preloaded in the Vision T5 CNC, and custom parameter files can be easily created as needed.

The ease and simplicity of part setup is complemented by use of ESAB's Columbus™ III CAD/CAM programming and nesting software, designed specifically for plasma, oxy-fuel, laser, and waterjet cutting. This advanced software handles simple to highly complex cuts, multi-process cuts, labeling, and nesting jobs quickly and easily.

ESAB's Vision T5 control and Columbus software in combination with m3 plasma and 90,000 PSI waterjet work together seamlessly to provide the highest cut quality on all contours with fully automated process control from part concept to completion. This fully integrated process control in conjunction with the patented process combination makes Hydrocut the ultimate tool for maximum production and precision cutting.

See the HydroCut LX in action at **Booth N1145.**

For more information, visit **www.esabna.com** or call 1-800-ESAB123. ■

Ivy Tech Creates Strong Machinist Pipeline

At a time when skilled trade positions are the hardest jobs to fill in the U.S., Ivy Tech Community College in South Bend, Indiana, part of the nation's largest community college system, is setting the standard for establishing a steady pipeline of qualified machinists ready to hit the shop floor.

Ivy Tech's Machine Tool Institute simulates a real-world machine shop, where students punch in and out, learning both the hard and soft skills needed to succeed in the manufacturing world. In just two years, the program has issued nearly 300 NIMS certifications, and regularly places students in jobs in the local area with grads starting between $14 and $20 an hour.

"At Ivy Tech, we work regularly with local manufacturers to fill open positions and we can't produce machinists fast enough to meet the demand," said Robert Harris, Ivy Tech instructor. "There are so many opportunities in manufacturing and, at Ivy Tech, we are out to change lives by giving our students a complete skill set — life skills and tech skills."

Currently, 32 students of all ages and backgrounds, many with no previous manufacturing experience, are enrolled in the school's five 8-week sessions. Motivated students are practically guaranteed a job when they graduate and, in fact, most start jobs while they finish their training.

The successful program, covering everything from Metal Cutting to Safety, relies on Tooling U-SME online classes, which are aligned to NIMS certification.

"Ivy Tech is a model for the entire country when it comes to building a pipeline of workers to address the growing skills gap," said Toni Neary, Government and Education, Tooling U-SME. "Since November 2011, more than 60 Ivy Tech students have completed more than 1,200 Tooling U-SME's online classes. These students are immediately employable."

Harris' students have shown an average knowledge gain of 15% throughout their time completing the program. Some of the most popular classes are CNC Specs for the Mill, CNC Offsets, CNC Manual Operations, Carbide Grade Selection and Cutting Tool Materials.

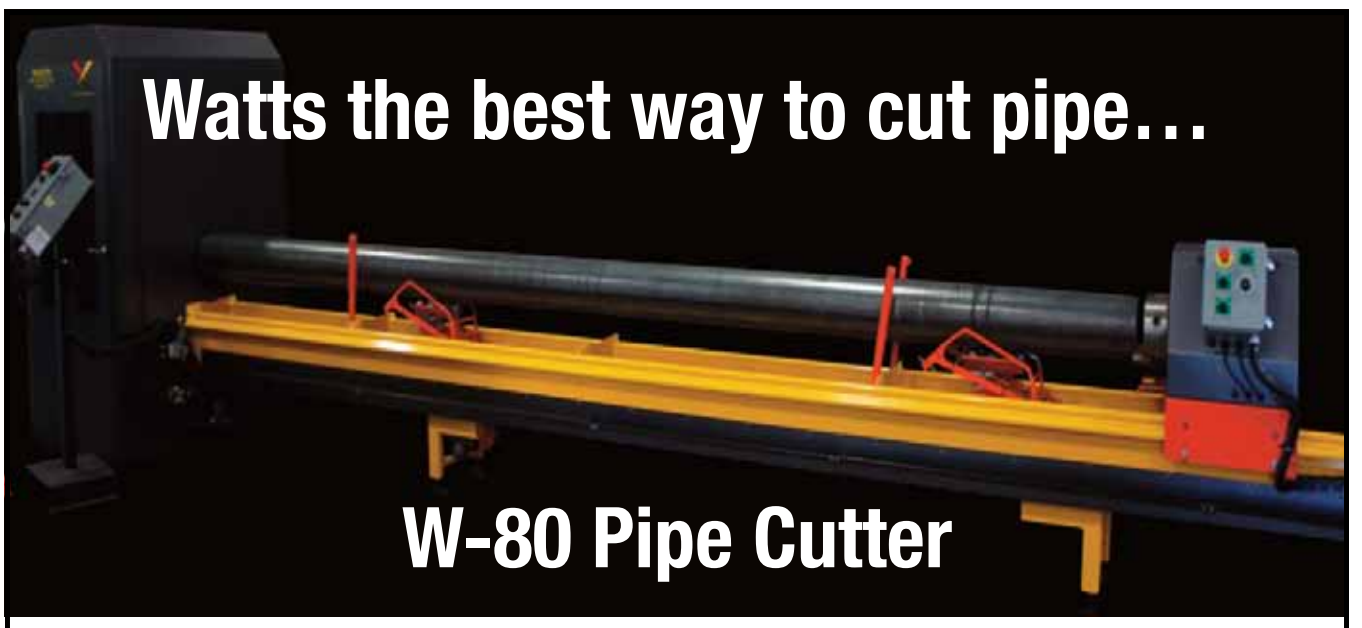
Harris, 49, who never used online training before two years ago, said online courses help accelerate training and that students of all ages find them very user friendly. Instructors find using online training a big time savings.

This training helps address one of the biggest challenges in manufacturing: the severe shortage of skilled workers needed to fill today's jobs, brought on by a limited pipeline, retiring baby boomers, reshoring and the changing pace of technology.

Companies say that access to a talented workforce is critical for growing their businesses. In fact, Deloitte's 2013 Global Manufacturing Competitiveness Index indicates that talent-driven innovation based on the quality and availability of workers (skilled labor as well as researchers, scientists and engineers) is the number one driver of manufacturing competiveness.

"The knowledge from retiring toolmakers and machinists will be lost unless we focus a younger generation on developing these skills now," said Harris. "We get calls from companies every day looking for talented workers and there are plenty of career opportunities for people who want, and are trained, to do the job."

Stop by **booth N1100** to find out more about SME's Tooling-U online class program. ■



The W-80 is a straight cut-off machine that cuts 2"– 8" pipe at 90°, 30° off 90°, and 37½° off 90°. The pipe is conveyed into the cutting area via a motorized carriage. An encoder allows for travel display in inches on a counter on the main controller. Kerf or bevel is not compensated for. The remote control box on the carriage enables the operator to perform functions required to load and clamp the pipe into the chuck. The cutting is done in an enclosure to capture sparks and smoke.

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See us at FABTECH Chicago Booth N2271

FABTECH Bistro

Hungry?

Located in Room S103 and on the show floor in the North Hall, the FABTECH Bistro offers assorted menu options including fresh and healthy lunch options, international cuisine and regional favorites — all at a reasonable price. Purchase lunch tickets at **booth N1101** in the Grand Concourse lobby, or for more information call (312) 791-6810. ■

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Amada will demonstrate three new fiber laser cutting systems — one featuring automation, one equipped to cut thicker materials and all three engineered to deliver uncompromising speed and accuracy. Three new press brakes providing ultra-precise results will be showcased in the Amada booth. Each is equipped with a full range of production-enhancing features. When you visit the Amada booth, you'll also witness our latest generation of punch and laser combination machines. This new series features advanced automation and tool change options to meet virtually any production need.

LCG 3015 AJ

(Two) Fiber laser systems — The LCG features automated load/unload and the leading-edge ENSIS model is equipped to cut thicker materials

HD 1003 ATC

Hybrid Drive press brake with Automatic Tool Changer (ATC)

EG 6013

Compact, precision press brake

FLCAJ 4020

High-speed, high-precision fiber laser

ACIES 2515 T

Automated punch and laser combination

HG 8025

High-speed, ultra precise press brake

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Booth S901

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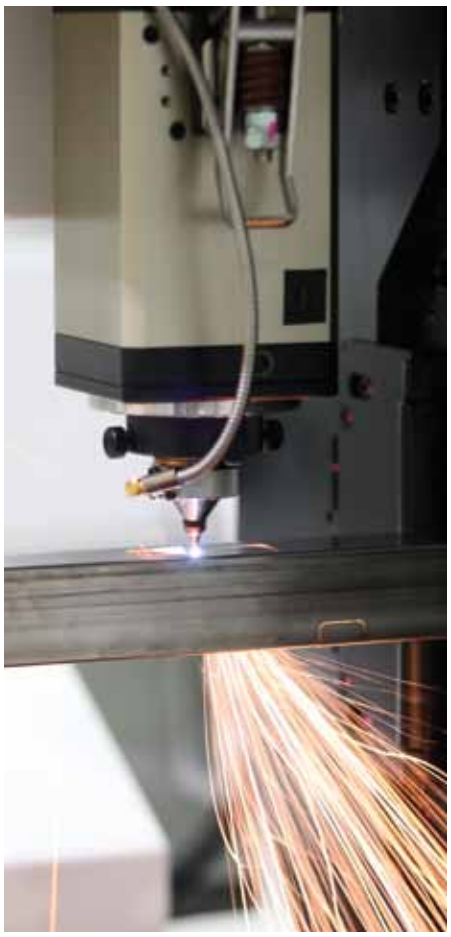
MAZAK OPTONICS is Bigger, Stronger, Faster

Mazak Optonics Corporation is a major supplier of laser-cutting systems, offering over 50 different laser models and leading the industry in the implementation of emerging laser technology. The company's 50,000 sq. ft. North American Headquarters are located in Elgin, Illinois, and feature a 30,000 sq. ft. Laser Technology Center housing up to 18 machines for demonstrations and training.

The latest laser and automation technology introduced by Mazak includes newly upgraded 6' by 12' and 6kW configurations of the industry-leading OPTIPLEX CO_2 system, the brand new TUBE GEAR 150 2D for tube and pipe cutting, the enhanced OPTIPLEX 4kW Fiber system and a full range of completely customizable Tekmag automation systems.



Bigger and Stronger: OPTIPLEX CO_2 with 6' by 12' and 6kW upgrades

Mazak Optonics Corp. now offers their industry-leading OPTIPLEX CO_2 laser-cutting system in newly expanded 6' x 12' and powerful 6kW configurations. The new designs incorporate all of the performance advantages of the original OPTIPLEX and use Mazak's fully automated AO|5 setup which overcomes the typical challenges of using varied workpiece materials. AO|5 setup improves productivity without compromising cutting conditions and can retain these optimal conditions during extended, unattended operation.

To simplify machine operation, the new systems also feature the new Pre-View Control with a 15" touch screen and straightforward user interface. The graphical interface clearly visualizes the cutting path and automatically determines process conditions including the required lens, nozzle, feedrate and laser output for different materials and thicknesses.

Faster: TUBE GEAR and OPTIPLEX Fiber with Tekmag automation system

The TUBE GEAR 150 2D is Mazak's brand new laser-cutting system for tube and pipe. Designed for fast cutting, it is ideal for shops

continued on page 20

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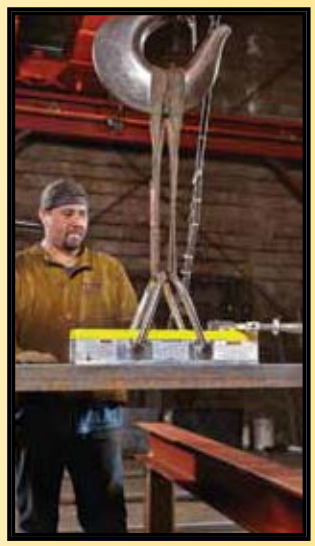

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TUESDAY, NOVEMBER 19

Time:	Company	Technology	Topic
10:15 a.m.	**TRUMPF**	Fabricating/Laser	New TRUMPF Technology Takes Solid-State Laser Cutting to a Whole New Level
11:00 a.m.	**Graco Inc.**	Finishing	ProMix PD2K - Positive Displacement Proportioning System
11:45 a.m.	**Hypertherm**	Fabricating	Integrated Waterjet Cutting
1:30 p.m.	**Schuler Inc.**	MetalForming	Laser Blanking Lines with DynamicFlow Technology
2:15 p.m.	**AMADA**	Laser	FLCAJ 3015 High Spreed, High Precision 2kW Fiber Laser
3:00 p.m.	**Lincoln Electric**	Welding	APEX(TM) 3000 Orbital Welding System

WEDNESDAY, NOVEMBER 20

Time:	Company	Technology	Topic
10:00 a.m.	**Norton Abrasives**	Welding/Fabricating	Reshaping the World of Metal Fabrication
10:45 a.m.	**IntelliFinishing**	Finishing	Software for management of your paint system and part flow
2:15 p.m.	**AMADA**	Fabricating	HD-ATC Hybrid Drive Press Brake with Automatic Tool Changer
3:00 p.m.	**TRUMPF**	Fabricating/Bending	TRUMPF TruBend Cell 7000 – High Speed Automated Bending Cell
3:45 p.m.	**OTC Daihen**	Welding	Nanotechnology Digital GMAW Machines

THURSDAY, NOVEMBER 21

Time:	Company	Technology	Topic
10:00 a.m.	**RoboVent**	Fabricating	Breakthrough Air Cleaning Technology - RoboVent's Vortex 3
10:45 a.m.	**SERVO Robot Inc.**	Fabricating / Laser	DIGI-I/Z - Servo-Robot New 3D Laser Vision System for Multi-Pass Welding Automation
11:30 a.m.	**Trilogy**	Fabricating	iPunch - CNC Ironworker Programming

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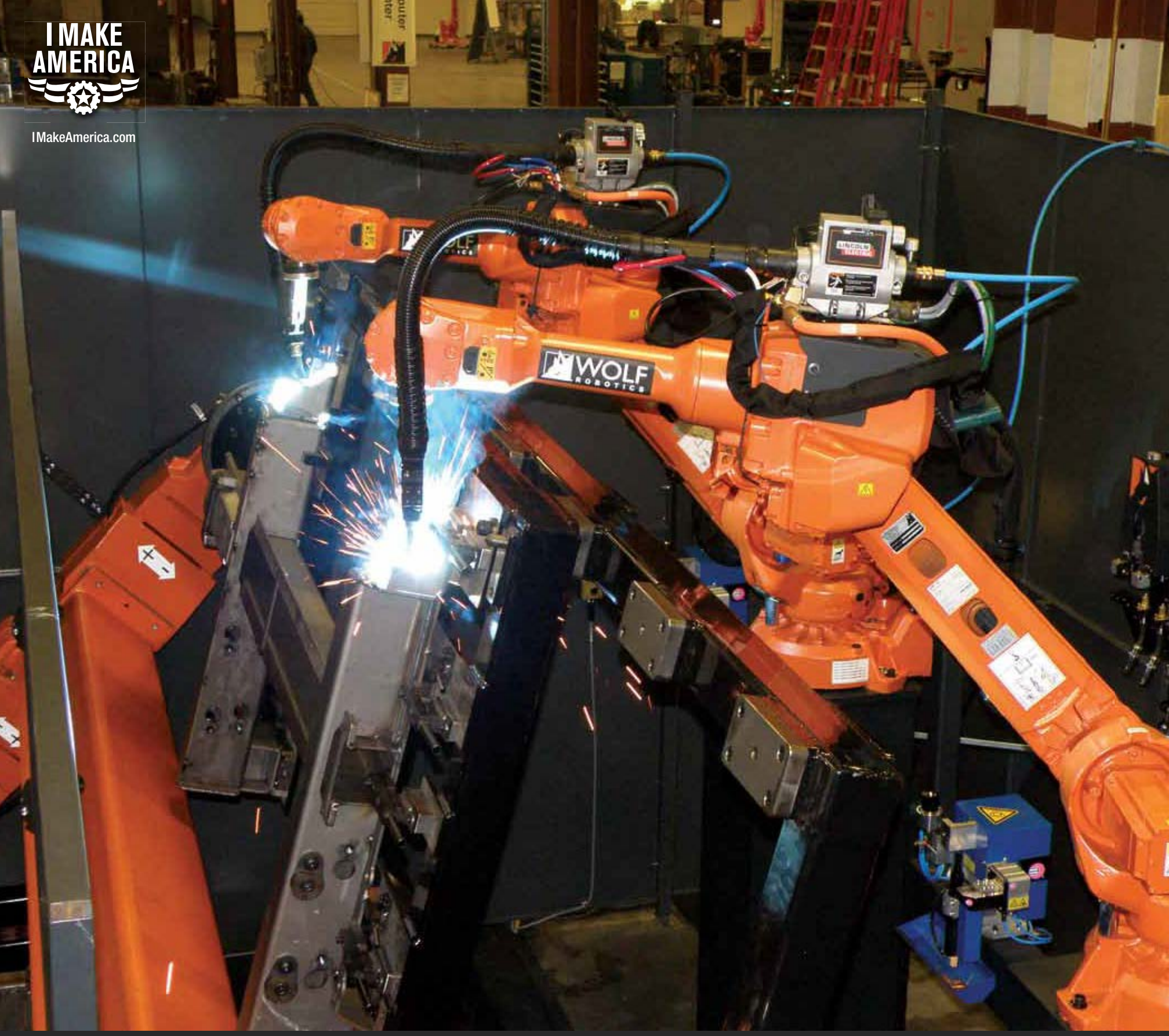

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Abicor Binzel: Awards and More

Product Leadership Award
Welding Torches
Europe, 2013

Frost & Sullivan is in its 50th year of business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The company's research philosophy originates with the CEO's 360-Degree Perspective™, which serves as the foundation of its TEAM Research™ methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2013 European Product Leadership Award in Welding Torches to ABICOR BINZEL (BINZEL).

ABIMIG® A T LW Torch

Thanks to its light weight, the air-cooled ABIMIG® A T LW Torch eliminates the laborious and physically stressful work caused while using traditional torches. The use of aluminum in designing the 'BIKOX® LW' cable lines, meant to transfer electric power, considerably reduces the torch's weight. The torch features a flexible neck facilitated by the torch's 'T interface', which enables the welder to work with ease at different postures. By using this torch, welders can work for long hours without straining their shoulders, back or arms. Enabling welders to better balance their grip of the torch, BINZEL has designed the handle of the torch using components with a soft feel. This enables welders to attain the best possible grip.

BINZEL RAB GRIP Line of Torches with FES-200 and FES-200 W3 Extraction Units

In an attempt to offer welders a hazard-free work environment, BINZEL reworked on its existing RAB torch line of fume extraction torches to incorporate increased safety features that considerably improve a welder's work environment. Binzel introduced the RAB GRIP Line of torches with value-added features. Fully compatible with the company's FES-200 units, it delivers best-in-class fume extraction efficiency. It also eliminates the need for external protection systems, significantly reducing costs by around 20 percent. The fumes released during such welding processes are trapped and extracted right at the arc, which is the release point of the fumes. This helps in keeping the work environment free of pollution, ensuring a longer service life to welders. This torch line also features the Grip insert and 'BIKOX® LW' cable lines, which lower the torch weight by around 15 percent. BINZEL also introduced the FES-200 W3 unit to cater to the welding of steels containing nickel and chrome.

BINZEL has clearly demonstrated its innovation and technology excel-

continued on page 19

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Conference-At-A-Glance

On-site registration for paid educational events is available in the **Grand Ballroom (S100), West Transportation Lobby,** and the **2.0 level concourse.**

TUESDAY, NOVEMBER 19

TECHNOLOGY	8:00 a.m. – 10:00 a.m.	10:30 a.m. – 12:30 p.m.	1:30 p.m. – 3:30 p.m.
FINISHING	C40: Conceptos Básicos de Pintura en Polvo en Español B Room S403b	C50: Building Blocks of Powder Coating B Room S403b	C60: NEW! Powder Coating Color Change: It's All About the Time A Room S403b
	C41: Introduction to Electrocoating B Room S404a	C51: NEW! FINISHING ESSENTIALS: Getting Hooked on Paint Racks I Room S404a	C61: NEW! FINISHING ESSENTIALS: Achieving an Excellent Powder Coated Finish B Room S404a
		C52: Advances in Porcelain Enamel I Room S404d	C62: NEW! Get Ready for OSHA or EPA to Come Calling I Room S404d
STAMPING	S40: NEW! Engineering Optimum Sheet Metal Stamping Costs: Blank, Tools, Presses I Room S405a	S50: Advances in Stamping Technology I Room S405a	S60: In-Die Value-Added Assembly I Room S405a
	S41: NEW! Material Handling: Requirements and Variations of the Job I Room S404d		
CUTTING	F40: NEW! Introduction to Laser Cutting Best Practices B Room S402b	F50: NEW! New Developments in Waterjet Cutting I Room S402a	
LASERS			F60: NEW! Industrial Applications in Lasers I Room S402b
FORMING & FABRICATING	F41: Leveling: Making Material Flat I Room S402a	F51: Coil Processing from Start to Finish B Room S402a	F61: NEW! Bending and Forming Technology I Room S402a
JOB SHOP SOLUTIONS	F42: NEW! Press Brake Safety: Changes to ANSI B11.3 - 2012 Explained B Room S401a	F52: NEW! Lean and Safe: A Winning Combination I Room S401a	F62: NEW! Maintenance for the Job Shop B Room S401a
AUTOMATION & ROBOTICS	F43: Automated Deburring with Tech Tour I Room S405b		
LEAN	F44: NEW! Lean Principle: Standardized Work for Shop Floors and Leaders I Room S401d	F54: NEW! Lean Principle: Flow and Pull Value I Room S401d	F64: NEW! Lean Tools: Value Stream Mapping — Addressing the Differences Between the Office and the Shop Floor B Room S401d
MANAGEMENT	F45: NEW! Developing Business Process and Strategy I Room S403a	F55: NEW! Practical Approach to Developing a Strategic Plan I Room S403a	F65: NEW! Put Your Customer First! Improve Customer Relations to Increase Profitability I Room S403a
	F02: WORKSHOP: NEW! Building a Competency-Based Training & Development Program B Room S404bc		F66: NEW! Workforce: Recruitment Strategies B Room S404bc
TUBE & PIPE		F57: NEW! Advancements in Welding Tube Production I Room S405b	F67: NEW! Inspecting and Troubleshooting Welded Tube A Room S405b

WELDING

SEMINARS

W12: **D1.1 - Code Clinic** • Room N227a . . . . . 8:30 a.m. – 4:30 p.m.
W13: **The Why and How of Welding Procedure Specifications B** • Room N137. . . . . 8:30 a.m. – 12:00 p.m.
W14: **The Why and How of Welding Procedure Specifications A** • Room N137. . . . . 1:00 p.m. – 5:00 p.m.
W15: **The Why and How of Welding Procedure Specifications B A** • Room N137 . . . . . 8:30 a.m. – 5:00 p.m.
W16: **Welding of Stainless Steel - Basics** • Room N138 . . . . . 8:30 a.m. – 4:30 p.m.
W19: **ASME Section IX, B31.1 & B31.3 Code Clinic - Day 1** • Room N230a . . . . . 8:30 a.m. – 4:30 p.m.

CONFERENCES

W24: **So You're the New Welding Engineer - Day 1** • Room N227b . . . . . 8:00 a.m. – 5:00 p.m.
W26: **Thermal Spray Technology: High-Performance Surfaces** • Room N128 . . . . . 9:00 a.m. – 5:00 p.m.

PROFESSIONAL PROGRAM

W29: **Session 4: Keynote Speaker 1 and Keynote Speaker 2** • Room N139 . . . . . 8:00 a.m. – 10:00 a.m.
Session 5: NSF-CIMJSEA - Modeling • Room N139. . . . . 10:00 a.m. – 12:00 p.m.
Session 6: NSF-CIMJSEA - Processing • Room N140 . . . . . 10:00 a.m. – 12:00 p.m.
Session 7: Welding Metallurgy I • Room N139. . . . . 2:00 p.m. – 5:30 p.m.
Session 8: Modeling • Room N140 . . . . . 2:00 p.m. – 5:30 p.m.

EDUCATIONAL SESSIONS

W35: **AWS Educational Sessions (including Plummer Lecture)** • Room N131 . . . . . 8:00 a.m. – 5:00 p.m.

SPECIAL PROGRAMS

W40: **AWS Awards Luncheon** • Room N228 . . . . . 12:00 p.m. – 2:00 p.m.
AWS Professional Welders Competition - Day 2 • North Hall, Booth N2299 . . . . . 9:00 a.m. – 5:00 p.m.
Welding Wars Competition – Day 1 • North Hall, Booth N2293 . . . . . 9:00 a.m. – 5:00 p.m.

American Welding Online Releases CWI Test Prep App

The road to passing the American Welding Society's Certified Welding Inspector (CWI) exam starts with preparation. American Welding Online (AWO), the American Welding Society's online learning center, is making sure that getting prepared for the exam is more convenient than ever before by introducing the CWI Test Prep app, a new mobile application for Android and IOS users that will allow them to access testing information and preparation right from their phone.

The free app features study resources, flashcards to help with memorization of welding symbols and mathematical formulas, practice test questions and quizzes which allow users to review their scores instantly, and testing location information and dates.

"The app is a great way to prepare anyone taking the CWI exam. Many of our members have smart phones, and this allows us to deliver information straight to their preferred communication device. We hope that the app in combination with our CWI Pre-Seminar online course will increase test success for all our users," said David Hernandez, director of education development, American Welding Society.

The app is currently available in the iTunes store under "CWI," and can be downloaded to both an iPhone® and iPad® at no cost. An Android® version can also be found at Google Play at no cost. ■

"Abicor Binzel: Awards and More"

continued from page 16

lence in designing industry-first and scientifically attested products that best address the market trends/customer needs. These breakthrough offerings are completely compatible with all the welding power sources dominant in the market across the globe. BINZEL always makes efforts to ensure all its technologies are patent-protected in terms of design, utility or full range of features. Furthermore, BINZEL ensures the durability of its offerings through the offer of top-quality accessories, such as suction funnels. This ensures that its customers continue to enjoy a consistent increase in their welding efficiency standards. ■

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MAZAK OPTONICS is Bigger, Stronger, Faster

continued from page 12

looking for high-speed production. The TUBE GEAR contains a 2.5kW resonator and can process round and square tubes and pipes with diameters up to 6".

Mazak also released a new 4kW model of their popular OPTIPLEX 3015 Fiber machine. Compared to conventional laser processing machines, the OPTIPLEX 3015 4kW Fiber significantly increases the productivity of thin worksheet cutting. It is designed to process reflective materials with greater thicknesses and at greater speeds than its CO_2 counterpart and can cut up to 0.750" in stainless steel and 0.625" in aluminum with impressive accuracy. The fiber design can also significantly reduce operating costs for applicable material types and thicknesses. The OPTIPLEX Fiber's increased productivity paired with the efficiency and convenience of a customized Tekmag FMS can create an unstoppable manufacturing powerhouse.

Tekmag, a long-standing partner with Mazak Europe, has recently teamed with Mazak Optonics Corporation to deliver completely customized automation solutions to complement Mazak's laser-cutting systems. Their range of products includes compact vertical cells, towers with load/unload shelf systems and automated storage and retrieval systems.

For more information on Mazak Optonics' products and solutions, stop by **booth# S921** in the South Hall or visit **www.mazakoptonics.com,** email sales@mazaklaser.com or call 847-252-4500. ■

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FABTECH 2013 Exhibitor Video Contest Winner:

Xiris Automation, Booth N2217

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FABTECH exhibitors were given one minute on camera to deliver their best pitch on why their booth is a "must-see" for show attendees. Xiris Automation came out on top with 4,282 votes! Scan this QR code to see the winning video, and make plans to stop by **booth N2217.**

RUN4MFG 5K Charity Run

FABTECH Partners Join Forces to Support Manufacturing Education

Pictured above: Mark Ullstrup, Paula Keats, Jennifer Egan and Matt Bollinger.

AWS, FMA, SME, PMA, and CCAI challenged over 120 people to raise funds for their educational foundations Sunday in Lincoln Park at the **2nd Annual RUN4MFG 5K.** The five associations collaborated to plan this event to support the future of the manufacturing industry.

The goal of the RUN4MFG was to shed new light on the need for skilled workers in the industry and provide a stimulating environment to promote the missions of the five educational foundations.

"The RUN4MFG is an important part of a nationwide push to get more young people involved in manufacturing by providing financial resources to well-performing students with a

desire to become part of our industry. We have to realize, the future of our nation and our prosperity is directly affected by our manufacturing capabilities," said Frank Fontana, Vice President of Sales at KNUTH Machine Tools USA, Inc. and member of FMA's Young Professional Council. "We need the next generation to continue the hard work and build on the success of American manufacturers so that our future generations can enjoy the same luxuries we have."

Congratulations to the top male finishers Matt Bollinger of JMT USA and Mark Ullstrup of Superior Die Set and top female finishers Jennifer Egan of TCI Powder Coatings and Paula Keats of Keats Manufacturing!

A special thank you to all who participated in Sunday's event and to the event sponsors: ABICOR Binzel, Batesville Tool & Die, CINCINNATI, CNA, D&H Industries, FREEMAN, Kelly Services, KNUTH Machine Tools USA, Inc., Lapham-Hickey Steel, Larson Tool & Stamping, Select-Arc, Inc., Waukesha Metal Products, WITT Gas Controls, and YRC Freight.

Mark your calendars for the 3rd Annual RUN4MFG 5K in Atlanta on **Monday, November 10, 2014!** ■

Attendees Share Strategies for Future Success

continued from page 3

their company's stamping and metal processing lineups. "We have capital planned for new equipment for next year but we need to come across the right technology," Jensen said.

When asked about the state of their business, Pattison said, "We've been extremely busy, making money and working around the clock. " The automotive segment has been driving the growth. "We've been making new parts almost every week," Pattison said.

Jensen said that they are bullish about the next several years and are committed to maintaining their competitive edge through new technologies. "We have more available capital, compared to last year," he said. "The new projects we have coming in will take us from 2015 – 2017."

While also looking for new tech ideas, Operations Manager Andrew Dorr with Troy, NY-based WeldComputer, was excited about new opportunities in the marketplace but at the same time, somewhat cautious about making big leaps in expenses. His

Andrew Dorr, Operations Manager, WeldComputer, Troy, NY

sentiment was common on the showfloor, as attendees were looking for ways to help manage growth without going into debt. "We've been riding this fine edge where we can't really hire people till we get the sales but can't get the sales without hiring people," he said.

Dorr noted that the overall business trend has been positive, and the company is looking to expand. He said, "We've been very busy. It's exciting." ■

"Managing the Next Generation of Skilled Machine Operators"

continued from page 1

Thielfoldt's research found the following commonalities among Millennial employees:

• The language of technology reaches Millennials. They have been raised around technology and look to it to help solve problems and make processes more efficient.

• More managerial interaction with Millennials will be required. While this will involve more work for supervisors, the payoff will be twofold, with employees satisfied at getting things right and the end product being done faster and better.

• Millennial employees look at work more from a transactional standpoint. If they work extra hours on a project, they expect reciprocal comp time or other forms of remuneration/recognition.

• Millennials know they're going to be working for many years and therefore want to make the experience worth it, hence the popularity of schedule flexibility and workplace perks with this group.

• Carrying an idea from a cocktail napkin sketch to a prototype is the conceptual problem-solving millennials thrive on. Going from concept to prototype to product is a great way to capture their imagination and interest in manufacturing.

• Millennials don't mind returning and asking for work, even if they left under bad terms.

Millennial Warren Long can't speak for his entire generation, but he and many of his peers disagree with being branded as entitled.

"I think that impression is tied more to one's age than anything else," said Long, who is a board member of Nuts, Bolts & Thingamajigs, a foundation of the Fabricators and Manufacturers Association working to spark interest in manufacturing careers for young people. "I'm sure many young Boomers and Xers were viewed similarly."

While Long still champions more traditional working styles like face-to-face communications and mentoring, he also acknowledges that technology is changing the workplace, citing examples of employees being able to manage manufacturing operations remotely, something not possible 15 years ago. So while the work-from-home scenario may seem like an entitlement, it's a byproduct of technology that isn't going away.

So what are companies doing right to attract and keep Millennial employees?

Communications and preferences of communications are key, Thielfoldt says. Both Xers and Millennials prefer to use tools like email, messaging, and texting. The companies that are taking the time to be explicit on these preferred methods are doing a better job of successfully integrating Millennials, she says.

"I suggest companies don't rule out being flexible with time off, vacations, and the possibility of 4 ten-hour shifts or 3 twelve-hour shifts," Thielfoldt says.

"Are you open to those kinds of discussions?" she asks.

Buban and her husband Tony are. (She's an Xer and he's a late Boomer.) Not only are they more flexible with schedules than they were in the past, they also provide enough latitude for their machine operator so he can do what he likes best—inventing processes and thinking of ways to do things better and faster.

The transition to this style contradicted Submersible Systems' established approach to doing business, but with a shortage of skilled workers and a payoff of increased quality and higher productivity from their machines, they realized that business as usual wasn't cutting it. ■

The Learning Café's Diane Thielfoldt will be a keynote presenter and workshop leader on multi-generational workplace issues at FMA's Annual Meeting on Feb. 28 in Austin, Texas. Get more info at fmanet.org/calendar.

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