Sharpen Your Edge in 2015

AMBA Annual Conference Ignites
Economic Factors
Tangible Property Regulations
Wage and Benefits Trends
As a molder and manufacturer of high-precision injection molds, Chuck Klingler of Janler Corporation aligns with engineering-focused suppliers that drive innovation and exceed performance expectations.

“To achieve high-precision mold performance, we use proven components in our tools, and specify CVe Monitors on every mold we build. We store processing specs and drawings on the device, and later history can be gathered to ensure proper maintenance and profitability is achieved.”

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www.amba.org
Happy New Year, AMBA community. I hope the improving economy was good to your business in 2014 and is keeping your shop busy as we begin 2015.

In the last edition, I highlighted the five-year plan that has been developed through the hard work of your Board of Directors. I want to emphasize a couple of key objectives that I believe are critical to the long-term health of our organization, as well as our industry.

One objective for the board is to increase the engagement of our membership. The health of the association is dependent on strong membership involvement. This can be a challenge in a national association where members have limited opportunities to interact. Fortunately, the AMBA has some very active chapters where members regularly can gather to share information, discuss best practices and tell war stories, as well as support our industry and each other’s businesses. We also work hard to provide programming at the national level that is impactful and valuable to individual member companies.

In 2015, AMBA plans to continue its investment in regional plant tours, including the upcoming tour at United Tool in South Carolina. These plant tours are awesome learning events, but also help recruit members to our chapters, and — in the case of the recent plant tour in SE Michigan — even can re-invigorate a chapter. What a great story! The management team also is busy planning for another dynamite annual conference, scheduled for May.

An exciting development is the inauguration of our leadership event, scheduled for Fall 2015. This executive forum was added based on feedback from member-company leaders interested in more exclusive interaction with other industry leaders. AMBA also is adding a series of peer networking exchanges designed to connect people in similar roles from different member companies and give them the opportunity to share ideas. It is our hope that these events and networking opportunities give the membership a variety of ways to stay engaged and support the association. Another objective in the long-range plan is to provide members with a competitive advantage through programming, events, benchmarking, technology and education. We want AMBA members who are actively involved to experience a specific return on the investment of time and money they make in their membership. Frankly, we want to give our members an advantage in the market over companies that are not members.

Along these lines, we have re-tooled our benchmarking offerings. Instead of the cumbersome financial benchmarking survey of the past, the AMBA plans to conduct a series of shorter financial and operational surveys more frequently throughout the year. The goal is to gather and share information on a timely basis, giving members the opportunity to compare themselves with their industry peers.

I hope our member companies can make an investment to take advantage of the programs, events or other AMBA offerings in 2015 that are most impactful for their company. The AMBA has some very exciting things planned, but we only maximize the value when members are engaged. I look forward to seeing each of you at an upcoming event.

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Michael Bohning
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Four Economic Trends to Watch in 2015

by Dr. Chris Kuehl, Armada Corporate Intelligence

Usually, these stories take place at the start of the year – something about that calendar change and the significance of moving into the year marked 2015. In truth, there is not all that much that makes the first of January any more significant than the first of February – or the first of August, for that matter. All business sectors seem to have their own seasons and their own financial rhythms. At the start of this year, there were the usual predictions and assessments, and already most of them seem pretty stale and inaccurate. Now there are new issues and concerns that likely are to have an impact on the rest of the year. Check back in a few weeks, and we likely will see another list.

At this point, the top four trends to watch include
1) the potential timing and extent of an interest rate hike,
2) the impact of the dollar, which is rising in value far faster than had been expected,
3) the growth that has been noted in the economy thus far and the impact this has had on everything from consumer confidence to business investment and
4) the potentially disrupting influence of the oil world on the economy of the US and the world in general.

It will not be too hard to see how all of these will connect with one another and, in many respects, it will be the connections that will prove to be the most challenging – like the proverbial string on a sweater, pull it at your own risk unless you want to deal with the unraveling. By the end of the year, these still may be big issues or they might be replaced by something new and unforeseen. For the time being, these are the ones that will keep most people awake, seen either as threats or opportunities. By the time we reach the end of 2015, the US will be facing the 2016 elections and that will be a whole other story.

1. Interest rates
The starting point for many business decisions this year will be the state of Fed policy. Will interest rates go up and, if so, when and by how much? Will this hike send the economy back into recession or will the investment and business community basically shrug it off as they have been anticipating it for some time already? At the last meeting of the Fed’s Open Market Committee (FOMC), the word “considerable” was replaced by the word “patient.” In “Fedspeak,” this means that rate hikes will not automatically be delayed by six months, but could happen at any moment depending on what the data says. The data the Fed will look at will be unemployment (getting much better of late), overall growth (a little less impressive in Q4 than it was in Q3 or Q2) and inflation (still very low and below the Fed’s preferred limit for 36 months). By these measures, it would be logical to assume the FOMC will raise the federal funds rate by between a quarter and a half point by the middle of summer, at the latest. However, there are other issues to consider, including the behavior of the dollar.

2. Impact of the dollar
The US dollar has been weaker than normal for the majority of the last decade, due to the impact of the recession. In truth, all the currencies of the world have been weaker than normal. The situation now is changing rapidly. The other dominant world currencies are faltering as there has been no growth to speak of and thus, the US dollar has been gaining by default. The US economy is not surging by a long shot, but if it is compared to the economies in Europe and Asia, it is the top of the heap and the dollar has gained strength. This is great news for those that buy from the rest of the world as the dollar purchases far more than it once did. On the other hand, the companies that are trying to sell to the rest of the world have seen reduction in demand as the dollar gets more powerful. If this keeps up, the US economy will slow drastically as the number of export opportunities shrink, while domestic competitors are forced to contend with ever cheaper imports. The consumer may like this a lot, but the producers are anything but thrilled. If the dollar keeps rising, it will have an impact on the Fed’s decision-making as well. Any hike in the interest rates will make the dollar that much stronger, and that could cause the Fed to delay its decision or reduce the size of the rate hike.

3. Growth of the economy
The third important guideline for the economy is the overall pace of growth as observed thus far. The behavior of the economy last year was somewhat perplexing, and now the analysts are trying to determine which of these narratives to believe. Is the growth seen in the second and third quarter the real deal or is the slower performance in the fourth? It all will depend on how the consumer develops in the coming year. It is not an exaggeration to assert that the economy goes the way of the consumer – after all, consumption accounts for between 70 percent and 80 percent of the GDP. The consumer has been in a foul mood since the recession and for the most
obvious of reasons. There has been little growth in jobs and even less in wages. Those factors have shown signs of a turnaround, and now the consumer seems encouraged by the better jobless numbers and the fact that wages are moving up a little. The evidence of this shift in attitude is the better consumer confidence numbers, but more importantly, consumers are back to using their credit cards again. The recovery in attitude still is pretty fragile, but it may be enough for business to expand. That means more hiring, which begets more consumer confidence as wages get better and jobs more plentiful.

Influence of the oil world

The fourth area of interest is something that could be discussed for weeks and, for the most part, it already has been. The oil situation is about as volatile as it has been in years. The US was just getting used to being the top oil and gas producer in the world when the bottom dropped out of the price of oil – in no small part because the US had become the world’s biggest producer. In less than a month, the per barrel price had fallen from $100 to less than $50, which sent ripples through the world economy. The oil-producing nations are struggling, and the consuming nations are starting to get used to these prices. The US is in the middle, with retailers enjoying the fact that consumers have more money. But, the booming oil regions are experiencing a bust atmosphere already. There is no perfect price for oil and the fuel that comes from it – it all depends on the side of the business that one is on. The expectation is that oil prices will stay low through the bulk of the year, but not as low as they are currently. The price of gasoline and diesel and the materials made from gas and oil likely will rise as the refiners and processors find better balance between supply and demand.

In general, the sense of the year’s economic situation is that it will start better than it will finish. By the end of the year, interest rates will be higher; inflation will be a bigger issue, as long as the consumer stays upbeat; oil prices will be down, but fuel prices will be up; and the dollar will be high enough to hurt exporters. It is a year best described as good, bad and then ugly.

Dr. Chris Kuehl is co-founder and managing director of Armada Corporate Intelligence. As economic analyst for the Fabricators and Manufacturers Association, chief economist for the National Association for Credit Management and author of NACM’s monthly Credit Managers Index, Kuehl is uniquely in tune with the economic indicators that drive business behaviors. Kuehl has a doctorate in Political Economics and advanced degrees in Soviet Studies and Asian Studies and was a professor of international economics and finance for over 15 years prior to starting Armada. For more information, call 816.304.3017 or visit www.armada-intel.com.
The 2015 outlook for US moldmakers is very optimistic as slightly over seven in 10 mold manufacturing executives anticipate expanding their employment base, according to the Wage and Benefits Report just published by the American Mold Builders Association (AMBA).

AMBA’s 2015 Wage and Benefits Report represents the largest compensation study focused on the United States moldmaking industry sector and contains comprehensive analysis on 50 job classifications from mold manufacturing-related firms that serve a variety of end-use markets. Exactly 163 mold building companies representing over 4,800 hourly and salaried employees located across America submitted data during this year’s survey process – a participation increase of 25.3 percent over the 2014 report.

The demographics of this survey show that more than 57 percent of the respondents represented companies with sales revenue of less than $5.0M, while companies with sales levels ranging from $5.0M-$15.0M comprised 28.2 percent of the population and companies in excess of $15.0M represented 14.5 percent.

Workforce continues to age
As initiatives are underway in nearly every manufacturing industry to attract youth into those respective sectors, the moldmaking industry leans on the wisdom of long-term employees, with 65 percent of the marketplace represented by those 41 years of age and older. Since the future of the mold manufacturing industry relies on newcomers embracing machine trades, it is startling to process the fact that the replacement workforce – those under 30 years of age – represents only 17 percent, while another 17 percent of the workforce is represented by those between the ages of 31-40. By examining age demographics found in the 2006, 2011 and 2015 AMBA studies, an unmistakable trend reveals shrinkage of the workforce under the age of 50 and expansion of the workforce above the age of 50. “This trend is not a secret to professionals in the mold building industry,” stated Troy Nix, AMBA’s executive director. “This is one reason that AMBA’s leadership team is working to financially support programs like Cardinal Manufacturing, a student-run machine shop located at Eleva-Strum Central High School in Strum, Wisconsin; expand its national scholarship initiative; and implement the machining certification program.”

Trends in health care insurance benefits
According to the most recent survey, approximately 83 percent of mold manufacturing firms provide medical insurance benefits to employees, 76 percent provide medical insurance to the dependents of the employees and 26 percent provide medical insurance for business partners. For those reporting data, the majority, or roughly 38 percent, uses a 30-day waiting period before new hires gain access to medical insurance benefits, while slightly over 30 percent use a 60-day waiting period.

<table>
<thead>
<tr>
<th>Gross Sales (millions)</th>
<th>% FT Employees Participating</th>
<th>% FT Employees w/ Dependent Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0–4.9</td>
<td>77.7%</td>
<td>48.4%</td>
</tr>
<tr>
<td>5.0–14.9</td>
<td>77.2%</td>
<td>48.6%</td>
</tr>
<tr>
<td>15.0–49.9</td>
<td>69.5%</td>
<td>42.1%</td>
</tr>
<tr>
<td>50.0+</td>
<td>98.8%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Overall</td>
<td>78.0%</td>
<td>43.1%</td>
</tr>
</tbody>
</table>

Charts provided by AMBA, derived from data in the 2015 Wage and Benefits Report.
As can be viewed in the chart below, aggregated data reveals that 78 percent of full-time personnel use the medical benefits offered by their employers, while a total of 43.1 percent of employee dependents are enrolled in medical benefit plans. Although statistics vary on the average premium percentage paid by employers, the range fluctuates between 71-89 percent. In addition to these premium payments, nearly 81 percent of employers also provide financial contributions to help offset the employee's cost for dependent medical benefits.

Viewing trends in Health Savings Account (HSA) deductibles, it is apparent that deductible levels have increased dramatically over recent years in order to control and reduce overall premium costs. In AMBA's 2011 report, the highest of the most common deductible choices maxed at $2,500. Today, the average HSA deductible is $2,553, with the highest recorded deductible level at $5,000 – more than double the highest limit documented four years prior.

With an effort to control escalating health care expenses, moldmaking executives have used an arsenal of different tactics, ranging from completely dropping health care insurance benefits to increasing insurance deductibles to increasing employee contributions. Although not effectively used by all firms, 64 percent of companies between $15.0M-$49.9M in sales revenue have implemented wellness programs designed to improve the health of their employees, while only 12 percent of companies below $5.0M in sales have adopted this concept. In addition, nearly 30 percent of employers in the $15.0M-$49.9M sales range are offering incentives to employees who practice healthy living habits. It is expected that trends in implementing wellness programs and healthy living incentives will further increase in the years to come as these practices address the root problem of controlling health care costs. Other practices expected to gain significant ground in the future involve employers joining health care trusts in order to spread risk and taking advantage of local health clinics where cost is shared by a number of businesses in the same localized region.

AMBA's 2015 Wage and Benefits Report contains compensation information on 50 different job functions, including management positions, office positions and shop floor positions. Also included is statistical data on medical, dental, vision and ancillary insurance products, as well as information on supervisor-to-employee ratios, retirement and bonus plans, standard vacation days and hiring forecasts. The full AMBA report may be purchased at www.amba.org.
Impact Influence Ignite at the AMBA Annual Conference 2015, May 6-8, at the JW Marriott, Indianapolis, Indiana. The stage is set for a record gathering of mold manufacturing professionals from across the country to share best practices, learn ways to improve the profitability of their mold building operations and become better leaders, better managers and better organizational contributors.

Carefully crafted programming over the two-day event has been strategically selected to encourage attendees to reflect on their leadership traits, study the strengths from their current leadership posts and explore how they can better impact their companies and the lives of the people they lead!

For conference details, including pricing, online registration, hotel, exhibitor information and the new conference mobile app, visit www.amba.org.

Wednesday, May 6

1:00-5:00 pm  Registration
1:00-5:00 pm  Ganassi Racing and Indianapolis Motor Speedway Tour (Optional)
6:00-8:30 pm  Welcome Reception and Supplier Trade Fair

Thursday, May 7

7:00 am  Registration Open
7:30 am  Exhibitor Networking/Continental Breakfast
8:00 am  The Cadence of Your Leadership
          Troy Nix, AMBA
8:30 am  Keynote: How Great Leaders Use the Power of Influence
          Stacy Nelson, VitalSmarts
9:45 am  Exhibitor Networking Break
10:15 am  Innovating the Customer Experience
          Steve Riddell, Blinds.com
11:15 am  Future Headwinds and Best Practices for Operational Leadership
          Laurie Harbour, Harbour Results
12:00 pm  Lunch
1:15 pm  Industry Management Breakout Sessions
2:15 pm  Exhibitor Networking Break

Friday, May 8

2:45 pm  State of the AMBA
3:15 pm  Ignite Sessions
          Mold Building Peers
3:45 pm  Using Workforce Analytics to Navigate Organizational Change
          Heather Haas, Advisa
4:45 pm  Adjourn Day #1

8:00 am  Functional Area Round Tables / Breakfast Break
9:15 am  Out-of-the-Box Recruitment Strategies to Build Sustainability
9:30 am  
          • Doug Bowman, CNC Machinists NOW, Vincennes University
          • Tony Cross, Operation Job-Ready Vets
          • Kyle Lanhan, Goodwill Industries
          • Jackie Dalzell, Molding Matters Recruitment Tool, Gardner Business Media
11:00 am  One Story from Greatness
          Kindra Hall
12:00 pm  What Cadence Will You Follow in 2015?
          Troy Nix, AMBA
12:15 pm  Conference Adjourns
Leadership is the most important aspect of running a prosperous company. If you are in pursuit of greater success, then become a better leader. If you want to become even more successful, cultivate your team to become better leaders. During this presentation, Troy Nix will break down leadership into its fundamental principles by using real-world experiences. Having worked for some of America’s best leaders in the United States military and in the manufacturing sector, Nix will demonstrate the practical use of military cadence in today’s business world. During this address, attendees will be challenged, attendees will be tested and attendees will be asked to truthfully reflect on how well they are “calling cadence” in their own organizations. Designed to strike chords deep within, the ultimate goal of this engagement will be for all individuals to dedicate themselves to improving one aspect of how they positively impact their people.

Creating sustainable change is a constant struggle for organizations and individuals. People often lack the skills to influence the behaviors behind issues like failed initiatives, short-lived change efforts, unproductive corporate cultures and entrenched bad habits. During this session, Stacy Nelson will draw on the best practices of many of the world’s leading change agents and on five decades of social science research to create a powerful model for changing behavior. Attendees will follow the experiences of influence masters who have succeeded in solving some of the world’s most profound problems. Examples ranging from major healthcare reform to reversals of destructive social behaviors to unprecedented corporate turnarounds will illustrate how a proven set of skills makes change not only achievable, but sustainable.

Innovation always is centered on delivering value to customers, and the customer experience must be front and center. Steve Riddell is an award-winning innovator leading Blinds.com sales and operations. Creating and executing disrupting value propositions has allowed Blinds.com to create consistent 30 percent sales growth—year over year. Along with founder Jay Steinfeld, Riddell primarily was responsible for leading Blinds.com’s merger with Home Depot in January 2014. His energy, passion and transformative leadership will inspire attendees to look at the customer experience they provide in new ways. Riddell will deliver a tangible roadmap that business leaders can Lift and Shift into their businesses to transform and innovate their value propositions and customer experiences.

If every business leader had a crystal ball, it would be easy to forecast and take advantage of changing market conditions and unexpected economic opportunities. Absent the crystal ball, the second best thing would consist of having historic insight on major trends (this is what’s been happening), while understanding where the current momentum and energy resides (this is what should be next) in the marketplace. Laurie Harbour, president of Harbour Results, will provide unparalleled data on trends in the mold manufacturing industry segment, information on industry operational tendencies and their associated metrics, and input on strategies to increase overall profitability. Included in these major topics will be highlights on best-in-class methods used to maximize production throughput, attract human capital and match the best prospective customers to internal capabilities. Since one of the main influences of success in today’s climate is the presence of a vibrant business strategy, Harbour also will cover trends in the development of company strategic plans and new methods of execution.
Industry Management Sessions

These sessions are designed to provide attendees with the opportunity to increase their knowledge on a variety of industry/work-related topics such as succession planning, pricing and more! During these Industry Management Sessions, industry executives and leading experts will be on hand to share information and data while facilitating discussions, cross talk and question and answer sessions.

Ignite Sessions

Member company executives will share brief, impactful stories related to targeted topics in order to ignite ideas, challenge paradigms and create a call-to-action for audience members.

Using Workforce Analytics to Navigate Organizational Change

Heather Haas, Advisa

In today’s workforce, every organization can benefit from a better way to manage change. Leading corporations are adopting change management as a fundamental skill, viewing it as a competitive advantage. Does your organization have what it takes to achieve sustainable change? Research shows that 70 percent of all major change efforts in organizations fail. Why? The failure may be due to the way the change initiative has been communicated and implemented. While the strategy developed might be well defined, an essential component to factor in is the employees’ behavioral needs and motivational drives. In this session, attendees will learn how to leverage behavioral science to effectively communicate and implement organizational transitions for sustainable and productive change.

Out-of-the-Box Recruitment Strategies to Build Sustainability

Doug Bowman, CNC Machinists NOW, Vincennes University

Tony Cross, Operation Job-Ready Vets

Kyle Lanhan, Goodwill Industries

Jackie Dalzell, Moldmaking Matters Recruitment Tool, Gardner Business Media

This powerful session will address the number one challenge facing mold building executives today – where to find skilled labor and still further, where to find candidates with the aptitude, ambition and desire to learn in a manufacturing environment! Attendees will hear about refreshing new programs that are utilizing out-of-the-box recruitment strategies to train, educate and place people in manufacturing jobs. This session will unveil inspirational stories of courage and determination as attendees will learn how these programs have overcome insurmountable challenges and have partnered with manufacturing organizations to build sustainable workforces. Attendees will leave this presentation armed with new ideas on how to start building their own sustainable workforce and will be ready to start shaping the future of tomorrow’s mold manufacturing industry.

Functional Area Roundtable Discussions

This session is back by popular demand! Growing peer-to-peer networks is a primary component of the 2015 AMBA Conference. During this session, professionals will exchange ideas on various topics related to their specific group: Sales and Marketing, Human Resources, Finance (IT & ERP included), Operations and Senior Leaders/Presidents. Attendees will have the chance to interact with two different peer groups during this session on topics that are unique to their job functions. Driven by past attendee feedback, these focused sessions have been highly requested and are expected to be one of the biggest hits of this year’s conference. They are a perfect way for professionals to find new ideas, expand their professional networks and explore new methods of improvement.
There is one thing that separates the good from the best when it comes to communication and message resonance. What is it? Story. In sales, in marketing, in leadership, a story will make whatever you have to say better. The problem? “Storytelling” has surpassed buzzword status and is nearing hyperbole. It’s time to go beyond the buzz and put your stories to work. In this engaging presentation, author and professional storyteller Kindra Hall will teach attendees why and how to use their powerful stories to immediately increase their effectiveness and subsequently, increase their bottom line. Attendees will learn why storytelling works so well, learn the most effective strategy to identify their personal and company stories, learn the three-step process for crafting a compelling story every time and determine exactly where and how to use this powerful, influential tool.

Ganassi Racing and Indianapolis Motor Speedway Tour (Optional) $69/person

This tour event offers an opportunity of a lifetime, allowing each participant to see how the machining industry impacts the world of championship racing! Starting at Ganassi Racing, attendees will tour this world-class facility, which was custom-built to facilitate workflow, communication, inventory control and speed. Coming off of their 100th win, the Chip Ganassi Racing Teams have reached a milestone that few other racing teams in the history of the sport have achieved. Next, attendees will tour the Indianapolis Motor Speedway Hall of Fame Museum, located on the grounds of the famous Indianapolis Motor Speedway. Recognized as one of the most highly visible museums in the world devoted to automobiles and auto racing, the museum houses a fascinating collection of cars, artifacts and Indianapolis 500 racing history. Weather permitting, attendees will have the opportunity to sit in the raceway bleachers and watch a bit of the testing trials for the 2015 Indianapolis 500! Tour is limited to 55 participants.

Hotel Information

The luxurious JW Marriott (the largest in the US) in downtown Indianapolis is right in the heart of world-class shopping and dining; steps away from White River State Park, the Indianapolis Zoo and many museums; and is near the State Capitol, Lucas Oil Stadium and Bankers Life Fieldhouse. Located just 20 minutes from Indianapolis International Airport, the JW Marriott Hotel provides the convenience of attendee drive-ins from all areas of the Midwest, as well as multiple direct flight options to/from the airport.

Special AMBA rate is $179/night and includes complimentary in-room internet and fitness center. For reservations, call 800.228.9290 or 317.860.5800 (local). For online reservations, visit www.amba.org and follow the conference link to hotel reservations.

Connect on the Conference Mobile App

New this year, attendees will have the opportunity to connect with each other through the AMBA Conference Mobile App. Attendees can link with fellow attendees before, during and after the conference; check the agenda; learn more about the speakers, programming and exhibitors; and so much more. To learn more and to download the app, visit www.amba.org/conference.
Freedom Machine Tool Announces 2015 CNC Advancements

Freedom Machine Tool, a division of Diversified Machine Systems based in Colorado Springs, Colorado, announced its 2015 CNC router advancements to the Patriot CNC and Orthoroute product lines. The more robust routers now offer new attachments for more versatile machining. Some of the newest features include oscillating tangential knives, dovetail fixtures, optional absolute feedback and multiple table configurations, as well as additional options for the lathe on the Patriot 4x8 CNC Routers with Lathe. These advancements result in added flexibility and productivity for the end user. Optional complete safety enclosures are available for companies requiring the strictest of safety measures. For more information, visit www.freedomcnc.com.

New Single-Needle Valve Gate Nozzle Available from Hasco

HASCO, Germany, recently announced the new single-needle valve gate nozzle SNV-06, SNV-12, with the corresponding melt deflection, now is available as a ready-to-install, all-in-one unit with either hydraulic or pneumatic drive and includes a flanged-on nozzle. The use of standardized components and interchangeable parts, as well as the identical fitting space required for the hydraulic and pneumatic versions, make the unit particularly service friendly. The single-needle valve gate nozzle is designed for use with nozzles of the TechniShot Z33/... series. Needle diameters of 2 to 6mm and needle strokes of 8 to 12mm ensure low pressure losses. Melt guidance similar to that in multi-cavity distributor systems means that results achieved with a single-cavity mold can be transposed directly to multi-cavity applications. For more information, visit www.hasco.com/gb.

Stratasys Expands FDM AND PolyJet 3D Printing Material Options

Stratasys Ltd., headquartered in Minneapolis, Minnesota, and Rehovot, Israel, introduced new colors for its ASA thermoplastic and expanded its line of digital materials. Launched in September, ASA is an all-purpose FDM material used for the production of prototypes, manufacturing tools and finished goods. Adding to the previously launched ivory and black, the eight new color options for ASA are red, orange, dark gray, yellow, green, dark blue, white and light gray. In addition to ASA’s new color options, Stratasys is expanding its PolyJet technology by adding 20 two-component digital materials that combine Endur with other base materials. Endur Digital Materials allow users to create parts using a range of grayscale colors with rigid material options, as well as the ability to select a variety of Shore A values with flexible material options. To learn more about ASA’s new color options and Endur Digital Materials, visit www.stratasys.com.

GF Machining Solutions Touts Technology for Lowering Production Costs

GF Machining Solutions, Lincolnshire, Illinois, has promoted its high-efficiency MIKRON HEM 500U 5-axis machining center and high-speed AgieCharmilles CUT 200 Sp wire EDM machine. Ideal for cutting parts from aluminum alloys and steel, the HEM 500U features a dynamic 12,000-rpm, ISO-B40 spindle and 30-tool magazine that provides a two-second chip-to-chip time for high-speed continuous milling operations. Additionally, a 20,000rpm spindle and 60-tool changer are available. The AgieCharmilles CUT 200 Sp provides fast spark-to-spark wire threading, energy efficiency and high productivity when cutting parts of variable heights. It also offers versatility through its ability to reliably hold tolerances measured in microns in both light and heavy parts. For more information, call 800.282.1336 or visit www.gfms.com/us.

Workholding Introduces New Sizes for DoveLock™

Expanding its DoveLock™ line, Kurt Manufacturing Company, Minneapolis, Minnesota, introduced two new DoveLock™ Quick-Change Jaw System sizes for 4” and 8” Kurt industry-standard vises and towers. The Quick-Change Jaw System enables fast jaw changes and repositioning with high precision. Jaw change time is reduced to less than one minute, with jaw positioning repeatability of up to ±0.001”. Exclusive to the DoveLock™, the machinable jaws can be rotated 180° and machined on both sides for two different part setups. For more information, visit www.kurtworkholding.com.
Next-Generation Valve Gating from MHS

MHS – Mold Hotrunner Solutions Inc., Georgetown, Ontario, has introduced its new line of next-generation valve gate hot runners. Unlike other pneumatic, hydraulic or electric valve gate hot runners, new Rheo-Pro Black Box™ actuators and second generation iVG™ internal valve gate nozzles can operate directly inside the mold at high temperatures of up to 450°C (850°F) without seal wear or cooling. This durable new type of actuator offers superior gate quality, precision pin movement and powerful shut-off force in an extremely compact form factor. The modular actuator units provide tool makers with design flexibility for all hot runner molds, including back-to-back stack molds. All components are engineered to enable easy retrofits and upgrades to existing systems running with conventional actuators. Both Black Box™ cylinders and iVG™ nozzles come in a number of different sizes for a large range of part weights and applications. To learn more, visit www.mhs-hotrunners.com.

Gilman Precision Introduces New Spindle Catalog

Gilman Precision, Grafton, Wisconsin, has announced a newly designed catalog displaying its extensive line of spindles. Last updated in 2005, Gilman has combined all previous spindle catalogs, creating a one-stop resource. The new catalog discusses spindle systems and selections, products features, ordering instructions and an in-depth look at Gilman quality. The products included are eight different series of belt-driven spindles, Mech-Tronix integrally motorized spindles and standard spindle accessories. The catalog is available in print and electronically. To learn more or to order a catalog, call 800.445.6267 or visit www.gilmanprecision.com.

Meusburger Announces Ball-Actuated Puller for Installation in 3-Plate Molds

Meusburger, Austria, has added the high-grade, ball-actuated puller E 1807 that has been designed for installation in 3-plate molds to its product range. Because the puller is built directly into the plate, it is not necessary to machine the cavity plates’ sides. The ball-actuated puller has a high release force, ensuring reliable separation of the moveable plate. The E 1807 is available with 200, 300 and 400 Newton release force. To fit application-specific requirements, it can be equipped with a variable number of springs for adjusting the release force. The hardened and nitrided traction bolt contributes to the high wear-resistance of the ball-actuated puller. For more information, visit www.meusburger.com.
Calibration as a Risk Management Strategy
by Phil Wiseman, Alliance Calibration

All the technical journals are abuzz with the changes to ISO 9001:2015. One significant paradigm shift is to a risk-based management approach. Most companies already apply risk-based thinking in their planning process for organizational management. This article will take a very narrowly focused approach to a key aspect of risk management: calibration.

The goal of every company is customer satisfaction. Reality is, if the customers are not happy, the long-term odds of a business’s viability are slim. There might be an exception if you are the only manufacturer of a product that everyone must have; however, that just is not reasonable in the global marketplace.

In order to manage your risk effectively, you must know what your customers need and want and how to deliver that, while maintaining a reasonable profit. If you use external suppliers, you must communicate your customer expectations through the supply chain to ensure your risk is mitigated or managed as you produce your final product.

So, what does calibration have to do with any of this?
Everything is manufactured to a tolerance: a +/- measurement so that component parts fit together. Controls such as temperature, pressure and/or force also are measurements that can affect final product conformance. Imagine you need a 1” diameter rod to fit a part. How close to 1” does it need to be? Is 1 ¼” good enough? Is 1.00001” necessary? This is the +/- mentioned above.

If a part arrives and it does not fit or perform properly, what is the first thing you do? Measure it with a device such as a ruler, caliper, micrometer, etc. Measurements help in the creation of standards. For example, if you are cutting a piece of wood, do you saw it on the line? Cut it “skinny” or “fat”? How wide is the saw blade? What is the final measurement of the cut wood? How do you know if it is the correct length?

Imagine the chaos if everyone had their own interpretation of what constitutes an inch! In order to reduce the chaos and manage the uncertainty, standards must exist and be agreed upon so that everyone measures an inch in the same way.

Enter calibration.
Calibration is the comparison to a known physical standard. The global marketplace dictates International Standards to facilitate commerce across geographical borders. An integral piece to this concept is internationally recognized standards for comparison. Standards are extremely expensive to maintain, and most companies could not afford to send their instruments to NIST or the UK or wherever the physical standard is located. Likewise, the weeks or months spent waiting for the instruments to return would be cost-prohibitive. These economic constraints are mitigated by using an accredited calibration company that can provide an unbroken chain of traceability to the standard.

Each link in the traceability chain contributes to the +/- discussed previously. The sum of all the +’s and -’s is referred to as measurement uncertainty. The smaller the measurement uncertainty, the better confidence you have in the measurement.
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Would you want to measure a 1” block with a yardstick ±¼” or a comparator ±0.0001”? Your product tolerance makes that determination for you.

Now that a rudimentary discussion of calibration has been had, why does any of this matter to your process or product? One company makes lids, and another company makes cups. Does anybody care if they fit together? Ask anyone who has ever had a leaky cup/lid, and he or she will say yes.

**ISO 9001 Section 7.6 requires a calibration program be in place.**

You can view this as a cost or revenue center. A properly executed calibration program will reduce internal rework and reduce external customer rejections. The more product you make that meets the customer’s requirements, the more profit you will make.

What should I calibrate? Any process that can contribute to customer expectations needs to be examined.

Does this mean you must a hire a calibration company for every device that is used for measurement? No. If you have a properly trained staff and have master standards that have been calibrated, you can perform calibrations internally. It can become cost-prohibitive to maintain all the necessary calibration standards internally, so a cost/benefits analysis should be performed.

**How do I select a calibration company?**

An international standard ISO 17025 exists for calibration and testing. In order to become and maintain ISO 17025 accreditation, independent third-party assessment must occur. This independent assessment includes observation of technical competence. It is common for companies to say they are compliant with ISO 17025. This is not the same as being accredited. Automotive standard TS 16949 requires ISO 17025-accredited calibration. A key risk management component of ISO 17025 is the unbroken chain of traceability back to the standard.

ISO 17025 accreditation does not mean a calibration company is competent for all calibrations. Accreditation bodies issue a scope of accreditation that delineates by line item what measurement a company has demonstrated technical competence to perform. The scope also will list the best measurement uncertainty the company has demonstrated. The end user needs to read this document to determine if the calibration company can meet specific needs.
Reduce risk with the following steps:
- Determine what needs to be calibrated.
- Evaluate in-house expertise for calibration.
- Maintain the proper standards for calibration.
- Select an external calibration laboratory, if appropriate.
- Examine the external laboratory’s Scope of Accreditation.
- Maintain records of calibration results.
- Analyze records to determine calibration frequency.
- Use calibration to reduce internal rework and scrap.
- Produce more product that meets specification.
- Gain market share based on quality work.

Phil Wiseman is COO of Alliance Calibration in Cincinnati, Ohio. He earned a B.S. degree in Chemical Physics from Centre College in Danville, Kentucky, and holds certifications from ASQ as Certified Manager of Quality/Organizational Excellence and Certified Quality Auditor. For more information, visit www.alliancecalibration.com.

A properly executed calibration program will reduce internal rework and reduce external customer rejections.
NPE2015 Returns to Orlando

Professionals from every spectrum of the plastics industry and its vertical markets will assemble in Orlando, Florida, on March 23-27 to discover the tools and access the emerging technologies shaping the future of plastics.

Produced by SPI (Society of Plastics Industry), this triennial international event features a one-million-square-foot exhibit hall filled with full-scale, operating machinery and equipment, 2,000 exhibiting companies, a multipronged conference program, cutting-edge technology pavilions, networking and much more. For more information, visit www.npe.org.

A. Finkl & Sons Co. Booth S26011
Producing world-class mold steels from the company’s new steel works facility completed in 2014. Occupying 44 acres in Chicago, Finkl boasts a new melt, forge and heat treating facility that is complimented by its expanded machining operations. Finkl is part of the Schmolz + Bickenbach Group.

Alliance Laser Sales Booth S30178
Featuring the best laser welding and marking systems from around the globe. Nd:YAG lasers, diode lasers and new fiber laser technology keeps Alliance ahead in the world market. Voted number one in service by its customers.

American Mold Builders Association Booth S10034
Distributing membership information, the AMBA Sourcebook of US mold builders and The American Mold Builder magazine. AMBA is the premier association for US mold manufacturers, providing benchmarking metrics, cost-saving programs, educational resources, peer exchange forums, plant tour workshops, conferences and more.

AST Technology Booth W4345
Introducing the new CVe Live™, a web-based platform for real-time monitoring of tools from anywhere in the world.

BORIDE (DMS) Booth W143
Offering bonded abrasive products including mold/diemaker polishing stones, mounted points and industrial sharpening stones. A leading USA-based manufacturer, for more than 50 years BORIDE Engineered Abrasives has provided customers with outstanding product quality, extraordinary customer service and competitive pricing.

Bohler-Uddeholm Corporation Booth S27015
Introducing Uddeholm Mirrax 40, a new, prehardened stainless mold material. Also displaying Buderus Thruhard Supreme®, a high-hard prehardened cavity and core material with high thermal conductivity. Bohler-Uddeholm Corporation is one of the largest providers of mold steels and special materials to the moldmaking industry for cavity, core and mold bases.
Cavaform International, LLC  Booth W1522
Demonstrating two medical molds. Cavaform customers represent the largest medical OEMs in the world and the industry’s largest moldmakers. Cavaform’s rich history of quality and innovation are well known throughout the plastics industry.

CoreTech System (Moldex3D)  Booth W8645
Demonstrating the latest developments in simulation technologies. CoreTech System (Moldex3D) has been providing the professional CAE solution, Moldex3D, for the plastic injection molding industry since 1995 and will conduct numerous presentations on the hottest topics in today’s plastic industry.

Colonial Machine Company  Booth S10110
Affording a long history of mold building experience. Colonial Machine has been manufacturing molds for the plastics industry for over 65 years. Its wide range of expertise will fit any molding needs.

Diversified Machine Systems  Booth S26125
Exhibiting a DMS 5-axis CNC router, along with new features available for advanced materials machining, such as updates that support emerging safety requirements. These include air-pressurized bellows, tool changer doors to protect the outside of the work envelope, cool air guns for keeping contaminants away from runner blocks and fully enclosed machining for safety and dust containment.

DMS  Booth W143
Featuring I-mold and Exaflow tunnel gate inserts, Boride and Diprofil polishing products, REDE VAULT, PlatenGuard locating rings, BZ hydraulic locking cylinders, ICS full color mold plaques, Metal Rust Guard wrap, Slide Lubricants and Koolflow water manifolds, as well as many other mold-related supplies.

Dynamic Tool & Design, Inc.  Booth W7254
Specializing in high-cavitation injection molds for the packaging, personal care and medical markets. When repeatability and interchangeability are required, Dynamic Tool & Design offers a mold building process and project management system that ensures each mold will be built to exact specifications, on-time, every time.

EDRO  Booth W5476
Offering premium tool steels, including RoyAlloy™, EDRO400™ and P1FM™, supplied in the saw-cut or machined condition. Backed by state-of-the-art equipment, EDRO is a leading manufacturer of custom mold bases and specialty steels for the plastics tooling industry.

Extreme  Booth W8391
Providing plastic product development services. An injection molding and tool building facility, Extreme utilizes leading technology for design, engineering and mold manufacturing. Additional in-house capabilities include scientific molding/process development, full mold and product validation and automation integration. Primary markets include medical, packaging, consumer goods and automotive.
Gardner Business Media/Plastics Technology  Booth S29001
Distributing issues of MoldMaking Technology magazine, a magazine dedicated specifically to the engineering, building, maintaining, repairing and management of molds.

GF Machining Solutions, LLC  Booth S13170
Serving moldmakers and manufacturers of precision components as the North American supplier of AgieCharmilles wire cut, die-sinking and hole-drilling EDM machines; MIKRON 3- and 5-axis high-speed, high-efficiency and high-performance milling machines; 3D laser texturing solutions; System 3R clamping and palletization systems; automation solutions; and spare and consumable parts.

HASCO  Booth 26027
Presenting a large number of new additions to its standard metric product range. On display will be the new HASCO App and Magic Lens, the standard DLC components, clamping fixture, temperature controller and line of DLC coated collapsible cores, ranging from 8-200 mm.

INCOE Corporation  Booth W4463 (Main) S19018 (Customer Appreciation Lounge)
Highlighting melt management (Opti-Flo), VG with melt velocity control (Soft-Gate) and miniature VG (HEM). INCOE Corporation, a global manufacturer of hot runner systems, temperature controllers, auxiliaries and solutions, will display products representing nearly every market in the main booth. Both locations will have coffee in the morning and beverages in the afternoon for customers and AMBA members.

JMMS, Inc.  Booth S29004
Combining the traditional strengths of full-service metal working and conservative business management with continuous improvement in processes, cutting edge mold and die technologies and well-established relations with Asian manufacturing partners. JMMS is a second-generation, family-owned mold and die manufacturer.

LaserStar Technologies Corporation  Booth S28009
Promoting LaserStar micro-welders, an alternative to microscope GTA welding that produces a high-quality result while reducing the amount of handwork required. LaserStar laser welding systems are ideal for a wide range of plastic injection mold, tool, die repair and maintenance applications. Made in the USA.

Makino  Booth S18125
Supplying high-speed horizontal and vertical machining centers, sinker and wire EMDs. A global manufacturer, Makino’s patented technologies, process innovations and advanced technology transfer programs help mold manufacturers reduce lead times while improving accuracies and surface finishes.
We increase Profitability!
With our Automation and Cell Management Solutions

With EROWA, the machine operator has the production cell under control at all times.
More info: www.erowa.com
Noren Products, Inc.  
Booth S21088  
Promoting Thermal Pin heat conductors to reduce cycle time and improve part quality. The gas-charged Thermal Pins core is a completely sealed cooling system for thermosetting or injection molding plastic, available in many different sizes and temperature ranges. The cores can be used to upgrade or fix old molds while cutting costs in injection molding, blow molding or extrusion molding application.

Omega Tool, Inc.  
Booth W4364  
Exhibiting at NPE since 1997, Omega Tool has seen many changes in the past few years. Please come and check out the new booth and new faces.

PCS Company  
Booth W3173  
Displaying the latest additions to the PCS product line. Various new products will be featured within mold base, mold component, mold supplies and hot runner product lines.

PM Mold Company  
Booth S29026  
Providing a full-service menu of capabilities that include product design, engineering services, prototyping, in-house tool building, injection molding (including 2-shot molding, insert molding and in-mold decorating), secondary operation and packaging. PM Mold Company is a vertically integrated manufacturer of plastic injection molded products.

Progressive Components International Corp.  
Booth W4345  
Introducing new industry standards designed to speed mold building and reduce costs and downtime. Also displayed will be the latest edition of the CVe Monitor, with which users can gain complete visibility of their entire fleet of tools, and Z-Series Alignment Locks with lifetime warranty. New, standard Wear Plates, SRT Slide Retainers and much more are available as well.

Roehr Tool Corporation  
Booth W4345  
Introducing the new Sub-10mm Dove Tail (DT) collapsible core, which features a full 360-degree undercut and is ideal for molders of small medical or electrical fittings.

SCHMOLZ + BICKENBACH  
Booth S19035  
Featuring the complete line of Formadur® stainless mold steels for applications including mold base, core and cavity and other components. SCHMOLZ + BICKENBACH is a leading global supplier of mold steels, vacuum heat treatment and machining services.

SelfLube Trunnion Lifter Slides  
Booth W5582  
Showcasing SelfLube Trunnion Lifter Slides. More tool builders are turning to SelfLube Trunnion Lifter Slides. With rugged design and durability, Trunnion Lifter Slides reduce time spent on the shop floor, representing a highly cost-effective way to reduce program cost and lead time. 100 ready-to-install configurations.

SIGMA Plastic Services, Inc.  
Booth S32026  
Presenting SIGMASOFT® Virtual Molding technology, which considers all the components of the mold with their specific physical and thermal properties. Processing conditions are used and multiple consecutive cycles are reproduced virtually, representing what happens in the molding machine during the manufacturing process.

Slide Products, Inc.  
Booth S28027  
Offering a full line of processing aids for plastic processors and mold makers. The Slide line includes mold releases, mold cleaner, rust preventives, purges and lubricants. Free samples and technical support are available by visiting the Slide booth.

Sturdell Industries, Inc.  
Booth S33138  
Featuring SuperPlast® Stainless, a stainless mold base steel with high machinability. Information regarding the new machines added to both locations, along with the company’s grinding, gun drilling and additional machining capabilities, also will be available.

Superior Die Set  
Booth W6955  
Manufacturing mold bases, including “Be Fast” style in P20 steel, Fortal® aluminum, Toolox 44 and SuperPlast stainless. Also available are the Glide-Rite™ components, Slide-Locks™, EXAFlow® tunnel gates and the Threadformer UnscREWing Device. Superior Die Set’s subsidiary, FCPK Bytow, manufactures Euro type mold bases in Poland.

ToolingDocs  
Booth 4345  
Showcasing the MoldTrax 6. Also available will be ToolingDocs Certification Training and Maintenance Capability Assessment (MCA).

Wisconsin Engraving Company  
S20170  
Promoting specialty services, including marking stamps, embossing tools, electrodes, duplicating, digitizing, mold polishing, CNC machining and mold repair. An ISO 9001:2008-certified texturing and engraving company, for more than 90 years WEC has focused on delivering unsurpassed quality and service that contribute to a project’s success.

YRC Freight  
Booth WL46  
Providing members with negotiated rates on shipping services, along with a competitive option for shipments ranging from 150-7,500lbs. YRC offers a variety of shipping solutions, including standard, guaranteed, expedited, cross-border, exhibit, truckload and custom services. Save between 5-15 percent compared to the incumbent carrier or logistics provider.
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Marshalloy MQ®/FM Mold Steel

The quality of molds depends on the material you use. With Marshalloy MQ®/FM, you get pre-hardened alloy steel plate that gives your molds the consistency they need to deliver optimal performance.

This mold quality, free machining steel is made with a proprietary melting and refining process, resulting in superior:

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- Hardness
- Tensile Strength
- Uniformity
- Cleanliness
- Polishability

Marshalloy MQ®/FM is decarb-free and stress-relieved, making it ideal for EDM processes.

To produce parts that meet specifications time and again, use Marshalloy MQ®/FM.

Learn more at www.MarshalloyMQFM.com
Take the 2015 iWarriors Challenge

After four years of supporting over 300 American heroes, iWarriors.org would like to invite everyone in the manufacturing industry to join in honoring wounded service members in 2015 by participating in the 2015 iWarriors Challenge. iWarriors.org was founded with the mission to give back to service members of the US Armed Forces who have been wounded in combat. Without their service and sacrifices, life in the United States would not be what it is today. To honor these heroes, iWarriors.org provides iPad gift packages that consist of a personally engraved iPad2, an OtterBox Defender protective case, ear buds and an iTunes gift card. The iPads allow the service members to stay in touch with family and friends miles away while undergoing months, and in some cases, years of treatment at the hospital. Additionally, apps are available to aid the wounded in their treatments of TBI and PTSD.

In 2014, iWarriors raised $71,000 and helped 110 wounded service members. In 2015, the goal is $90,000. The 2015 iWarriors Challenge is a $650 donation, the value of one gift package. Another option is the iWarriors In-Shop Challenge, in which employee contributions are matched by owners and/or management.

Special Thanks to the Plant Tour Sponsors

AMBA Plant Tour Workshop

March 5, 2015; 8:00 a.m.-12:30 p.m.
Duncan, South Carolina

United Tool & Mold – Emergency Room Specialist for Tooling Repair

Highlighted as the first of its kind since AMBA began its plant tour workshop series in 2011, moldmaking industry executives will have an exclusive opportunity to tour one of the nation’s leading mold repair shops, United Tool and Mold (UTM), in Duncan, South Carolina. With a culture based on “nothing is too much to handle,” UTM has evolved into leaders in the specific niche of providing immediate solutions to a host of clients, including OEMs, plastics processors and moldmakers. Functioning literally as emergency room doctors for the tooling industry, the staff and associates of UTM have built a wide range of expertise due to the nature of the support business. With constant demand, UTM must service and repair molds from every corner of the globe, requiring each UTM associate to possess the technical knowledge to overhaul and fix two-plate molds, three-plate molds, insulated/modified molds, hot runner molds and all specialty molds. Visit www.amba.org for more information and to register.

AMBA Chicago Chapter Hosts Suppliers Night

To support its continuing efforts to promote mold manufacturing as a viable career in the Chicago area, the AMBA Chicago Chapter will hold its 1st Annual Suppliers Night. All funds raised from this event will be used to host a symposium in the fall of 2015 where teachers, counselors, parents and students can learn about mold manufacturing careers and opportunities. Suppliers Night exhibits and networking will be held Wednesday, April 22. Registration forms are due no later than Fri., March 29, 2015. For more information, contact Karen Norville at 708.227.0373 or email ambachicagochapter@comcast.net.

AMBA Headquarters Relocated

The American Mold Builders Association has moved its headquarters to Indianapolis, Indiana, to best utilize the resources of its management team and bring greater value to the AMBA membership. Please update all records with the new contact information for the AMBA office:

American Mold Builders Association
7321 Shadeland Station Way, Suite 285
Indianapolis, IN 46256
317.436.3102 p
317.913.2445 f
Winning a race is nearly impossible if the participants have no knowledge of their own position and no understanding of the speed of those around them. It is for this very reason that the American Mold Builders Association will host the State of the Mold Manufacturing Industry webinar. Data collected from hundreds of mold building executives from across the US will be reviewed to enable company leaders to comprehend their positions in the marketplace, while understanding the speed of performance of the industry as a whole.

The webinar will provide unparalleled data in the industry, including compensation and benefits, employment levels, capital expenditures, profitability, primary issues and more. This information will help attendees understand the overall health of the mold building industry and serve as an indicator of how manufacturing executives are managing their business strategies. Presenter: Troy Nix, AMBA executive director. To register, visit www.amba.org.

CALL FOR NOMINATIONS: AMBA 2015 MOLD BUILDER AND CHAPTER OF THE YEAR

Mold Builder of the Year

Nominations now are being accepted for the 13th Annual Mold Builder of the Year Award. The award was instituted to recognize outstanding contributions made by an AMBA member. The recipient of this prestigious award will be an outstanding business leader, dedicated to the industry and an active member of the AMBA. Last year’s Mold Builder of the Year Award was presented to Don Snow, CS Tool Engineering, Inc., Cedar Springs, Michigan.

Chapter of the Year

The AMBA Chapter of the Year Award was established to recognize those chapters that have made outstanding advancements throughout the year. AMBA chapters may nominate themselves or be nominated by individuals outside the chapter. The award recipient will be the chapter as a whole. Some questions to ask when choosing a chapter to nominate include the following: Has the chapter established new initiatives geared toward implementing or maintaining apprenticeship programs? Has the chapter launched new strategies to promote moldmaking state and nationwide? How has the chapter surpassed last year’s accomplishments?

Both the 2015 AMBA Mold Builder and Chapter of the Year Award winners will be announced during the upcoming Annual AMBA Conference in Indianapolis, Indiana, May 6-8, 2015, at the JW Marriott; in national industry publications (including AMBA’s The American Mold Builder magazine) and posted on the AMBA website. The award recipients will receive a $5,000 scholarship grant from Progressive Components, to be donated to the industry-related educational program of their choice. Visit www.amba.org for more information or to download a nomination form. Deadline for nominations is March 20, 2015.

NEW MEMBERS

Midwest Mold Services, Roseville, Michigan
John Hill, President/CEO
586.888.8800  www.midwestmold.com
Midwest Mold Services is an injection mold builder and plastic part manufacturer for high/low volumes and prototypes. Innovative thinking, attention to detail and open communication with its customers helps the company create the highest quality plastic products.

Martin Signature Machining, Englewood, Colorado
Donald Martin, Manager
720.638.3843
Martin Signature Machining’s services include part and product design, tooling design for injection molds, new injection mold building and mold repairs and revisions.

Michiana Global Mold, Mishawaka, Indiana
Eric Karaman, President/COO
574.255.6262
Michiana Global Mold manufactures high-quality plastic and rubber injection molds and components. Services offered include engineering changes, repairs and global sourcing of molds and components.

Midlands Technical College, Columbia, South Carolina
Alan Grier, Program Coordinator
803.738.7757
Midlands Technical College is a technical school offering programs leading to a two-year degree in machine tool technology.

NEW PARTNERS

Precision Marshall Steel, Washington, Pennsylvania
Jackson Milhollan, President/CEO
724.222.2100  www.pmsteel.com
Precision Marshall Steel Company manufactures pre-machined tool, die and mold steels. The company is the largest producer of “Deluxe” pre-finished tool steel products, ground flat stock line and drill rod in North America. It enjoys a leadership role in specialty tool steel manufacturing based upon a unique combination of innovation and excellence.

Gesswein Company, Bridgeport, Connecticut
Greg Gesswein, Vice President
203.366.5400  www.Gesswein.com
The Gesswein Company offers mold finishing supplies and equipment. Its high-quality, precision products are sold to the global manufacturing community, with an emphasis on customer service and same-day shipping.
For 50 years, Delta Tooling Co. (a division of Delta Technologies Group) has been serving the transportation industries from its location in Auburn Hills, Michigan, by providing injection molds, models, fixtures and prototype tooling. With clients including Chrysler, Ford Motor, General Motors and Boeing, the company’s 200 employees must meet high quality standards, and its production volumes require a large on-site inventory of perishable tooling. In 2012, the company found an innovative way to manage that inventory, saving both time and money through the use of vending machines exactly like those found in many break rooms.

The result, explained Tibor Toreki, vice president of technology for Delta Technologies Group (Delta Tooling Co.), has more than met expectations. “We introduced our first three vending machines in October of 2012 to help manage the carbide inserts and drills used by our CNC manufacturing groups,” Toreki said. “The effort was successful enough that we have since expanded the system to 10 vending machines dispensing roughly 640 unique items used by both our CNC and manual manufacturing groups.”
Inefficiencies led to new system implementation
Delta Tooling has three buildings at its Auburn Hills location, two of which are staffed with employees who provide machining services. However, the facility had a tool crib in only one of those buildings. “If an operator needed something, they had to walk to the tool crib – which may not have been in the same building,” explained Toreki. “Once they arrived at the tool crib, there were no guarantees the tool crib manager would be available.” This back-and-forth between work space and tool crib wasted time and didn’t always ensure the needed parts or tools were immediately available.

In addition, excess inventory was floating through the facility. “Many of the inserts we buy are in a package of ten,” he explained. “The operator would only need one, but would be given the entire package. Then the operator next to him needed the same insert, so he would go to the tool crib and get another package of 10. We had tens of thousands of dollars that was spent on inventory no one was using.”

Inventory standardization also played a key role in the decision to implement the vending machines. “Before the vending machines were added, every machine operator could go to the tool crib attendant and ask for any tool or insert they’d like, so Operator A and Operator B could be working on the same project but getting different results,” said Toreki. “Now, if we find a tool or insert that improves the process, we can replace it easily across the entire facility. We’re improving our processes and controlling our output with something as simple as inventory management.”

How does the system work?
Before the vending machines were installed, an employee would submit a handwritten requisition document containing the quantity, part description and part numbers for each item they needed. This was a slow process, with mistakes from missing or transposed part numbers resulting in delays and incorrect orders, which then incurred restocking charges and additional shipping fees. “In many cases, we just kept the items and now have stockpiles of items we will never use,” said Toreki.

In addition, the company typically runs two 10-hour shifts per day and sometimes operates on a 24/7 basis. Prior to the installation of the vending machines, the day shift employees could
request an item from the crib attendant, but at night, the tool crib was locked and an employee would have to find a supervisor for access. If the tool crib was left unlocked to avoid this back and forth, as was often the case, access to the inventory was no longer controlled. This meant inventory tracking was unorganized and, in some cases, theft occurred.

Today, any employee can access the needed supplies at any time. Each employee is assigned to a group and the company controls which group has access to certain products. For example, mold builders can vend a hand tap, but not a more expensive CNC tap that isn’t essential to their job. To vend an item, the employees enter their employee number and the four-digit code assigned and then chooses the bin number. In addition, theft has been practically eliminated since the system tracks which employee vends each item.

Since there are now 10 vending machines at Delta Tooling, with various locations throughout the facility, a web page has been posted to the intranet to direct operators to the correct machine for the items they need. “The first screen shows all the different products available in the vending machines,” Toreki explained. “Users click on the item they need, which takes them to the next page to find the size of the product they’re looking for and then which machine it is in. The machines locations are color-coded in the web page and on the shop floor, so from a distance each operator can tell which machine to use. We’ve also purchased touchscreen tablets to mount to the side of the machines so the operators don’t have to look up the correct bin information near their work centers, write it down and take it to the machine.”

The vending machine database automatically emails reports to the vending manager each day, identifying items which need replenishing. The reports are reviewed and submitted to the purchasing department to order additional inventory. The vending manager spends on average less than an hour a day reviewing reports, ordering inventory and replenishing the vending machines. Since the process is completely electronic, the potential for errors has been eliminated. Each vending machines costs approximately $5,000, and the ROI has been extremely short.

**Determining the necessary inventory**

“We first addressed the CNC machines,” said Toreki, “and looked at everything that is used on a regular basis. The type of vending machines we ordered limited the size of what could be dispensed to six inches, so that gave us immediate guidelines for what was appropriate and what wasn’t.” Once carbide drills and inserts were assessed, the moldmakers on the shop floor were asked about the files, stones and even gloves that were used on a regular basis.

“It seems simple, but the gloves were a smart addition to the vending machines,” he explained. “In the mornings, we would have six or seven guys waiting 20 minutes at the tool crib to get a 49 cent pair of gloves. When deciding what inventory could be managed through the vending machines, we didn’t look so much at the cost of the item, but rather how much work time was being taken away from the operators.”

While the vending machines are saving time for operators on the floor, there were some tricks to setting the system up initially. “Depending on how the product is shipped and packaged to us, it may not fit in the machine or it may come in a larger quantity that needs to be individually packaged before it’s placed in the machines,” said Toreki. The company developed a labeled manila envelope system for repackaging items as needed.
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Vending machines result in reduction of inventory and wasted time

In addition to creating a much needed inventory control system, the vending machines also have opened opportunities for additional training. “Each morning, the supervisors receive a report showing the items their employees have vended the prior day,” he said. “The supervisors can identify trends where employees may be using the incorrect item for their task or using an exorbitant amount of product. It helps identify potential process problems and provides an opening for additional training.”

For more than two years, the vending machines have been instrumental to Delta Tooling’s efficiency and have significantly impacted the bottom line. Toreki explained, “We’re reducing the amount of inventory we’re carrying, controlling the products our operators are using and saving a considerable amount of time when an item is needed on the floor.” And, all of that has been accomplished with a machine that likely is dispensing candy and potato chips in most other tooling facilities.
C&G Systems Receives Gold Product Certification

C&G Systems, Inc., Tokyo, achieved “Gold Product” certification as of November 2014. Sponsored by Dassault Systems SOLIDWORKS, certification was given to the CG CAM-TOOL, a CAM software for machining molds, dies and parts. C&G’s CG Press Design for SOLIDWORKS was awarded Gold Product certification in February 2014. Likewise, a third CG Series product, CG Mold Design for SOLIDWORKS, currently is being considered for certification. The CG series was developed to meet the growing demand for software, allowing technicians to become CAD/CAM operators in a short amount of time and with little expertise. To learn more, visit www.solidworks.com/sw/partners/certified_gold_product.htm.

Tech Molded Plastics Wins Training Excellence Award

Tech Molded Plastics, Inc., Meadville, Pennsylvania, received RJG, Inc.’s Training Excellence Award during the 2014 Benchmarking and Best Practices Conference hosted by MAPP (Manufacturers Association for the Plastics Processors) in October. Created in 2012, the award recognizes plastics processors’ achievements within RJG’s Master Molder™ certification program. Along with its Master Molder successes, this summer also saw Tech’s apprentice toolmaker receive one of ten scholarships awarded nationwide by the American Mold Builders Association. For more information, visit www.ttmp.com.

Gesswein Celebrates 100 Years of Service, Adds Associates

Dec. 15, 2014, marked the 100th Anniversary and Holiday Celebration for Paul H. Gesswein & Co., Inc., Bridgeport, Connecticut. Leaders of Gesswein in Canada (David and Keith Ambtman), Thailand (Sarote Srathongthan) and India (Kaushal Khetan) attended the event, highlighting Gesswein’s growth into markets all over the world. In addition, Gesswein has announced the arrival of three new sales associates. Adam Kasson joins Gesswein’s field sales staff in the jewelry division. Ian Bowden also joins the industrial field sales team after a previous position with Strauss Diamond Instruments USA. Chris Corwel comes to Gesswein from Specialty Wire and Cords, bringing additional senior purchasing experience to the Gesswein procurement team. For more information, visit www.geisswein.com.

Industrial Molds Technical Presentation at ANTEC® Orlando

Kerry Smith, project engineer for Industrial Molds, Rockford, Illinois, will deliver a technical presentation entitled “Mold Design for Reduction of Offline Assembly and Secondary Operations” at ANTEC® Orlando, March 23-25, 2015. The presentation will focus on designing for metal-to-plastic conversion for part consolidation, two-shot molding and other molding technologies for reducing production costs and improving quality. Smith will discuss evaluating part design, material selection, mold design considerations and much more to help OEMs convert their metal parts to plastic successfully. To learn more, visit www.4spe.org/Events/event.aspx?EventID=51212.

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PCS Launches New Website
PCS Company, Fraser, Michigan, recently launched a new website, www.pcs-company.com. The website has a fresh, clean, contemporary look and provides customers with unprecedented access to PCS Company product information in an easy-to-search format. The website essentially is a comprehensive business-to-business data center where PCS Company customers have the ability to obtain technical product information, download product CAD files, request product price quotations, shop and buy online, search current and past order history and initiate communication with key PCS Company functional departments. To experience the new website, visit www.pcs-company.com.

DME Company Announces Sales Team Additions
DME Company, Madison Heights, Michigan, a leading global provider of mold technologies, has announced additions to its sales team. Todd Castile is DME director of sales for the Americas, Jim Mogan is DME territory manager for California and Nevada and Eric Jakobowicz is DME territory manager for the New England region. Castile oversees an expanding DME direct sales force of over 25 sales professionals. For more information, visit www.dme.net.

Alcoa Foundation to Support SkillsUSA’s US Student Delegation in Global Skills Competition
SkillsUSA, Leesburg, Virginia, is proud to announce its partnership with Alcoa Foundation to support the US delegation of 19 students and 16 experts which will compete at the 43rd WorldSkills Competition. Alcoa Foundation’s $250,000 grant to SkillsUSA will enable the US to compete for the first time in the Manufacturing Team Challenge contest, involving three-student teams that perform design, production, assembly and testing of a manufactured product. The WorldSkills Competition will be held August 11-16 in Sao Paulo, Brazil. To learn more, visit www.skillsusa.org or www.alcoafoundation.com.

Manufacturing Day 2014 Smashes Expectations
Manufacturing Day 2014 exceeded all expectations, with events extending far beyond Oct. 3 to officially wrap up on Dec. 12. Manufacturing Day is an annual national event, executed at the local level by more than a thousand manufacturers across North America that host students, teachers, parents, job seekers and other local community members at open houses designed to showcase modern manufacturing technology and careers. A total of 1,679 events were held across North America, in all 50 states, three Canadian provinces and Puerto Rico. Based on data collected from host company evaluations, more than 260,000 people participated in live events. This brings the total number of individuals involved with Manufacturing Day activities to nearly 400,000. President Barack Obama attended his first Manufacturing Day event, an open house at Millennium Steel Service in Princeton, Indiana. For more information, visit www.mfgday.com.
After nearly a decade of issuing a long series of proposed and temporary regulations, the IRS has finally issued final regulations providing guidance to help taxpayers determine how to treat expenditures related to tangible property from a tax perspective.

Such property includes buildings, machinery, equipment and vehicles, as well as costs incurred to replace major components or substantial structural parts of a unit of property (UOP). It also includes costs that result in a UOP’s betterment, restoration or change in use.

The final regulations (IRS T.D. 9636, also known as the Repair Regs) help clear up the confusion that has existed for many years with regard to whether taxpayers can expense and deduct repair and maintenance costs, or if they must capitalize these expenditures. Property and costs that are expensed generally can be deducted in the year they are paid or incurred, but those that are capitalized must be depreciated and deducted over a period of years. Therefore, expensing is usually preferred by most taxpayers.

Separating repairs from improvements
Internal Revenue Code (IRC) §162 and §263 distinguish between “repairs” and “improvements” in determining whether taxpayers can expense and deduct tangible property expenditures or must capitalize and depreciate them.

Expenses allocated to acquiring, producing and improving tangible property must be capitalized and depreciated over the appropriate useful life, while those allocated to incidental repairs and maintenance can be expensed and deducted as paid or incurred.

The Tangible Property Regulations provide clarification to help taxpayers make this distinction. They allow a taxpayer to deduct routine maintenance costs, which are defined as recurring activities that are necessary to keep the property in “ordinarily efficient operating condition.” These activities – which include inspection, cleaning, testing and replacement of worn and damaged parts – should be expected to be performed more than once during the property’s alternative depreciation system (ADS) life.

Note that in the case of real estate, the measurement period is 10 years. Therefore, such activities should be expected to be performed more than once every 10 years.

If non-inventory materials and supplies are used to perform the routine maintenance, they can be deducted under specific conditions. Fuel, lubricants, water and similar items consumed within one year are deductible, as are UOPs with a useful life of no more than one year and those with an acquisition or production cost of no more than $200.
Incidental materials and supplies, such as mold or fixture cleaning materials, can be deducted as soon as they are purchased. But, non-incidentals may not be deducted until they actually are used or consumed – these include things like press parts and end-of-arm tooling parts, for example. Further, rotatable, temporary and standby emergency spare parts cannot be deducted until they are disposed.

**Expenses that must be capitalized**

Meanwhile, the Repair Regulations define acquiring, producing or improving tangible property as any activity that results in one of the following:

- A betterment of the property – It corrects a pre-existing defect or causes a material increase in capacity, productivity, efficiency, strength, quality or output.
- A restoration of the property – It returns a unit of property to ordinarily efficient operating condition after it had deteriorated and was no longer functional.
- An adaptation of the property – It makes it possible to use the asset for a new or different purpose.

If an expenditure meets any one of these criteria, it cannot be expensed and deducted – it must be capitalized and depreciated over a period of years.

The following examples help illustrate how the Repair Regulations might apply in typical scenarios:

- Suppose the compressor unit in a commercial building’s air conditioner has failed and needs to be replaced. Would this be considered a repair or an improvement to the air conditioning system? While on the surface it might seem like this would be a repair that can be expensed and deducted, it would actually depend on the facts and circumstances. Assuming the compressor was replaced with a more efficient unit, this would be considered a restoration or betterment and, therefore, must be capitalized and depreciated.
- On the other hand, if the taxpayer had 10 rooftop units and two were replaced and no work performed on the others or the controls, these would be expensed as they do not constitute a major component or substantial structural part of the building unit.
- Suppose key parts of 5-axis machine are damaged and need to be replaced. This would likely qualify as a repair that can be expensed and deducted during the year when the repair is made.
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For commercial buildings, the repair standards must be applied separately to the overall structure, as well as to the following specific building systems:

- HVAC
- Plumbing
- Electrical
- Escalators
- Elevators
- Fire protection equipment
- Security equipment
- Gas distribution systems

**Safe harbors for taxpayers**

The Repair Regulations contain a safe harbor for taxpayers with gross receipts up to $10 million. These taxpayers can elect to expense and deduct (rather than capitalize) repairs, maintenance and improvements if the building’s initial cost is $1 million or less and the total expenses for the tax year do not exceed $10,000 or two percent of the unadjusted basis, whichever is less.

In addition, the Repair Regulations also provide a de minimis safe harbor of $5,000 for taxpayers that prepare applicable financial statements (these include audited and certain other government-required statements). Further, for those without an applicable financial statement, taxpayers can expense up to $500 per item if a written expenses policy was in place at the beginning of the tax year.

**Coordination with research expenditure regulations**

On July 18, 2014, the Treasury Department finalized regulations with respect to research expenditures. Research expenditures, like repair and maintenance expenditures, may be deducted in the tax year in which they are paid or incurred. As part of this process, mold builders should consider whether the activities associated with internally developed machinery or equipment meets the definition of research.

**Applicable dates**

The Repair Regulations apply to tax years beginning on or after Jan. 1, 2014 (this tax filing season for calendar year taxpayers). They are retroactive, so you may need to adjust for prior years’ repairs and maintenance costs that were capitalized incorrectly. The good news is that this adjustment could result in a current deduction equal to the un-depreciated cost of previously capitalized repair and maintenance expenses.

**Steps to take**

Mueller Prost suggests the following actions:

- Review and update your depreciation schedules and calculations.
• Review your fixed asset files and determine if expenditures have been properly classified as a repair expense vs. capital asset.
• Compare allowable depreciation to what has been previously reported on prior years’ tax returns.

The impact
The Repair Regulations likely will have some kind of impact on virtually every business, including the need to change how businesses account for repair and maintenance costs. In fact, most taxpayers will benefit from these required changes in their accounting method(s), and these changes will result in significant, new recordkeeping, administrative and documentation requirements.

Teri M. Samples, CPA, and Michael J. Devereux II, CPA, are partners at Mueller Prost, a CPA and business advisory firm. Samples leads Mueller Prost’s Real Estate Services group, while Devereux leads Mueller Prost’s Plastics Industry Services group. Both authors focus on tax incentives available to taxpayers. Mueller Prost’s Tax Incentives Group is nationally recognized and has assisted hundreds of companies in the manufacturing sector to identify and utilize these incentives. For more information, call 314.862.2070 or email mdevereux@muellerprost.com.
Working ON the Mold Manufacturing Business

by Laurie Harbour, Harbour Results, Inc.

Even with economic and market uncertainties, there are several improvements that mold building companies can make to impact their business in ways they can control. In the end, these items will allow mold builders to grow their profitability, invest in new capital and, in turn, grow their businesses and improve the outlook for the future.

What are some of those very “actionable” things that mold builders can do to improve their businesses? Companies are returning their focus to lean manufacturing and basic engineering, which they may have lost sight of, to gain back some efficiency. But, the mold builders that are really making quantum strides to improve their businesses are focused on four key projects.

1. **Strategic planning**

   Instead of having a vision as a leader, articulating that vision and calling it a long-term plan, the best companies have taken that vision and turned it into actionable one-year objectives. Those objectives then are cascaded throughout the organization to all levels of the company, with metrics that have been developed and are driving each person’s role and responsibility in meeting the longer-term vision. Too often, company leadership thinks a plan has been developed, yet wonder why the plan is not being met. Usually, it’s because the company has not cascaded the plan into what it means to each person in the company and what that person’s role will be to achieve success.

2. **Market intelligence**

   Companies finally are realizing the need to gather market intelligence, not only on their type of process, but on each and every industry in which they produce product. The best companies have put people in place to gather market intelligence on their customers in terms of forecasts, new models, new processes and materials. They also gather data on industries such as automotive, aerospace, medical, etc. Even the smallest companies (under $10M) have put people in place at conferences and trade shows, talking to customers and tapping other sources to gather data that allows them to be more knowledgeable. That knowledge base allows them to focus on the third project – demand planning.

3. **Demand planning**

   Demand planning has been the most challenging aspect for most of the businesses with which Harbour Results has worked. Companies report they can’t get the information from their customers that is needed to provide an accurate forecast. Some of that is true because customers won’t provide it, but many times it is because companies don’t ask. Those companies that use market intelligence, talk to their customers, gather third-party data and use all means possible to do demand planning have shown that they can drive throughput by 20 to 30 percent, making profitability soar.

4. **Systems efficiency**

   The last project that is getting a lot of focus and success from companies is a real look at manufacturing efficiency, but in a different way than previously accomplished. Companies need to view operations as an entire system, rather than simply improving the efficiency of one or more machines. Companies need to analyze the system from scheduling on, throughout each and every piece of equipment that supports...
making the product. Those that have done this are seeing the ability to manage the higher mix and lower volumes much more easily. Inventory can be managed better and turned over much faster, changeovers are improving and machine utilization is at an all-time high in those shops. Companies are beginning to manage multiple business models under the same facility and doing it very profitably.

Some companies have done one or more of the four improvements outlined here, such as evaluating systems efficiency or strategic planning. But, those that have put all four of these projects together are running like a well-oiled machine while making a ton of money and operating with a true sense of calm. For many, 2015 will be a great year, and everyone has the opportunity to get there. There’s no need to over-complicate it; instead, focus on the right things and work ON the business.

Laurie Harbour is president and CEO of Harbour Results, Inc. Combining operational and financial advisory expertise with industry analysis and thought leadership, Harbour Results delivers results that impact the bottom line. The company specializes in manufacturing, production operations and asset-intensive industries, as well as a number of manufacturing processes, including stamping, tooling, precision machining and plastics. For more information, visit www.harbourresults.com.

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