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PATCH IN, TO PAGE 16

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Bengt Blendulf

Bengt Blendulf, president of EduPro US, Inc., was educated in Sweden and moved to the United States in 1974 to start a subsidiary for a Swedish fastener manufacturer. After working as a technical consultant and also eight years on the faculty of the College of Engineering and Science at Clemson University he established EduPro US in 1997 to teach highly rated courses in Fastening Technology in the US, Canada, Mexico, Europe and Asia for engineers and fastener professionals. Being one of the founders, Bengt served as the chairman of ASTM F16.96 Bolting Technology from 1996 to 2006. In 2006 he received the Fred F. Weingruber award from ASTM for "his efforts to promote and develop standards for the fastener industry." In 2013 he also received IFI's Soaring Eagle Award for "significant contributions to the technological advancement of the fastener industry". Bengt is the author of an extensive lecture book, well over 110 articles and "Mechanical Fastening and Joining", a book published in 2013 by the Industrial Fasteners Institute. He can be contacted through www.edupro.us or by email bblendulf@yahoo.com.

ADVANCEMENT IN TORQUE CALCULATIONS

There are several methods to tighten threaded fasteners, the most common are:

- 1. Torque to tension
- 2. Torque/Turn to tension
- 3. Torque to yield
- 4. Hydraulic tensioning
- 5. Thermal tensioning
- 6. Mechanical tensioning (jack-bolting)

The last three methods are not traditionally "torqued" to achieve tension, but are stretched in a straight fashion (no twisting). The advantage with that is that no torsional "wind-up" is introduced due to the influence of thread friction and we can, therefore, use the book-value strength in our joint calculations. Accuracy in achieving the intended preload is good and the scatter in

tension levels relatively small. The down-side is that assembly is generally slow and is typically for larger bolt sizes (M12, 1/2" and up). We will take a closer look at these three (4-6) at some later time. This time around we will focus on the issues related to torque a.k.a. moment of force.

Of the first three methods, the Torque-to-Tension is, by far, the most widely used. Assembly speeds are usually high and therefore very suitable for large volume manufacturing. The quality of the bolted/screwed joints assembled by this type of tightening depend largely on

- 1. Tightening tool accuracy
- 2. Torque value used
- 3. Control of assembly

Tightening Tools/Equipment

We can buy cheap wrenches and noisy tightening air tools with little or no real control of torque output and with high scatter (+/- 40-60%) in resulting tension. Spending more money, we can invest in better equipment like DC electric tools and calibrated torque wrenches and cut the tension scatter to +/- 10-20%.



In those bell curves, the highest point would represent the mean target value we have arrived at by calculating a torque (moment of force) value. If we have made this calculation properly and with correct values for friction, thread pitch and bearing areas, a lower scatter tightening method would give us a reliable assembly. If, on the other hand, we don't know the friction coefficient and make the wrong assumptions, we will not get a good joint even with the best and most expensive tightening tool.

The Torque Formula

Before we look at the method of determining torque values, let's keep in mind: **90 % of the work of tightening a fastener is wasted due to friction.**

50 % of our tightening torque is used up by overcoming friction under nut or screw head, 40 % between the external and internal threads. This is true for most fasteners where head sizes are about 1.5 times the screw diameter.



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Robert B. Footlik

Robert B. Footlik is a licensed professional engineer. A graduate of Illinois Institute of Technology, he has worked extensively in the fields of material handling, plant layout, packaging and management systems. The firm of Footlik and Associates serves as staff warehousing and materials consultants to six trade associations. Footlik writes for 12 trade and professional journals. Footlik and Associates is located at 2521 Gross Point Road, Evanston, Illinois 60601; phone 847-328-5644.

CARVING OUT SMALL SPACES

Fastener Distribution inherently requires far more Stock Keeping Units (SKU's) than most other distribution businesses. Growth in volume normally comes by adding new items and product categories rather than adding more pallet loads of existing items. This means that "fronts" (places to put things) are far more important than "cube" (more space for existing large quantities). The result is that warehouses often have plenty of space above and within the racks or shelving but are short of lineal footage for picking stock. This leads to an entirely different strategy for warehouse expansion.

Working Higher

Take a good look at the top of the warehouse. If the space is wide open above the shelving or at the top of the pallet racks you are a candidate for adding vertical fronts. There are several ways of doing this ranging from comparatively cheap to breath taking expensive.

For mostly case quantities of materials the least expensive alternative is to add another level of beams in the pallet racks. Used beams and wire mesh decking can be found for less than \$40.00 per 8' wide x rack depth opening. Accessing heights above the six foot reach level can be accomplished using OSHA compliant rolling steel ladders or if mostly single cartons are moved a low cost man lift such as the "Joey" from Big Joe Forklifts, Crown "WAVE" or a used vehicle such as a "man-lift" or Raymond "Gofer."

For those with a larger budget and a need for speed a used Atlet or Jungheinrich man up pallet mover is a good alternative. Given that these are no longer sold in the US parts and service can be problematic although both companies supposedly have maintained service capabilities.



The compromises are space loss in the depth of the shelf; slow and limited access using ladders and man rideable equipment; the necessity of only using boxed materials (bags and loose items are usually problematic); and the difficulty of defining spaces. Some of these limitations can be minimized by judicious product placement. Maintaining the upper levels strictly for slower moving items is a frequently used strategy. This can work well if the "C" and "D" items are directly above their related family members. Random storage at the upper level may seem appealing but an "Affinity Analysis" should be performed before making any decisions. If the slow movers are almost always sold with other family related SKU's going to randomized stocking will cost far more in labor time and effort.



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Joe Dysart

Joe Dysart is an Internet speaker and business consultant based in Thousand Oaks, California. A journalist for 20 years, his articles have appeared in more than 40 publications, including The New York Times and The Financial Times of London. During the past decade, his work has focused exclusively on ecommerce. Voice: (631) 256-6602; web: www.joedysart.com; email: joe@joedysart.com.

CRUISIN' FOR A BRUISIN': FASTENER DISTRIBUTORS STILL USING WINDOWS XP AFTER APRIL 2014 COURT PERIL

Fastener distributors still using Windows XP after April 8, 2014 will be courting peril, according to countless IT experts, given that all Microsoft support for the operating system ends on that day - leaving XP forever vulnerable to new security breaches.

"The importance of upgrading from Windows XP cannot

be overstated," says Tim Rains, director of Microsoft Trustworthy Computing. "We truly want people to understand the risks of running Windows XP after support ends, and to recognize the security benefits of upgrading to a more modern operating system."

Moreover, many IT security analysts are also predicting that hackers will have a field day poking holes in XP's security after Microsoft abandons the OS in April. Those hackers know full well that that any security vulnerabilities they find in XP will no longer be patched by the software maker after

April 8, 2014.

IT security analysts also predict that a rash of hacker attacks will be unleashed on unsuspecting XP users as soon as the deadline passes. The reason? Many hackers are currently discovering and squirreling away new flaws in XP's security, knowing these vulnerabilities will last forever once XP takes the dirt nap.

More than 12-years-old, the extremely popular Windows XP

is still used by many fastener distributors and on 31% of PCs worldwide, according to Net Applications (www.netmarketshare.com/operating-system-marketshare.aspx?qpcustomb=0&qprid=11) with business use much higher.

Indeed, a Fall 2013 study by Dimensional Research found that 47% of businesses worldwide had not completed

Above: Microsoft Chairman Bill Gates is anticipating a spike in Windows 7 and 8 sales as XP fades into obsolescence.

Below: Windows 8 has been derided by many as a move to force-feed touch-screen computing to traditional PC users.



their migrations from Windows XP to Windows 7 or 8. An additional 16% had not even started to migrate.

"The deadline is looming," says Mahesh Kumar, chief marketing officer for BDNA (www.bdna.com), an IT consulting firm. "People are saying, 'Oh my God. I have to get it done.'"

The extreme reluctance of fastener distributors and other

businesses to migrate from XP has been a source of much consternation at Microsoft, which for years has been beseeching firms to move to more modern versions of the operating system.

The problem, in part, is that XP was and is - a home run for Microsoft. Over the vears, the OS has earned a reputation as very stable and very reliable. Plus, XP runs many software programs that are simply not compatible with later versions of Windows - a major sticking point for businesses.

Understandably, businesses are in no

rush to migrate away from XP, knowing full well they'll also be forced to re-purchase newer of the versions same applications that run just fine on their XP computers.

The reluctance to upgrade has also been exacerbated by the memory on fastener distributors and at other businesses of Microsoft's release of Windows Vista. which initially had major compatibility problems with

peripheral hardware, and ran slower than XP on many PCs.

And while Microsoft's follow-up OS, Windows 7, was generally cheered, its latest offering - Windows 8 - again has the Redmond goliath in the dog-house. This time, the newest version of Windows has drawn a rash of sneers for its radical new look-and-feel, which is designed to force-feed touch-screen computing to traditional PC users, like it or not. please turn to page 112



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Guy Avellon

Guy Avellon has been in the MRO and fastener distribution industry for over 30 years. He began his metallurgical engineering career at Republic Steel Research Center in metal coatings and has since held positions as sales engineer; Chief Engineer; Manager of Product Marketing, Product Engineering and Quality and Director of Quality and Engineering. He founded GT Technical Consultants where he performs failure analysis, presents lectures on fastener safety, worked for law firms and designs and audits Quality systems.

He is a member of SAE and is Vice Chairman of the ASTM F16 Fastener Committee and Chairman of the F16.01 Test Methods Committee, since 1988. He also received the ASTM Award of Merit in 2005.

Guy and his wife, Linda currently reside in Lake Zurich, IL and may be reached at 847-477-5057 or visit his website at http://www.BoltDoc.com.

TO JAM OR NOT TO JAM?

There has been an ongoing debate on the issue of the use and positioning of the jam nut for many years: should the jam nut be placed against the joint surface first, followed by the standard nut, or should the standard nut be

tightened against the joint surface first with the jam nut tightened against it?

I recalled that a friend had pointed out long ago that an article was published in a book by the IFI titled "Fasteners Data Handbook", circa 1950, made an engineering and illustrated case for the jam nut on first, the standard nut on last. The author is unknown. However, one must remember that in the 1950's, a Grade 5 fastener was high strength. I had written an article about jam nuts awhile back and I was very skeptical of their use. So I decided to find out for myself what is happening when you put two nuts together.

I began by purchasing some jam nuts from the hardware store. I tried searching for different strength grades of jam nuts, but could not find any, even among some MRO suppliers. They all appear to be Grade 2. In fact, the IFI Handbook only states the material requirements are that of an SAE Grade 2 or ASTM A563 Grade A. No general formula is given for the thickness differences, but the jam

nuts appear to be on the average of 2/3 the thickness of a standard nut.

The tests were conducted on a digital load cell using 3/8-16 Grade 2, Grade 5 and Grade 8 bolts and matching

nuts against a hardened flat washer. In all cases, none of the nuts or bolts were used twice. As stated before, the jam nuts were standard grade purchased from a hardware store.





Standard Nut First, Grade 2

Using the Grade 2 bolt with a target clamp load of 3,200 lbs, I torqued the standard nut to 20 lb-ft. The clamp load reading indicated 2,680 lbs, which relaxed to just 2,625 lbs. I then tightened the jam nut and the clamp load jumped to 3,528 lbs, which relaxed to only 3,506 lbs. When I loosened the jam nut, the clamp load had dropped to 2,960 lbs.

When I tightened the jam nut, I noticed the jam nut was causing the standard nut to also move from compression friction. I then installed a new Grade 2 bolt, washer and standard nut. This time the initial reading from the standard nut was 2,500 lbs. At this time I used an open end wrench to prevent the first nut from turning as I tightened the jam nut. The clamp load jumped to 3,775 lbs, producing a greater clamp load than before. This time when I loosened the jam nut, the load dropped to 2,345 lbs.

Jam Nut First

Still using the Grade 2 bolt, I

tightened the jam nut first at the same 20 lb-ft and recorded a reading of 3,000 lbs, stabilizing at 2,956 lbs. I then added the standard sized nut at the same torque and recorded a clamp load of 3,500, relaxing to 3,480 lbs.



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Bart Basi

Dr. Bart A. Basi is an expert on closely-held enterprises. He is an attorney, a Certified Public Accountant, and President of The Center for Financial, Legal & Tax Planning, Inc. He is a member of the American Bar Association's Tax Committee on Closely-Held Businesses.

DISASTER PLANNING IN THE COMING YEAR

Introduction

The fact of the matter is that, businesses in this country and all over the world face a gauntlet of peril. From rising fuel prices, rising commodity prices, clients filing bankruptcy on their payables and clients not paying to adverse credit climates, business is a challenging endeavor for any line of work. However, there are threats even beyond the day-to-day and year-to-year challenges.

It was just 5 months ago that Superstorm Sandy swept through the Northeast. In its aftermath, approximately seventy-seven billion dollars

(\$77,000,000,000) of insured losses have been reported. Now, the hurricane that was all over the news is now becoming part of our collective memory. The legacy it leaves behind on the businesses of the Northeast is unfortunately, ongoing. Many businesses in the area, once they shuttered, never reopened. In this case, as in many, the terrible results of natural disasters are often felt for a long time or even possibly forever.

New Statistics on Natural Disasters

In 2012 the nation experienced a number of natural disasters. In fact, in the past 15 years, natural disasters have increased 40%. In terms of human suffering, property loss, and the potential loss of business and commerce in the wake of the hurricanes and other natural disasters, businesses need to be prepared.

Natural disasters are a fact of life on this planet. With earthquakes, volcanic eruptions, tidal waves, tsunamis, tornados, and such, at some point nearly everyone and every business will be touched by a natural disaster. The consequences can range from minimal (as in a snow or ice storm), to severe (hurricanes), to termination and even dissolution of the company, to even being dangerous to personnel. With disaster planning, the company can and should plan to continue in at least some capacity.

Planning for the Worst

REPARED

The absolute worst thing to do in preparation for a natural disaster is to do nothing at all. Waiting until it is broadcast on the radio or seeing a major storm system develop on the news is not the time to begin your preparation for a disaster. At that point, communications

> and electrical systems may already be failing area wide. Critical supplies needed for business continuation may have already been sold out of

stores. Therefore, secondary protocol in people, location, and supply is absolutely necessary at all times. Out of state suppliers and friendly competitors should be reviewed for viability in these potential circumstances.

The best thing a business owner can do to continue business during and after a disaster is to begin preparation immediately. Talk to the people who are going to be players in the disaster plan. Talk to secondary suppliers. Think about where business will be conducted in the event the primary location is not available. The basics are presented in short form :

1) Written Instruments and Communication

Along with any disaster plan, written instruments a necessity. Reducing a plan to writing is a sure sign that the plan is being developed in a manner which is achievable.

Ready.gov provides a written form which your business can use to prepare and commit a plan to paper. Check signing authority in an alternative person is a must as well. If the key person is not available, there must be a back-up person.



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Laurence Claus

Laurence Claus is the President of NNi Training and Consulting, Inc. He has 25 years of experience with a medium sized automotive fastener manufacturer, holding positions including Vice President of Engineering, General Manager, Director of Quality, Director of New Business Development, and Applications Engineer. In 2012, he formed NNi to pass on his knowledge and experience to others in the fastener and automotive supplier industries. In addition to technical and business training courses, he does technical consulting and expert witness and consultation work. He can be reached at 847-867-7363 or Lclaus@NNiTraining.com.

THE POWER OF VALUE ENGINEERING -CONVERTING SCREW MACHINE PARTS TO COLD HEADED PARTS

As markets become more global, customers are ever demanding new ways for suppliers to deliver them value. Over the last ten years or more, these same companies have been reducing their engineering and purchasing staffs, creating a new dependence and responsibility in their vendors to generate both quality and cost improvement ideas. For many distributors, this new responsibility is an unwelcome diversion in their already hectic and changing environment. However, for a select few, these new expectations present a unique opportunity to be exploited and profited from.

Many customers have placed demands on distributors to provide annual cost downs in order to receive a contract. In many cases the supplier feels trapped by the necessity to provide cost downs to win the business, but believes that because their products are simple, commodity parts they have no means of cost reduction except to lower price and erode margin. However, if the customer is enlightened with a company philosophy of continuous improvement, their product is complicated, or their engineering and purchasing resources are thin or not well versed in cold forming technology, there may be some significant opportunities to conduct value engineering exercises that net significant quality improvements to their product, cost savings, or both.

One particularly constructive value engineering exercise is reviewing the possibility of converting screw machined parts to cold formed parts. I recall working on a project a number of years ago for a large automotive manufacturer. They were purchasing a threaded ball stud which acted as a pivot point for a gas strut used to assist in lifting the rear pane of glass on an SUV. They were purchasing the ball stud in high volume from a screw machine source for well over a dollar each. This part was converted to a net shaped cold headed part at a savings of nearly 75%. Not a bad savings for the customer and the part ended up providing the new supply chain with excellent margins.

At the outset, it should be clearly understood that upwards of 80% to 90% of the screw machined parts one might have a chance to review are, in fact, no opportunity at all. The engineers, designers, or purchasing agents have employed the correct process technology. However, in those remaining cases, where opportunity resides, the advantages and results of conversion may be very compelling, and provide one the ability to meet a customer's cost reduction criteria, strengthen a relationship, or expand one's part portfolio.

This article will explore the three primary considerations one should review when attempting to convert a screw machined part to a cold headed one. These considerations are cost savings, improved throughput (or yield), and strength.

In many customers' eyes, the one and only consideration is cost. Unlike the cold forming process which has minimal or no material waste, screw machining fundamentally involves material removal, often in significant amounts. When dealing with a low carbon steel that is priced at \$0.75 pound this may not be significant, but is a severe handicap when exotic alloys and red metals costing many times that are utilized. In addition to the waste of removed material, the cycle times are often long which equates to added cost of attributed labor and machine burden.

The second primary consideration is throughput. Although the screw machining process makes a great deal of sense for small lots of parts with complicated geometries, the pendulum can swiftly swing the other way as lot sizes increase. This is quickly understood when one compares screw machining run rates of maybe several parts a minute to cold forming run rates of up to several hundred parts a minute. Naturally this is dependent on obtaining a cold headed blank as near net shape as possible so that the required secondary operations to achieve the final part geometry do not offset the throughput advantage from the cold heading process alone.



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COMBINING THE PAST AND THE PRESENT FOR YOUR BUSINESS ADVANTAGE

Pacific Warehouse Sales and the Lehman name have represented honesty, integrity and reliability in the fastener industry for over 55 years. Based upon those principles and with the promise to sell to distributors only, we proudly introduce our new division, AFIXX Alliance[®], Inc.

AFIXX Alliance[®] will provide distributors with an advanced E-commerce site that allows us to maintain our personal customer service combined with the ease of doing business. We will offer a full range of blind, closed-end, multigrip and structural rivets, rivet nuts and tooling to distributors. PWS has been selling rivets on the West Coast for over 30 years, and AFIXX was created in an effort to expand this product line to distributors nationwide. AFIXX will continue to offer the experience of an intimate family company along with the extra benefits of using innovative business solutions.



To share our excitement and vision, Bob Lehman and Tracy Lehman from PWS and Larry Kanne and Matt Angel from AFIXX are here to provide some insight into our new division.

How are family businesses currently perceived in the fastener industry?

Small, family run businesses are the foundation of the fastener industry. There is still something to be said about a handshake agreement through face to face contact with owners. It may be old school, but we still run our business on family value principles. -Bob, PWS

How will AFIXX benefit distributors?

Our goal is to create an easy way for distributors to do business. Time is a precious commodity, and by

streamlining the ordering process, our customers will be able to spend more time with their customers. We will follow up with orders and quotes, and develop a personal relationship with all of our customers. We will be here for your questions and concerns, and offer monthly specials designed to meet our customers' needs. *-Matt, AFIXX*

How does afixx.com differ from other industry web sites?

AFIXX will change the way fastener distributors do business by featuring an E-commerce platform that will allow the ordering process to become quick and convenient. We have worked closely with our software provider, INxSQL[®], to bring you the latest technology. We are pleased that INxSQL[®] has selected AFIXX as their exclusive rivet partner for their Direct Connect feature. -Larry, AFIXX

How will AFIXX maintain its level of personal customer service?

We will use the personal experience model that has been successful for us these past 30 years and combine it with advanced technology to bring us into the future. We still believe strongly in partnering with manufacturer representatives to sell our products. Calling on our customers, and making sure we still maintain that face to face contact is very important to AFIXX, but now we also have a quick and easy way to access ordering, and review purchase histories around the clock. -*Tracy, PWS*

Why is the Future Now?

Business is always changing. By combining an old school handshake philosophy with a modern E-commerce site, the fastener industry can continue evolving to keep pace with the demanding times.

-Larry, AFIXX

AFIXX Alliance[®] looks forward to a lasting business relationship with you. We want you to ask questions and feel comfortable ordering, checking stock, and reviewing your acquisition history, and know that no matter what size your order, from bulk shipments to small pack purchases,

AFIXX is your valued rivet provider.



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AFIXX IS YOUR VALUED RIVET PROVIDER



Dennis R. Cowhey

Dennis, R. Cowhey, started Computer Insights, Inc. in 1981 and is currently CEO. He served for many years on the Illinois CPA Society Computer Information Systems Committee. He is a frequent author of articles for Industry Trade Magazines. Before starting Computer Insights, he served as Central District Manager for a division of Litton Industries (now part of Northup Grumman). That company offered Inventory Control Systems to Retailers. Prior to that, he was a Credit and Financial Analyst for National Credit Office division of Dun & Bradstreet, Inc. He received his education at Chicago City College and DePaul University.

QUALITY IS NOT AN OPTION

Quality assurance systems, once the exclusive province of manufacturers, are now finding their way into many fastener distributors. Some customers are insisting on them while others are choosing companies with quality systems as preferred vendors.

Require Significant Investment

A well run quality system is useful, but it can often be complicated and expensive to implement. Once implemented, the maintenance of the system can be a constant headache. Quality systems describe in detail what you are going to do, provide instructions on how to do it, and then document that you did it.

A consultant is normally hired to assist in the preparation of the Quality Assurance system. It is guite useful to have a consultant involved since he or

she has been through many audits and will be able to tell you the key issues that must be satisfied. The manual is different for every company because each company's procedures are somewhat different. Many procedures need to be modified, enhanced or created in order to comply with the standards described in the manual. Detailed training of all of the people affected is needed so that the quality system can be implemented in a uniform manner.

Subtle Differences - Big Difference

Subtle differences in the definitions in the manual can make a big difference in the amount and type of reporting that the system requires. For example if the quality manual says any vendor shipment that is one day

UALITY

Non-Integrated

In many companies the quality assurance system is a separate non-integrated system that is maintained in a separate database from the in-house ERP system. Maintaining the two separate systems becomes problematic. The quality system is often out of sync with the ERP information because of timing issues. When this happens preparing for an audit becomes a little bit of a crisis. Everyone is running around trying to get their records straight before the auditor arrives. This not only impacts productivity while preparing for the audit, it also means that since it isn't up to date and accurate, the information in the quality system is not as valuable to management for process improvement programs.

impact deliveries as problems there will be far fewer to report and track. The latter definition is not only more forgiving, it is also more practical. When a person is looking at the vendor report card, it provides more useful information.

Typical Standards

late must be reported as a problem, it will require that

many purchase order receipts be reported. If the quality

manual says to consider only late vendor receipts that

Typical quality specifications in the fastener industry include ISO 9001:2008 and AS9100C amongst others. All of the Quality Assurance systems have certain things that are required. These include an inspection system, a problem reporting system, instrument calibration, document management, а machine maintenance system and the vendor and customer report cards.



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Exhibit space sales for the National Industrial Fastener & Mill Supply Expo scheduled for October 22-24, 2014 at the Sands Expo & Convention Center, Las Vegas, Nevada USA are running considerably ahead of the same period

last year; it was announced today by Expo management.

"We have 500 companies and 674 booths already under contract and are receiving inquiries daily. We already have 485 of 609 companies returning from the 2013 Expo, plus we have gained 23 companies which were not with us last year, including Action Packaging Systems, Afixx Alliance Division of Pacific Warehouse, Aircraft Missile Parts, Aluminum Spacers, Arser, Big C & Dino Lite, Blackburn & Co., Brush Man, Chu Wu, Creative Alliance, Cube Global, Dyson Corp., Faster SRL, Form G Tech, Hongfu Hardware Works, Karna International. Laboratory Testing, MAPCO Manufacturing, Missouri Pipe Fittings. Peaksight (Shanghai) Technologies, Set Screw, Tormex, and Zago Manufacturing. We are on target to reach or exceed 800 booths this year", informs Susan A. Hurley, CEM, General Manager.

"The Machinery & Tooling World area of the Expo continues to grow, and we are delighted with the addition of many aerospace fastener companies as well as specialty tool and other related industry suppliers who are recognizing the importance



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of being in front of the many manufacturers and multi-line distributors who shop and buy at our event", adds Ms. Hurley.

The always popular Welcome Reception which

annually kicks-off the Expo on Wednesday evening will be held this year at nearby Treasure Island. "We feel that moving this exciting, well attended, event closer to the Expo site will be more convenient for everyone. Our exhibitors and Expo visitors staying at Treasure Island can simply ride an elevator to the party, while those staying at the Venetian/Palazzo will merely have to walk a short distance across a pedestrian bridge to Treasure Island", informs Ms. Hurley.

Special rates are being offered at the Expo's Headquarters Hotel, the Venetian/Palazzo, as well as other partnering hotels, Treasure Island and Harrah's. Convenient online reservations can be made at any of the official Expo hotels by visiting the Expo's newly designed and easily navigable website at www.fastenershows.com. Simply search the MENU and click on HOTEL & TRAVEL.

For more information regarding "North America's Largest Fastener & Mill Supply Expo", contact Susan Hurley at 614-895-1279, send an email to: info@fastenershows.com or visit the Expo website at www.fastenershows.com.

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DISTRIBUTOR NEWS

Component Packaging is pleased to announce the promotion of Nick Magoulas to Vice President / General Manager effective February 2014.



Nick Magoulas joined Component Packaging in February 2011 and has been in an intensive training program prior to this promotion.

Nick's background is with Bridgestone as a retail store manager in Arizona. Prior to his affiliation with Bridgestone Nick was in the Air Force stationed in Florida, Texas & Arizona.

Component Packaging is a contract packaging company located in Southwestern Missouri which specializes in fastener kitting, assembly & packaging. Nick will assume responsibility for day to day operations of the company along with developing outside sales efforts and overseeing construction of an additional production facility.

For more information on the appointment or for information about products and services, contact Component Packaging at 7931 E 24th St, Joplin, MO 64804. Tel: 417-624-9395, Fax: 417-624-2303 or visit them at www.componentpackaging.com.


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DOES THE FASTENER QUALITY ACT STILL HAVE THE SAME RELEVANCE TODAY?



Recently I was contacted by a fastener industry observer who asked, "Is the Fastener Quality Act still in effect and if so does it have any relevance today?" The answer to the first part of the question was easy. Yes, the Fastener Quality Act (FQA) is still in effect. I had to think about the second part of that question before answering. After pondering the relevance today of the FQA to the fastener industry I provided the following answer.

"In the mid-1980's there was a rash of quality issues in the industrial commercial market that created an alarm about the nature of quality consciousness and adherence to standards in the US. This alarm resulted in the development of the Fastener Quality Act (FQA) which was finalized and fully implemented in 1999.

What the government assumed would require a little attention and a quick fix ended up being a 15 year struggle. The government, just like most individuals, underestimated the breadth and complexity of the fastener industry. Throughout that entire struggle the IFI was part of the Fastener Industry Advisory Committee that was created at the request of NIST to assure that the perspective of the fastener industry was taken into account while the law's requirements and rules of implementation were being created. The IFI's role was significant in helping to create a law that was effective and practical without imposing non-essential and/or ineffective requirements.

The final outcome of the Fastener Quality Act was the creation of a law that placed all emphasis on the demand for conformity of fasteners to their applicable standards requirements. Not complying with applicable published industrial or government requirements can subject the supplier to significant fines and even imprisonment if standards are knowingly and willfully not adhered to.

The Fastener Quality Act set out many specific requirements about testing and reporting on products meeting the definition of a "fastener" in the law. The major exemption from having to adhere to these arduous

requirements was if the factory the products are made in is registered to a recognized quality system such as ISO 9000, TS 16949, or AS 9100.

This emphasis on compliance to fastener standards was the primary focus of the effort to create the Fastener Quality Act from the beginning, but it took 15 years to figure out the most practical way to make that achievable. The pressure for fastener producers to register to and adhere to recognized quality systems requirements was the practical and effective answer.

The fastener industry was kept abreast of the developments throughout the 15 year journey. There was much speculation, but no certainty as to what the final law would require, but it was very obvious that not complying with applicable standards was not going to be acceptable.

The consciousness about quality and the pursuit of consistent quality totally transformed the fastener producers during those 15 years. By 1999 the fastener industry was at a completely different level than it was in 1984. The actual issuance of the Fastener Quality Act was anticlimactic, because there was no great surprise. In 1984 it was rare for a fastener producer to be formally registered to a recognized quality system. Today it is extremely rare for a fastener manufacturer to not be registered to a recognized quality system. This is a direct result of the enactment of the Fastener Quality Act.

Today the Fastener Quality Act is seldom referred to directly, but its on-going influence and impact is ever present. Had there been no Fastener Quality Act it is my feeling that the registration of fastener producers to recognized quality systems such as ISO 9000, TS 16949, or AS 9100, would be much less prevalent and the fastener industry would be worse for it. Adherence to recognized quality systems is the foundation and back bone of the fastener industries' product quality. The wide spread registration of fastener suppliers to recognized quality systems is the legacy of the Fastener Quality Act and I feel it will endure far into the future."







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Richard Hagan

Richard P. Hagan is the president of Pinnacle Capital Corporation, a boutique investment banking firm which specializes in providing merger & acquisition advisory services to the global fastener industry. Hagan has more than twenty-three years of international investment banking experience and has worked on successful domestic and cross-border M&A transactions, corporate restructurings and capital raisings. Hagan earned a B.A. in Economics from the University of North Carolina at Chapel Hill and an M.B.A. in Finance from Fordham University in New York City. Pinnacle is located at 82 Nassau Street, Suite 352, New York, New York 10038. Tel: 212-267-8200, Email: rphagan@pinnaclecapitalcorp.com.

FASTENER COMPANY ACQUISITIONS COMPLETED DURING 2013

In this issue, we will briefly review all the fastener company acquisitions - a total of twenty-nine worldwide completed during the 2013 calendar year. Of course, it is impossible to track every single fastener company transaction because many deals involving private companies are not publicly-disclosed. That said, we believe the following list is the most comprehensive and detailed you will find.



On January 2, 2013, OMG Inc. purchased the W.P. Hickman

Company. Founded in 1960 and located in Asheville, North Carolina, W.P. Hickman is a manufacturer of proprietary metal roof edge systems designed to provide protection against wind damage and water infiltration. In the early 1960's, W.P. Hickman developed and patented the construction industry's first multiple component roof edge product line. Formerly known as Olympic Manufacturing Group, OMG is North America's largest manufacturer of roofing fasteners for commercial and residential construction applications. Through its FastenMaster business unit, OMG also manufactures a line of specialty fasteners for drywall installation and repair, along with specialty deck screws. Founded in 1981 and headquartered in Agawan, Massachusetts, OMG is a whollyowned subsidiary of Handy & Harmon Ltd. (Nasdag: HNH). Purchase price: not available



On January 14, 2013, NORMA Group AG purchased Davydick & Co. Pty. Limited ("Davydick"). Established in the mid-1980's

and based near Sydney, Australia, Davydick distributes a comprehensive range of irrigation system hardware for the agricultural, plumbing and commercial hardware markets. Davydick's product range includes fittings, valves, hoses and nozzles, along with water pumps marketed under the PumpMaster® brand name. Based outside Frankfurt, Germany, NORMA Group manufactures a diverse range of highly-engineered clamps, connectors, fittings and joining products for approximately 10,000 customers located around the world. NORMA Group operates 19 manufacturing facilities in Europe, North America and Asia, along with a global sales and distribution network. The company employs 4,485 people worldwide and generated net sales of 604.6 million EURO in 2012. NORMA Group shares are traded on the Frankfurt Stock Exchange (symbol: NOEJ).

Purchase price: not available

LOFELONE PRODUCTS ONC. MW Industries Inc. A Point Above The Rest

On January 20, 2013, purchased Lifeline

Products Inc. Founded in 1976 and located in Wallingford, Connecticut, Lifeline Products is a manufacturer of custom hypodermic needles, infusion assemblies and stainless steel tubular components for the medical market. Following the transaction closing, Lifeline Products' equipment and customer base will be consolidated into MW Industries' Economy Spring division located in nearby Southington, Connecticut. Economy Spring and Lifeline Products share mutual customers and significant post-acquisition operating efficiencies are anticipated. MW Industries is a manufacturer of engineered mechanical components including highly-engineered springs, specialty fasteners, machined parts, precision stampings and custom wire forms. The company is headquartered in Rosemont, Illinois and is comprised of 14 operating divisions located in 10 states. MW industries is a portfolio company of Genstar Capital LLC, a San Francisco-based private equity firm. Purchase price: not available



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Tara McCallam

Tara McCallam is a certified Law of Attraction coach. She works with both clients individually and in group workshops to aid them in creating the kind of life, results and experiences that have previously eluded them. Her specialty is helping individuals, professionals and businesses to expand to higher levels of success and satisfaction, by using a variety of techniques often overlooked. Tara is the founder and CEO of Expressions Coaching, a life coaching company based in Chicago, IL. For more information contact her via email at tara@expressionscoaching or visit www.expressionscoaching.com

SWIMMING IN A SEA OF NUTS & BOLTS LOOKING FOR THE NEXT BIG WAVE

Do you ever feel overwhelmed by the vast sea of offers that are out there for your current and prospective customers, wondering how you can stand out for them? There is a wonderful quote that I am sure you have heard many times, 'What you focus upon expands.' This is true have already created rather than trying to build from the ground up again. You will also increase your customer loyalty by reaching out and demonstrating that their opinion really matters to you; as well as their business.

in business too. If you focus on the competition and their sales techniques and successes you will constantly watch as they expand and eclipse your business, but if you really hone in on what you want to expand then you will see that indeed you are the one growing.

So, what are the 4 simple steps to create success in any economy?

[1] Accentuate The Positive



[2] Expansion

Now identify what you want to expand and who is your target audience. Be specific. Describe who your target demographic is and what needs you want to fulfill for them. If you want to reach everyone then your message will be diluted and your energy and resources will be meager in comparison to the task at hand. However, if you lock in on what you want to

Take a look at what you are doing well now. Interview some of your best clients and ask them the following questions:

- a. Why they are with you?
- b. What does your company have or do that makes them stay loyal?
- c. What could your company do to gain more of their business? ie. What is missing?

Taking a moment to be thankful for what is going well even in business, is a smart strategy. This gives you the ability to build upon a tried and true foundation that you expand and a target audience that you want to reach you will see that you are focused and that your energy and resources are limitless.

[3] Limiting Beliefs

Next, ask yourself and your management team, what are the limited beliefs in this situation that are holding our company back from creating success. Do we believe that our company doesn't stand a chance against the larger companies, or if you are a larger company already, do you believe that you have already saturated the market and the economy is no longer able to sustain substantial growth.

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FALL RIVER MANUFACTURING COMPANY 30 YEARS STRONG

Fall River Manufacturing first opened its doors in April of 1984 in Fall River, Massachusetts, where the company still operates today. Celebrating 30 years in business, the company is still going strong, producing high quality cold headed stainless steel and non-ferrous screws, bolts, and nuts. Despite turbulent market conditions over the last 29

years, they have managed to become one of the leading domestic manufacturers serving fastener distributors throughout the US for both commercial and Mil-Spec "corrosion resistant" fasteners.

The company employs over 50 people and operates within 143,000 square feet of manufacturing space.

Fall River believes that one

of the company's key strengths is service. In a mature industry where there have been few technological advances over the years, there are many manufacturers both foreign and domestic who can make quality fasteners. Servicing the customers is where the company pulls away from the pack. With the growing demand for faster deliveries, lean inventory levels, Fall River Manufacturing offers some of the quickest turn-around times in the industry.

Fall River provides personal service and technical assistance to the distributor market that is second to none. When distributors utilize the type of manufacturing expertise that Fall River provides, they have a greater level

of confidence that enables them to succeed in competitive markets. Fall River also partners with distributors by offering blanket order programs, split delivery options, as well as fixed price programs, all designed to match the commitments the distributor must offer the OEM. These programs enable the distributor to better manage their

inventory as well as cash flow, while providing the services necessary for today's OEM marketplace.

Fall River manufactures a full line of domestic stainless steel and non-ferrous Standards, Specials and MIL-SPEC fasteners. The company has recently expanded their product line to include domestically made stainless steel hex nuts in

304 and 316 stainless steel. Fall River is ISO 9001:2008 Certified, and QSLM Class 2 approved, complete with inprocess inspections, material and production lot number traceability. They have the ability to supply full certifications to 100% domestic melted and manufactured when required by the purchaser for municipal and government projects.

The company strives to partner with their customers and communicate effectively through constantly changing market conditions. Their goal is to maintain existing business and continually find new business opportunities. Fall River has been going strong for 30 years, and all indications point to their continued success for many years to come.



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DISTRIBUTOR NEWS

J.W. Winco, Inc., a leading supplier of standard industrial machine components, announced it now offers GN 913.6 Steel Set Screws with Retaining Magnet, in metric sizes.



These RoHS-compliant set screws are a shielded magnetic assembly. One possible use for these set screws is as work piece stops, with the magnet holding the work piece in place.

The set screws are made of steel with a zinc plated, blue passivated finish. The retaining magnet element is Neodymium, iron and boron NdFeB (ND type). Thread diameters from M6 to M16 are offered, with thread lengths from 12 to 80 mm. Nominal pulling forces of the retaining magnets range from 2.5 to 35 N.

J.W. Winco offers an extensive selection of inch and metric size adjustable levers, cabinet Uhandles, plastic and steel hinges and locking mechanisms, revolving and retractable handles, hand wheels, hand cranks, tube connection and conveyor components, inch and metric construction tubing, shock absorption mounts, leveling mounts, hand knobs, spring, ball and indexing plungers, jig, fixture and fastening components, retaining magnet assemblies, toggle clamps, metric casters and wheels, universal joints, oil sight glasses, and metric tools for the industrial and commercial equipment industries. J.W. Winco's website catalog, with 3D CAD and online buying, is viewable at www.jwwinco.com.

For more information, contact J.W. Winco at 1-800-877-8351, by fax at 800-472-0670, on the web at www.jwwinco.com, and via e-mail at sales@jwwinco.com.

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Jim Truesdell

James Truesdell is president of Brauer Supply Company, a distributor of specialty fasteners, insulation, air filtration, and air conditioning with headquarters in St. Louis. Mr. Truesdell is adjunct professor at Saint Louis University and Webster University. An attorney and frequently published writer, he is the author of "Total Quality Management: Reports From the Front Lines".

SDS INFO SHEETS CONFORM TO GLOBAL HAZMAT RULES

Once upon a time the phrase "SDS" evoked images of a late '60's leftist group (Students for a Democratic Society) which gained notoriety for being at the heart of anti-Viet Nam War protests and which raised some people's fears of an anarchist revolution.

Today that acronym has a new meaning. "Safety Data Sheets" (SDS) are replacing the MSDS (Material Safety Data Sheets) which have been the centerpiece of the Occupational Safety and Health Administration's Hazardous Materials Communication Standard. These informational sheets have been around for many Many businesses have loose leaf years. binders of the sheets which provide about the chemical information composition and potential risks involved with handling certain products used in industrial, institutional and other commercial applications. Sellers and of users MATERIALS hazardous chemicals have kept TEAM extensive files of these papers on hand spelling out emergency first-aid and other data which need to be on hand in the event a spill or unintentional contact with one of these chemicals triggers a reaction in an employee or user.

It has been a problem that the MSDS have varied in format and style of presentation. Thus, in an emergency, time could be lost as the people involved struggle to interpret the information in its uniquely presented form.

Now, as a result of our increasingly globalized economy, international standards have been adopted to bring uniformity to product safety information. The United Nations has developed an internationally agreed upon

system called the "Globally Harmonized System of Classification and Labeling of Chemicals" (GHS) with the intent that it will replace the hodgepodge of hazard communications currently in place around the globe (and sometimes even within the same countries). In the United States OSHA has chosen to conform to this which means that American businesses must get in step with the new regulations. Manufacturers, in particular, are being required to reformat their data sheets into a uniform sixteen point design that places the critical information in the same place and order for all products. Distributors and product users will have the responsibility of gathering these new replacement sheets to update their own information books maintained at key locations within their companies where employees may come into contact with chemicals or customers AZARDOUS may request the information. Label requirements are also changing. Pictograms must be included along with single word "Warning" or "Danger" statements.

> A series of deadlines have been set, the first of which has already passed. On December 1, 2013 employers were to have trained their relevant employees on the new SDS format and label requirements. By June 1, 2015 all modified provisions of the final OSHA Rule must be complied with. This is causing manufacturers to promptly address revising their data sheets. Distributors and other sellers can ship product labels marked under the old system until December 1, 2015, so attention will have to be paid to existing inventories.

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IMPROVED FUEL FILTER UTILIZING A WAVE SPRING

by Vincent Rodgers

Fuel filters in combustible engines play a vital role in cars and trucks. Their purpose is to filter contaminants that might enter the engine causing damage and they also provide better gas mileage. Cleaner fuel will burn more efficiently and increase a vehicle's lifetime.

However, like any part in a vehicle, inevitable wear is caused over time and a fuel filter is no different, especially under harsh climates.

In order to replace a fuel filter an individual is required to remove two bolts from the fuel line and slide the fuel line out. Then remove the bolts holding the filter attached to the vehicle. Bolts and screws can wear over time, becoming rusted causing the fuel filter to become loose or the fuel line to detach.

This improved design replaces the bolts and screws. The fuel filter is more like a fuel filter cartridge which can be easily screwed into a fuel line base attached to the vehicle. A wave spring can be used in the base of the fuel filter cartridge located in the screw collar. The fuel line base will have a catch or detent attached to it. When the fuel filter cartridge is



screwed into place, the wave spring will "catch" the base, locking it into place. Using a wave spring provides a uniformly distributed periphery around the base for a secure grip. It can also be coated to prevent deterioration.

Adding the wave spring is an inexpensive alternative which will save time and money for someone replacing a fuel filter. When it is time to replace the filter, simply unscrew it, dispose of it and replace with another filter.

DISASTER PLANNING IN THE COMING YEAR continued from page 24

2) Security

If you provide consumer goods such as groceries and other necessary supplies, security is a must. Over the past decades, whenever there is a natural disaster or riot, the first thing looted tends to be consumer goods stores. While it is illegal for the population to loot, police cannot always protect those businesses and prosecute the individuals responsible for the chaos. Reasonable measures must be taken in order to, if not defend the store; provide footage for law enforcement to catch the individuals responsible for the crimes there committed.

3) Finances

Without the proper finances in place, your business could be shut down. Modern day financing relies heavily on electronic mediums such as credit card readers and telecommunications. Bottom line, if there is no power, there is essentially no money. The solutions to the situation may not be easy. Two scenarios come to mind 1) either a back up generator or 2) A remote business location wherein company business can be conducted conduct business. A back up generator can be in the form of a portable generator or if you have the money and infrastructure to invest, you may be able to purchase and utilize a whole building back up.

Your employees will also need financial assistance during this time period as well. Two weeks of pay can ensure that employees 1) can pay their bills and endure, and 2) come back as they will be obligated to work for the pay advance you provided them with. This assurance is a good thing to have especially when key employees may be having second thoughts about returning after a large natural disaster.

Conclusion

Additionally a whole wealth of information is provided at ready.gov for individuals and businesses. Just remember that alongside the business, individuals must be taken care of as well. If the individual employees cannot endure their own personal situation, they will be unwilling to stay. Ready.gov provides insight for personal readiness as well and should be followed despite any situation

Every business should have a disaster plan in place in order to survive a natural disaster ranging from the smallest to devastating. People face challenges and businesses do as well. It is important that a natural disaster does not become a personal or business bankruptcy, where a continuation is possible and necessary.

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PAC-WEST CREATES NON-PROFIT SUBSIDIARY FOR FASTENER TRAINING INSTITUTE® AND NEW FASTENER EDUCATION FOUNDATION®



For years the Pacific-West Fastener Association has been at the forefront of fastener training, particularly with its Fastener Training Institute[®] advanced technical programs on standards and specifications.

Pac-West's commitment to fastener industry professional development has taken a leap forward, by creating a new nonprofit corporation for the Fastener Training Institute (FTI), as well as a new nonprofit foundation, the Fastener Education Foundation[®] (FEF).

The core purpose of the Fastener Training Institute is to enhance fastener use, reliability and safety. By providing fastener product and technical training at all levels of industrial distribution, FTI can achieve its goal of strengthening the industry and its personnel in all segments.

In addition to its current range of product training and advanced technical training programs delivered at sites throughout the United States, FTI is embarking on development of online, on-demand fastener training.

The inaugural Board of Directors for the new Fastener Training Institute nonprofit corporation includes:

- John Wachman
 Desert Distribution, Scottsdale, AZ
- Andy Cohn
 Duncan Bolt, Santa Fe Springs, CA
- Kelly Cole WCL Company, City of Industry, CA

WOI

Jennifer Harder
 Empire Bolt & Screw, Spokane, WA

Dallas Puckett

Valley Nut & Bolt, Olympia, WA

The purpose of the newly created Fastener Education Foundation is to enhance public safety through fastener education. Its goal is to raise funds for fastener education and research that will develop, strengthen and educate the entire industry.

The Foundation will be led by a full spectrum of fastener industry companies. The FEF Board will include a team from FTI and Pac-West to insure its sustainability while it develops the vision and strategic goals laid out by its founders, along with the insights of other industry leaders.

In announcing the creation of FTI and FEF, Pac-West president Tracy Lehman (Pacific Warehouse Sales, Chino, California) said, "This is a historic endeavor that will support knowledge and professionalism in our industry. My thanks go to all who have worked so hard to develop our Fastener Training Institute into what it is today: John Wachman, Carmen Vertullo, Andy Cohn, Jim Law, Kelly Cole, Joe Greenslade, Salim Brahim, and Laurence Claus."

For more information about the Fastener Training Institute and its programs, visit www.FastenerTraining.org or contact FTI president John Wachman by email at: john@desertdistribution.com

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DISTRIBUTOR NEWS

Micro Plastics Inc., manufacturer of industrial-quality plastic components, today unveiled its latest product catalog, containing thousands of fastening solutions for engineers and product designers. In addition to hundreds of new problem-solving products, the catalog features several new complete product lines with improved product and material explanations.



Micro Plastics, Inc., using stringent quality standards, manufactures 10 million fasteners daily, offers over 30,000 items and maintains an inventory of over 300 million parts. Such efficiency provides fast and responsive services to their customers for a competitive advantage. An industry leader for over 50 years, Micro Plastics, Inc., specializes in Nylon threaded fasteners, but also offers extensive product lines for wire management and circuit board hardware. Spacers, Washers, Clips, Clamps, Ties, Bushings, Screw, Nuts, Rivets and Plugs. The vast component solution list continues for 300 pages in this new product catalog #40. Micro Plastics, Inc., manufactures and designs parts to satisfy all your fastening needs, while maintaining ISO 9001 Certification standards.

An experienced customer service team will use their vast knowledge base to help you select the right plastic component to fit your needs.

For a FREE copy of the NEW full line catalog #40 contact: Micro Plastics Customer Service Department at P.O. Box 149, 111 Industry Lane, Flippin, AR 72634. Tel: 1-870-453-2261 Fax: 1-870-453-8676, email: mpsales@microplastics.com or visit their website at www.microplastics.com.



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VOGELSANG FASTENER SOLUTIONS, INC: NEW NAME, EXPANDED OFFERINGS

Due to substantial growth and a laser-focused commitment to improved customer service, Vogelsang Corporation has expanded into two separate companies; Vogelsang Fastener Solutions, Inc. (VFS), and Vogelsang Corporation.

Both companies fall under the Vogelsang corporate umbrella with Vogelsang Fastener Solutions, Inc. concentrating its efforts on sales, engineering, and distribution, and Vogelsang Corporation expanding into a new production facility.

"This expansion will allow each Vogelsang entity to focus on its core competencies, and improve customer service by having dedicated production, sales, engineering and distribution centers" remarked Dale Stuban, Managing Director of the newly formed Vogelsang Fastener Solutions, Inc. (VFS). "VFS will have the infrastructure, manpower and resources to enhance the customer experience from start to finish" Stuban added.

Along with separating manufacturing from sales/engineering/distribution, the expansion has streamlined product offerings as well. Vogelsang Fastener Solutions, Inc. (VFS) retains the commercial offerings of Rollpins[®], Coil pins, Slotted Pins, Tension Bushings, Compression Limiters, Hollowed Dowels, and will continue to offer custom engineered products as well. VFS's Quickship program will also be expanded to offer even more product lines available for same-day shipment. Chassis components will fall under Vogelsang Corporation's product lines.

In addition to new manufacturing plants, the restructure has also allowed for reinvestments into equipment and technology. Vogelsang Fastener Solutions, Inc. (VFS) has recently implemented a new state-of-the-art computer system that will facilitate improved responses to customer inquiries and orders.

The reinvestments will also yield an expanded VFS inventory of zinc parts, coil pins, metric products, tension bushings, stock products and more.

Engineered Specials

The expansion has allowed Vogelsang Fastener Solutions, Inc. (VFS) to allocate new resources into their existing Engineered Specials program, making these services even more robust. Nick Penney, Business Development Manager for VFS explains, "We've spent the last several decades carefully designing and developing an extensive line of standard products which fulfill nearly all of the market's needs. However when a challenging design or manufacturing problem arose that required a custom solution, we've created custom engineered products that are innovative and cost-effective. I'm extremely pleased that we can continue to provide — and even expand — this highly specialized service." The team of design and engineering professionals at VFS are ready to help with developing product designs and providing design engineering assistance.

VFS Engineered Specials are backed by experience, quality assurance and have limitless possibilities such as:

- Variety of Materials and Commercial Finishes
- Close Tolerances
- Open/Closed Interlocked Slots
- · Special Shapes/Geometry in Body of Part
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FEBRUARY 2014 FASTENER INDUSTRY TECHNOLOGY UPDATE



by Joe Greenslade Director of Engineering Technology, IFI

I. Standards Organizations Activities [a] Standards Published

ASTM F593 Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs **IFI 199** Tap Bolts

[b] Standards withdrawn

ASME B18.3.1M Metric Socket Head Cap Screw – refer to ISO 4762 in the future.

ASME B18.3.2M Metric Hexagon Keys and Bits – refer to ISO 2936 in the future.

ASME B18.3.3M Metric Socket Shoulder Screws – refer to ISO 7379 in the future.

ASME B18.3.4M Metric Socket Button Head Screws – refer to ISO 7380 in the future.

ASME B18.3.5M Metric Flat Countersunk Head Cap Screws – refer to ISO 106423 in the future.

ASME B18.3.6M Metric Socket Set Screws – refer to ISO 2342, ISO 4026, ISO 4027, ISO 4028, ISO 4029, ISO 4766, ISO 7434, ISO 7435, and ISO 7436 in the future. **ASME B18.25.2M** Metric Woodruff Keys – in the future refer to ISO 391.

ASME B18.25.3M Metric Square and Rectangular Keys and Keyways – in the future refer to ISO 773

[c] Standards in the publishing process

SAE J429 Inch Bolt and Cap Screw Material Standard. Revision to the allowable amount of sulfur (S) and phosphate (P) in alloy steel for Grade 8 for screw machining and hot forging passed the fastener committee balloting and is in the SAE publishing process. **ASME B18.16.6** Inch Prevailing Lock Nuts. This has been balloted twice. The negatives and comments have been responded to. This standard was approved and is in the publishing process.

[d] Standards in the revision process

SAE J2280 Ship Systems and Equipment – Fasteners – Selection and Identification Requirements. This standard revision was balloted in January. There are several comments that must be resolved before the next ballot.

SAE J2295 Fastener Part Standard—Cap Screws, Hex Structural Bolts, and Hex Nuts (Inch Dimensioned). A revision of this Ship Systems Fastener Standard was balloted in December 2013. Comments are being reviewed in preparation of another ballot.

ASME B18.24 Fastener part identification numbering system. A revision to this standard is in progress. This will be discussed at the next B18 meeting in Toronto in May 2014.

ASME B18.8.1 Inch clevis and cotter pins. All of the comments from the first ballot were addressed. A second ballot generated more comments that must be addressed before moving to a final ballot.

ASME B18.31.2 Inch studs. A revision of the Scope adding "flange studs (stub bolts)" was balloted in January. There was not enough committee response so another ballot will go out in February. This revision will cover ASTM A193 and similar studs.

ASME B18.31.3 Threaded rod (inch) has been balloted once. Responses to the negatives were discussed and a new ballot is expected in early 2014.

ASTM F606/F606M Fastener Testing Standard, the inch and metric standards are being combined into a single standard. The first ballot closed in mid-October. All comments have been addressed. The final ballot closed on January 20, 2014 with no negative, but a few comments that will be addressed in February. It is unclear if an additional ballot will be necessary after the comments are addressed.

please turn to page 138





Leland Industries Inc.

95 Commander Blvd., Toronto, ON M1S 3S9, Canada Tel: 416-291-5308 Toll-Free: 1-800-263-3393 Fax: 416-291-0305 Email: info@lelandindustries.com www.lelandindustries.com

DOMESTIC FASTENERS FOR DOMESTIC INDUSTRIES

Leland Industries Inc. (est. 1984) has long held the opinion that "given the option" North American Manufacturers and builders would choose products made with Domestic Steel and Labor. Imported products are no match for the Bolts, Nuts and Screws produced to the exacting standards demanded by American and Canadian Industry. Now, after Thirty Years of Manufacturing for the Agricultural Storage, OEM, Metal Building and commercial construction industry segments, Leland has outgrown our current 155,000 sq. ft. Production and Warehouse facility.

By mid-July, a further 50,000sq.ft. of manufacturing capacity will have been added to our existing plant. The additional space is required to support expanded Bolt and Nut making and warehousing of raw materials and finished goods. Leland's capabilities include; Bolts to $3/4 \times 6$ ", Nuts, including finished Hex, Hex serrated, Serrated Flange and heavy Hex Nuts to 7/8" including Gr. 2, 5 and 8. A325 bolt and Nut Assemblies for structural steel construction and Screws including Tapping, Self Drilling tapping, Gutter and specialty screws for OEM.

Opening Day in 1984, Leland began production in 1,500sq.ft. of rented space, just enough to accommodate two Cold Headers and four enthusiastic employees, (including the President,



Byron Nelson) that was the start, then through a series of strategic moves to ever larger premises, Leland grew to occupy it's own 155,000 sq. ft. Head Office and Manufacturing plant on a ten acre parcel of land in a suburb of Toronto, Canada.

Byron Nelsons' foresight in choosing a location with room for expansion, was instrumental in allowing the addition to be contemplated and finally come to fruition in 2014.

Leland Industries continues to serve our customers with the same enthusiasm as shown in the beginning, but with a product offering only dreamed of in 1984. We have never imported, instead we still believe in "North American Steel, North American Labor and Production."



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METROPOLITAN FASTENER DISTRIBUTORS ASSOCIATION, INC

MFDA PROUDLY SUPPORTS TOYS FOR TOTS PROGRAM



Showing the generosity of its membership, some of whom are themselves still struggling with the aftereffects of Hurricane Sandy, the Metropolitan Fastener Distributors Association completed its most successful "Toys for Tots" drive with its 2013 campaign. Culminating with a dinner at the Al Di La Restaurant in East Rutherford NJ, the MFDA received its largest ever donation of toys from members and friends of the MFDA alike. According to the director of the Toys for Tots drive, the MFDA's cash donation of five thousand dollars in addition to the toy donation, means the MFDA will be designated as a "National Corporate Donor" for the 2014





Pictures courtesy of Terri Plat





MFDA - P.O. Box 1477, Wayne NJ 07470 • Tel: 201.644.7424 • Fax: 201.644.7427 • Email: admin@mfda.us

METROPOLITAN FASTENER DISTRIBUTORS ASSOCIATION, INC

MFDA EVENTS AND 2014 BOARD & OFFICERS

Upcoming Events April 10, 2014

Fastener Industry Vendors/Importer/Exporter Round Table Moran's Restaurant, New York, NY

May 15, 2014

Social Event - Night at the Races Meadowlands Racetrack

June 10, 2014

35th Annual Scholarship Awards Dinner Al Di La Ristorante, East Rutherford, NJ

September 21, 2014

19th Annual Golf Outing Wild Turkey Golf Course, Crystal Springs Golf & Resort **September 22, 2014**

Table Top Show and Trade Show The Fiesta, Wood Ridge, NJ

December 2, 2014

16th Annual Toys For Tots Holiday Party Al Di La Ristorante, East Rutherford, NJ

MFDA Board of Directors

Andrew Licht Fastbolt Corp. Michael White - Brighton Best

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DISTRIBUTOR NEWS

Mid-States Bolt & Screw Co., is honored to announce that on Wednesday January 15th, 2014 they received the 2013 Supplier of the Year for Mechanical Commercial Material Award from KUKA Systems North America LLC.



Larry Drake, Group CEO; Denise Winsten, Lead Buyer Mechanical and Commercial; Jim Mile, Mid States; Paul Ambros Group CFO, Jason Hardy, Director of Purchasing. Photograph by Amruta Ghande.

Several suppliers were considered by key members of KUKA's purchasing department who narrowed the list of suppliers before the final decision was made. Annual sales and other performance measurables such as, on time delivery, pricing and cost savings were key factors in selecting KUKA's top suppliers in four commodities. KUKA's award panel felt Mid-States Bolt & Screw Co. went "above and beyond" as KUKA's MRO & fastener supplier for their vendor managed inventory and named Mid-States Bolt & Screw Co. as their 2013 Supplier of the Year in Mechanical Commercial Category.

"[Mid-States] has opened 4 new facilities [crib sites] this year, working tirelessly to get them up and running by the required dates...Not to mention being readily available every time we call..."

Mid-States Bolt & Screw Company continues to provide KUKA and other customers with exceptional service and would like to recognize our entire Shelby team for a job well done!

KUKA Systems North America LLC, is a worldwide supplier of assembly and welding systems and other related machinery, servicing the Automotive, Aerospace, Alternative Energy and Manufacturing Industries.

Mid-States Bolt is headquartered in Burton, MI with branches in Saginaw, Lansing, Gaylord, Shelby Twp., and Niles; plus a branch in Statesville, NC.

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BLIND RIVETING 103: THE "HOLE" TRUTH by Steven Sherman, Engineering



Engineers and production staff generally work from the premise that if a rivet fits a hole, it should create a secure trouble-free joint when applied. This is true in some respects as rivets do have a greater hole-fill ability compared to other types of fasteners. Unlike nuts and bolts, however, there are also a number of variables that can impact and limit the effectiveness of rivet.

Based on the way rivets are specified and used today, the primary challenges these professionals face include:

- Riveting in correctly specified holes, grip ranges and materials.
- Selecting the right rivet, for the specific hole condition and application.
- Selecting the ideal riveting tool with a proper force, stroke and weight ratio
- Riveting tool maintenance
- Providing "Best Practice" training for operators

To resolve these issues, it's important to first understand how rivets function differently than other fasteners and why they may or may not be performing.

Rivets vs. Nuts And Bolts

Rivets are permanent mechanical

fasteners; nuts and bolts are not. Rivets cannot be uninstalled without intensive time and effort for rework. As a result, there is a great deal of pressure on the operators to realize the benefit of a rivet's speed and strength while also minimizing any potential downtime for rework if the rivet is not properly installed. When production is not going as planned, operators will often place the blame on the rivet itself. In these instances, production or quality staff may "lot swap" to find better results. This may only provide a temporary solution since lot swapping is not an effective corrective action and will not prevent the reoccurrence. Revisiting these problems time and time again without isolating the root cause will be frustrating and ultimately cost the end user and distributor in lost time and productivity.

Why Rivets May Not Be Performing

A rivet's installation practice is critical, as is the installation tool, materials and the prepared hole in the substrates. While there are many applications that have poorly riveted holes caused by the installation tool, the



operator, or the materials...the greatest frequency of riveted defects can be attributed to the actual condition of the hole itself. In essence, it may very well be the hole that's defective and not the rivet. If this is the case, the failure may ultimately be caused by the end user or their subcontractor's own manufacturing processes.

A faulty hole condition can be related to a single issue, or the result of many wrapped into one. Surprisingly though, the cause of a poor hole condition is sometimes intentional. As fabricators of sheet metal move toward turret punches, lasers, waterjet and hard tooled stamping presses, tolerances have become significantly more critical compared to the "oldfashioned" technique of just drilling a hole.

Hole drilling has more of an "align then drill" approach. Today we work more often with pre-prepared holes, which means we are drilling or punching and THEN aligning. The new methods certainly allow for speed on the hole making equipment. The problem is that when the components are ready to be assembled, all the holes must line up perfectly. This makes bend tolerances critical and often one of the more challenging to hold, which will affect hole lineup. When sufficient punch/bend tolerances cannot be achieved, the properly prepared holes will eventually compound out of alignment thus making it difficult for the rivet to be installed.



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GLOBAL

By John Wolz editor@globalfastenernews.com

SURVEY OF THE FASTENER INDUSTRY: 2013 YEAR END



FIN: 2013 Brought Consistent Fastener Returns

For the third year in a row a solid majority of fastener companies participating in the End of 2013 FIN Survey reported strong results, with widespread sales and profit gains and stable costs, GlobalFastenerNews.com reports.

The FIN Company Performance Index edged up to 6.7 from 6.6 the previous year.

Just over seven in 10 businesses reported "moderate" to "strong" sales growth in 2013, down from the 78% that achieved revenue growth in 2012. About 43% reported "moderate" growth in sales, while 28% saw a "strong increase" in sales.

Just over 15% of survey participants said 2013 sales levels were unchanged from the year before, while 13% reported sales declines — up from the 15% of companies reporting dwindling revenues in 2012.

About 66% of fastener manufacturers, importers, distributors and platers reported increased profits, with 40% claiming "moderate" bottom-line gains and 26% reporting a "strong" profit increase. Just over 20% said profits were unchanged from the year before, and 10% reported declining profit.

The End of 2013 FIN Survey found costs edged up modestly, with 48% of participants reporting flat or declining costs, while an additional 44% claimed

"moderate" cost increases and 3% claimed "strong" cost jumps.

And 46% of businesses reported a "moderate" to "strong" increase in capital expenditures during 2013, with another 37% of participants keeping investment levels unchanged from the previous year.

Much of the same is expected this year, with a solid majority of FIN Survey participants forecasting higher sales and profits amid moderate cost increases for 2014, according to GlobalFastenerNews.com.

About 77% of businesses predict sales gains, while 57% expect profit growth and 89% anticipate flat or "moderate" cost increases.

Both the FIN Sales Index and FIN Profit Index were flat in 2013 after declines in 2012.

Pace of Fastener Job Growth Still Strong in 2013, Wages Up

Just under half of fastener companies added jobs in 2013, down slightly from 50% the previous year. About 36% reported job growth under 10%, while13% of companies reported job growth greater than 10%.

Wage increases continued, with 74% giving wage hikes averaging 4% in 2013, up from the 70% that granted pay hikes the previous year.

And 75% of survey participants anticipate modest pay raises in 2014.



SEFA - PO Box 448, Elba, AL 36323 • Tel: 847.370.9022 • Fax: 847.516.6728 • Email: sefa@thesefa.com • www.thesefa.com

SOUTHEASTERN FASTENER ASSOCIATION

SOUTHEASTERN FASTENER ASSOC. & NATIONAL FASTENER DISTRIBUTORS ASSOC. ANNOUNCE PLANS FOR A JOINT MEETING

SEFA and NFDA have made plans to hold a joint conference in February of 2015. This will take the place of the SEFA Spring Conference and NFDA Winter Conference. Both associations hold similar schedules for their conferences and have some membership overlap. With this being a year of a SEFA Table Top Show it also offers both groups opportunity for additional networking. The two groups will draw on their expertise on programs to present a highly educational, motivational, social and networking opportunity. This is just one of the many examples of member associations, of the Fastener Industry Coalition, hosting programs together.

This conference will be held February 24th-26th in

Florida.

The details are currently being worked out but please mark your calendars now for this event!!

Southeastern Fastener Association Welcomes New Members

SEFA is pleased to announce their newest additions: 3Q Inc. - Naperville, IL Cigar City Fasteners - Tampa, FL Sems and Specials Inc. - Rockford IL The Dyson Corp. - Painesville, OH

For more information or to keep up to date with SEFA News, email sefa@thesefa.com or visit www.thesefa.com

MWFA - P. O. Box 5, Lake Zurich, IL 60047 • Tel: 847.438.8338 • 1.800.753.8338 • Email: mwfa@ameritech.net • www.mwfa.net

MID-WEST FASTENER ASSOCIATION

MWFA 2014 BOARD OF DIRECTORS & EVENT CALENDAR

In December, the MWFA Board met for their annual planning meeting. One of the important parts of the annual meeting is the Board of Directors election.

The 2014 Board Is As Follows:

President	Rich Cavoto
	Metric & Multistandard Components
Vice President	Glen Brin
	Innovative Components
Treasurer	Bob O'Brien
	Certified Products
Secretary	Cliff Hauger
	Acme Companies
Directors	Brian Christianson
	South Holland Metal Finishing
	David Gawlik
	All-Tech Hardware-Autocraft USA
	Matt Delawder
	SWD Inc.
	Becky Russo
	American Fasteners & Components
	Wayne Wishnew
	XL Screw Corp.
Alternates	Paula Evitts
	KDS Imports
	Rich Pease
	RK Precision Products LLC
	Amanda Clark
	Clarcorp Industrial Sales
	Bob Baer
	Abbott-Interfast Corp.
Executive Director	Nancy Rich

2014 MWFA Events

Please mark your calendars now so you can make our events of 2014. The board has worked hard to schedule informative meetings for your business benefit.

April 24th	FAS 101 Seminar
	(Introduction)
	Dinner Meeting
May 8th	MWFA joins NCFA for Distributor Social
June 23rd	33rd Annual Fastener Expo,
	Exhibitor Set Up, Sales Seminar,
	Fastener Bash

	Belvedere Banquets - Elk Grove IL
	Glow Golf - Eaglewood Resort & Spa, Itasca, IL
June 24th	62th Annual Golf Outing
	Eaglewood Resort & Spa, Itasca, IL
September 18th	
	(Intermediate) Dinner Meeting, Healthcare
October 16th	FAS 401 Seminar
	(Plating & Heat Treating)
November 6th	Elections, Scholarships Awarded
	Dinner Meeting
December 11th	Rosewood Restaurant, Rosemont, IL Holiday Party
2015	
June 8th to 10th	Fastener Tech '15
June 23rd	ener Expo Schedule
	ets, Elk Grove Village, IL
-	,
1 10.000m 12.00p	m Print Reading/PPAP/Quality Control
10.000111 12.000	m Print Reading/PPAP/Quality Control Seminar
10:00am - 12:00p	Seminar m Exhibitor set up
10:00am - 12:00p 12:00pm - 1:00pm	Seminar m Exhibitor set up Exhibitor & Seminar Attendee Luncheon
10:00am - 12:00p 12:00pm - 1:00pm 1:00pm - 6:00pm	Seminar m Exhibitor set up Exhibitor & Seminar Attendee Luncheon 33rd Annual MWFA Fastener Show
10:00am - 12:00p 12:00pm - 1:00pm	Seminar m Exhibitor set up Exhibitor & Seminar Attendee Luncheon 33rd Annual MWFA Fastener Show
10:00am - 12:00pm 12:00pm - 1:00pm 1:00pm - 6:00pm 6:00pm - 8:00pm	Seminar Exhibitor set up Exhibitor & Seminar Attendee Luncheon 33rd Annual MWFA Fastener Show Fastener Bash
10:00am - 12:00pm 12:00pm - 1:00pm 1:00pm - 6:00pm 6:00pm - 8:00pm	Seminar Exhibitor set up Exhibitor & Seminar Attendee Luncheon 33rd Annual MWFA Fastener Show Fastener Bash
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MWFA Welcomes New Members

Acme Refining, Chicago, IL Aerodyne Alloys, LLC, S. Windsor, CT Cardinal Fastener Inc., Bedford Heights, OH Vogelsang Fastener Solutions, Lakewood, NJ

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Barnaby Myhrum

Barnaby Myhrum is an Applications Engineer at Applied Bolting Technology in Bellows Falls, VT. He has over 25 years of experience in engineering and manufacturing companies in roles as an engineer, manager, executive and consultant. He earned a Bachelor of Science in Mechanical Engineering from the University of Vermont, and a Masters of Business Administration from Carnegie Mellon University. He can be reached by email at barnabym@appliedbolting.com.

THE DURASQUIRTER[™]: THE BEST JUST GOT EVEN BETTER

When Squirters[™] were introduced to the structural bolting world 10 years ago, they revolutionized the way structural fasteners are installed and inspected. Installers can rely on the immediate visual feedback of the squirt to ensure that the bolts are tensioned properly. Similarly, when inspectors see the squirt, they know the ironworkers did their job. Squirters[™] improve constructability by making bolt installation easier and more accurate.

At Applied Bolting we are serious about continuous improvement. We always strive to make our products better in response to feedback from the field. Someone requested a squirt that would stick around longer. When the weather is particularly nasty, the squirt can literally get blown or washed away. Consequently, if inspection isn't close-coupled to installation, the benefit of the visual appearance can be compromised. The inspector can still use a feeler gage, but that takes more time and causes frustration. After all, the point of using Squirters[™] is to make life easier.

So we went to work developing a squirt that would stick around longer. We also had secondary objective. It is well known that silicone and paint do not like each other. In structural applications, it's not that big a deal because the squirt can be removed easily prior to painting. But some automotive applications strictly prohibit silicone anywhere near painting operations. So the goal was set: develop a Squirter[™] that uses a non-silicone squirt media that will stick around even when exposed to wind and rain.

Introducing the DuraSquirter[™]

It took some time, but we identified another squirt media that accomplished our objectives. It's not silicone, and it takes more than what Mother Nature can throw at it to make it go away. In outdoor trials, our test flange still had the original squirt appearance seven months after the bolts were tensioned. (The flange is currently under the snowbank in front of the building. In a couple of months, we'll see how it reacted to the two feet of snow and ice that buried it back in December!)

The results with prototypes in the field have been very promising, and the feedback enthusiastic. The picture below shows DuraSquirters[™] that used a red prototype formulation 10 weeks after installation in an extremely windy environment. I saw this flange in person four weeks after this photo was taken. I could still see the squirts from the ground 15 feet away. We were told that the squirts still looked strong one month after my visit. By the way, it was so windy the day I was there that the cranes were not allowed to operate.

Now we're not recommending that you let weeks pass before you inspect your bolts. But sometimes stuff happens and real time monitoring of work in progress as required by the RCSC isn't feasible. And some pneumatic guns exhaust from the front, potentially affecting the final squirt appearance. With the DuraSquirter[™], it's no big deal if time passes before inspection occurs. The squirt will still be there, and you'll be able to further minimize the use of feeler gages.



Duraquirters™ (Prototype Red) Ten Weeks After Installation on the Gulf Coast



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FASCOMP...ON FAST PACE IN ELECTRONIC HARDWARE by Stan Lockhart

www.fascomp.com

A relative new-comer in the field of electronic hardware, Fascomp is making its name known to distributors across the country. Co-owners, Mark Georgia and Jason Bertone have grown the company into a major player since starting the company 13 years ago. Known affectionately as "**The Good Guys**" in the industry....a name they continued hearing time and again from appreciative customers, they decided to adopt the slogan. Today, that friendly feeling remains as their

customer service team carries on the tradition of listening to the distributor and fully understanding and responding to their needs.

Good feelings alone cannot sustain or support the type of growth that Fascomp has enjoyed and both owners knew the direction they had to take as they set out to build the broadest selection of electronic hardware

inventory in the market. "Our goal to become the one stop shop for electronic hardware has been a steady process and we continue to add SKU's where the market shows demand for the product" states Mark Georgia, President. "Our recent addition of handles has been very well received and we now have over 50,000 items outlined in our newly released catalog." Jason Bertone, Vice President, points out that Fascomp's mix of direct manufacturing, both domestic and offshore, has helped them reduce lead times while continuing to offer some of the most aggressive

pricing in the market for standard and blue print special parts.

Fascomp is ISO9001-2008 certified and operates facilities here in the United States with production in Naugatuck, Connecticut, as well as Shenzhen, China and Taichung City, Taiwan. Fascomp's corporate headquarters and main distribution center is located in Orlando, Florida. With a wholly owned manufacturing facility in Shenzhen, China and a newly developed plant in Taiwan, the company has expanded its Asian manufacturing and continues to offer its customers the best of all worlds. That offering includes; standoffs, spacers, shoulder screws, captive fasteners,

Owners, employees and reps of Fascomp pictured at the recent National Sales Meeting held in Orlando, Florida.

jackscrews, thumb screws, swages and handles. Fascomp also welcomes any opportunity to quote your custom and made to print items. Their products can be found throughout the telecommunications and entertainment marketplaces as well as in household appliances, computers, large communication towers, automotive applications,

marine industry, gaming industry, traffic control systems, emergency exit lighting, stage equipment and power supply units.

In addition to the largest inventory in the world, Fascomp offers a wide variety of value-added services such as; consigned inventory arrangements, blanket orders, dock-tostock and blind third party drop shipping, kitting and bagging, as well as field engineering support. Engineering and field sales support is handled by the company's nationwide independent sales representatives, which have been carefully selected based on product and market knowledge in their respective territories. Jason Bertone is proud of the team that they have assembled, "Our sales force is highly motivated, well trained and competent in representing our products to our customers. They lend credibility and consistency to our mission statement of acting with integrity and listening to the customer while operating in a conscientious and ethical manner." Representatives for the company include; All American Systems, Atlas Industry Marketing, Binge & English, Clevinger and Associates, Fasteners and Industrial Products, John Gourley and Associates, ProWest Marketing, Rick Rudolph and Associates, and Steers Associates.


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CARDINAL FASTENER INC. PROUDLY ADDS 4 NEW MANUFACTURER REPRESENTATIVES

Cardinal Fastener Inc. a Cleveland based manufacturer of high quality, competitively priced hot forged large diameter fasteners, announces that effective January, 2014, the hiring of 4 Manufacturer Representative Organizations.

Jack & Mike Gourley of John Gourley Associates

Cardinal Fastener proudly welcomes back John Gourley Associates. John Gourley Associates was started by John Gourley, Sr. in 1967 (47 years). His son, John Gourley, Jr. (Jack) started in 1981 (and represented Cardinal for 31 years), and now his son Mike (third generation), joined the business in March of 2012.

John Gourley Associates are known for representing companies that make fasteners, electronic hardware, stampings, clamps, and related fastening products.

John and Mike's territory will cover eastern Pennsylvania, New Jersey, Delaware and Maryland.

And as John said, "We are very excited to be back with Cardinal, they have been a core principal and a great company to work with for over 30 years".

John Gourley Associates - Office: 570-226-7475

Jack Gourley - Tel: 215-421-2937 Email: jackgou@ptd.net

Mike Gourley - Cell: 215-353-8443 Email: mgourley001@comcast.net

Roy Tomlinson of Excalibur Industrial Sales Inc. Roy Tomlinson started Excalibur Industrial Sales Inc. in 2004. Excalibur is a Canadian Master Distributor selling across Canada and specializes in quality domestic fasteners, thread repair products and other fastener related products. Excalibur is located in Mississauga Ontario, in the industrial hub of Canada.

Roy's team will cover all of Canada.

Excalibur Industrial Sales Inc: Office: 905-812-9090 Cell: 519-830-9091 Email: rtomlinson@excalind.ca

Hank Schaffner & Janet DeBiaso of Hank Schaffner Associates

Hank Schaffner Associates was started in 1982 representing manufacturers of industrial, commercial and aerospace parts selling to distribution.

Hank Schaffner started in the industry at US Steel; was General Sales Manager of Standard Press Steel (SPS); Director of Marketing for Allen Manufacturing and then President of Titan Fasteners before going into the manufacturer's representative business.

Janet DeBiaso (Hank's daughter) joined the company in the spring of 1985.

Located in Huntington Beach, CA, their territory will cover California, Arizona and Nevada

Hank Schaffner Associates - Office: 714-840-8291

Janet Debiaso - Cell: 714-742-9769 Email: jrdebiaso@gmail.com

Hank Schaffner - Cell: 714-329-1574 Email: hschaffner@msn.com

please turn to page 84



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INTEGRITY

DISTRIBUTOR NEWS

The Metropolitan Fastener Distributors Association, Inc. begins the New Year welcoming Nancy Rich as their new Executive Director.



With Nancy's many years of fastener association experience with the Mid-West Fastener Association and in more recent years joining the Southeastern Fastener Association, the MFDA is excited about having her expertise.

They look forward to Nancy's assistance leading them into a great future as the MFDA continues its growth and expansion of valuable programs for our members and the industry. Jay Minichino/President stated "We're confident her strong role in the fastener industry will serve our association well. The MFDA is fortunate to have Nancy join us."

For more information, contact the MFDA, PO Box 72, Lake Zurich, IL 60047. Tel: 201-254-7784, Fax: 847-516-6728, Email: admin@mfda.us or alternatively to mfdaboard@gmail.com. You can also visit their website at: www.mfda.us.



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Scott A. Merritt

Scott A. Merritt is CEO of Merritt Ventures, Inc., dba Merritt & Associates and author of "Identity Theft Do's and Don'ts." and has over a decade of experience in real estate financial planning, insurance, investment and mortgage services. Merritt holds a life, accident and health insurance license and a principal associate real estate broker's license. He has an associate degree in pre-law, a bachelor's degree in business administration and a certificate in computer information systems. He has personally represented himself and won in court hundreds of times to, in part, clear his record from the ravages of identity theft.

HACKING & ID THEFT: ARE YOU NEXT? 7 TIPS FOR PROTECTING YOUR IDENTITY & MONEY

At least 110 million consumers were affected by the hack involving Target and Neiman Marcus retailers. Whether or not millions more will have their identities manipulated and finances ruined within the coming months due to more breaches of security at other stores is anyone's guess, says identity theft recovery expert Scott A. Merritt.

"By necessity, I became an expert on identity theft. My information was stolen in 2006, and in repairing the damage, I learned some not-so-obvious ways we can all protect against identity theft in the first place," says Merritt, CEO of Merritt & Associates and author of "Identity Theft Do's and Don'ts."

Merritt's problems began quickly. While disputing financial charges and dealing with resulting business problems, in

2007 he was stopped for a traffic violation and arrested on a false outstanding felony warrant. He immediately knew why.

"I had to enlist my U.S. congressman and convince the state police, NCIC, FBI and Secret Service that I didn't commit the felonies. For a few years, I had to prove that the prints did not match the false record in question. After legal action, however, I was able to have this corrected." Unfortunately, the millions affected by the recent hacks may be dealing with similar repercussions in the years ahead, he says.

Before you become a victim of identity theft, Merritt offers seven ways to guard against it.

[1] Understand how and where it happens: Identity theft is like being robbed when you are away from



home; most thefts occur in places where you do business every day. Either a place of business is robbed, a bad employee acts improperly or a hacker breaches the office through the computer.

[2] Secure the infomation you carry in your wallet: Photocopy everything in your wallet: photos, credit cards (front and back), membership cards – everything. Put the copies in the order the cards are arranged in your wallet, staple

the pictures and place them in a strong box or safe.

[3] Make sure all of your information is **consistent:** For all of your identity and financial documents, make absolutely sure, to the smallest detail, that all of your personal information is accurate and consistent! Discrepancies such as using your middle initial on some documents, and not others, or having different addresses, can wreck havoc in proving your identity, and can compromise your credit score.

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OBITUARY



Terry Wing graduated from Western Michigan University in 1976. His career started off with a position at MacLean Fogg Corporation where he worked in inside sales and that eventually developed into an outside position. After a

successful start at MacLean Fogg he was promoted to a Distributor Sales Manager. In the mid 80's he worked for several Fastener distributors and in 1988 started W.E. Wing Company a Manufacturer Representative firm.

Terry serviced the Midwest marketplace supporting both OEM and Distributor sales. In 1990 Mike Hamlin joined Terry Wing's firm to help grow the agency's business and expand the territory coverage.

In 1992 Mike & Terry became partners and formed Wing-Hamlin Company in Elmhurst IL. Together they worked to develop the Wing-Hamlin agency into a nine person firm covering nine Midwestern states. In 2011 Terry's son, Cory Wing joined the firm to carry on the family tradition.

Terry's career was based on integrity and friendship. He treated customers and fellow coworkers with respect and dignity. He is survived by his partner Sandi Rocca and his five children Cory Wing, Todd Schaefer, Reed Schaefer, Mark Schaefer and Courtney Gross.

Donations can be made to Ronald McDonald Charities of Chicagoland and NW Indiana.



Terry Wing (left) with his long-time business partner Mike Hamlin (right) from the 2012 Las Vegas NIFMSE show.

DISTRIBUTOR NEWS

Lee Spring's 2014 Stock and Custom Catalog offers new and expanded innovative Stock product lines featuring several unique designs and corrosionresistant materials.

The new additions are High Pressure Compression Springs and Metric Bantam Mini



Compression Springs, as well as an expanded offering of HEFTY Die/Heavy Duty Springs. Lee's online catalog is available on www.leespring.com.

Lee Spring's newest Stock Spring solution is a unique line of low index, High Pressure Compression Springs, designed to work in holes from 1/8 " to 1". We carefully designed an offering of 144 slender parts packed with high load capacities, rated to pressures of 300, 400, and 500 psi. High Pressure Series Compression Springs in 17-7PH Stainless Steel provide a balance of corrosion resistance, high strength, and toughness. This line is ideal for anyone in need of firm, yet not rigid springs designed with slender profiles, suitable for small spaces. Another product line designed for small spaces, Bantam™ Mini Compression Springs has grown to include 108 new Metric designs. These miniature stock springs combine strength with corrosion resistance using Elgiloy[™], a distinct high temperature resistant, nonmagnetic nickel alloy that is 10% stronger than Type 316 Stainless Steel. The Metric Bantam series starts at wire diameter 10mm, just slightly thicker than a human hair, with outside diameters from .81 to 1.65mm and free lengths from 1mm to 14mm.

Lee Spring has also expanded their HEFTY[™] Die Spring product range to include longer free lengths up to 12". Round wire HEFTY springs are ideal for applications beyond traditional die springs and are well suited for any high stress, heavy load applications such as aircraft mechanisms, farm machinery, industrial equipment, brakes and clutches.

For more information about Lee Spring, contact them by Tel: 1-888-SPRINGS (1-888-777-4647), Fax: 1-888.426.6655, Email:sales@leespring.com or visit their website at www.leespring.com.



2015 ALL-AMERICAN — FASTENER SHOW —

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Mark your calendars for the 2015 All-American Fastener Show! It's going to be a fantastic two days of networking at the Sheraton Nashville Downtown Hotel in the heart of America.

The All-American Fastener Show is an opportunity for worldwide industry professionals to connect with United States fastener companies and learn more about new products and technology available from the American market.

Find out more—or take advantage of early bird registration—at our brand-new website, AllAmericanFastenerShow.com.



Accurate Manufactured Products Group, Inc. 8090 Woodland Drive, Indianapolis, IN, 46278 Tel: 317-472-9000 Fax: 317-472-9010 Email: sales@ampg.com www.ampg.com

ACCURATE MANUFACTURED PRODUCTS GROUP DOES IT ALL

Products Made To Stock

Accurate Manufactured Products Group (AMPG) is a make to stock manufacturer of specialty fasteners and industrial accessories now in its' 27th year of operation. Founded with the idea that there was a business in offering, manufacturing, and managing the "hard to find D, E, and F inventory items", APMG has built a successful business,

manufacturing in the USA, with an ever expanding product line.

Lumpy Product Line

The AMPG product line by definition is lumpy. They have 18,000 different types of items; 90% of the items are classified as lumpy items, as their demand frequency is less than 4 times a year. Managing a large portfolio of lumpy sale items would be

impossible without the right software product. Even more important than the software itself would be the team that stands behind it. After experiencing the frustrations of dealing with large software providers, the flexibility and customer service ethic of The BUSINESS EDGE 2.0 team at Computer Insights was a welcome change.

Complex Inventory Management Needs

APMG is managing a 24/7 manufacturing operation:

- 1. 18,000 lumpy items
- 2. These are going over 22 machine tools
- 3. They have subcontractors for heat treating and plating,
- They also have in house assembly and packaging operations

To say the least, managing this inventory is complicated. Providing world class service and dealing with the customer demands adds to the complexity.

Many Customer Specific Needs

This complexity includes many customer specific needs. AMPG's largest customers have:

- 1. Their own part numbers
- 2. Customer specific packaging quantities
- 3. Customer specified label requirements
- 4. Customer Bar Code formats and nomenclature
- 5. A number of other requirements that often change depending on who is in charge at the company at any given time.

The BUSINESS EDGE 2.0

The BUSINESS EDGE 2.0 software enables AMPG to keep track of each customer's part number, bar code, and label formats, and efficiently process a large volume of orders with very little labor in the office, warehouse or shipping department. Customer Service Representatives have every piece of information at their fingertips when a customer calls or writes. Critical information can be e-mailed to the customer with the click of a mouse. The information is always up to the minute and accurate because the system is fully integrated. Data integrity and timeliness are assured by the use of bar codes and wireless technology.





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WOMEN IN THE FASTENER INDUSTRY

NETWORK & LEARN WITH WIFI







The Women in the Fastener Industry board is planning a busy 2014 with networking sessions at several regional events. First up is the Mid-West Fastener Association Table Top Show on June 23-24. Join WIFI in Chicago as we host an informative gathering for members and other women in the industry.

"We are still working out the details, but we are planning a casual, fun event where women can connect with others who are passionate about WIFI's goals of scholarship, mentoring and networking," says WIFI President Pam Berry.

Keep checking the WIFI website for details – www.fastenerwomen.com.

WIFI membership is growing and new board and committee members are now in place to lead our group for the next two years.

President

Pam Berry, Advance Components 1st VP and Communications Chair Cris Young, Hudson Fasteners

2nd VP and By-Laws Chair

Joanne Bialas, International Fasteners Secretary/Treasurer and Membership Chair Nancy Rich, MWFA, SEFA, MFDA

Chair of the Board

Mary "Lou" Aderman, The Aderman Company









Scholarship Chair

Beth Van Zandt, Desert Distribution Mentoring - Sara Vasicek, Aztech Locknut Events - Suzy Cravens, Advance Components

The WIFI scholarship committee is happy to continue offering our members the opportunity to attend classes at the Fastener Training Institute with the Ann Bisgyer Wolz Scholarship, or attend the National Fastener Industry & Mill Supply Expo with the Edith Cameron Scholarship.

"The Wolz scholarship a great perk for our members as the Fastener Training Institute is the premier training ground for the industry, and the NIFSM Expo in Las Vegas is an opportunity to learn and connect as well" says Beth Van Zandt, who heads the scholarship committee. "Knowledge is power, and what better way to learn and grow than with WIFI."

WIFI is a non-profit organization that provides mentoring, networking and educational opportunities for women employed in the industrial fastener industry. We welcome corporate sponsorships for events and scholarships.

For more information about WIFI membership, scholarships, news and events, please visit us online at www.fastenerwomen.com.







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MID-WEST FASTENER ASSOCIATION

HOLIDAY SPIRIT AND GENEROSITY CLOSES THE YEAR

The MWFA holiday party on December 12th at Medinah Banquets, was an awesome fun event for 200 attendees. Everyone worked hard all year and it was time to relax and enjoy the Holidays.

Tables piled high with toys and an ammunition canteen filled with checks and cash were the future delight of many children. Nearly \$2,000 was presented to the U.S. Marines Toys for Tots program. Who better than Santa, to help the U.S. Marines, collect toys, after all toys are his specialty! Music That Moves

provided fun music for listening and dancing pleasure. And then there was the Photo Booth creating fun for the attendees.! Santa was quite popular as everyone wanted a picture with Santa! Santa knew everyone attending was good so he gladly smiled and enjoyed the fun pictures (posted on our website at www.mwfa.net). Food and drinks

were great but the joy of the group being together was the best.

This year's party also featured the "Holiday Ugly Sweater" contest. It was a time when you could truly tell

someone their sweater was ugly and they were happy to hear it! Sems and Specials sponsored the contest with a \$150 prize. With such a nice prize, you can be sure there will be more ugly sweaters next year. There were some very interesting Holiday Outfits. The females hesitate to wear "ugly" so perhaps we should think of the

"Best Holiday Shoes," for the females in the future.

After a year of serious hard working, it's great to see everyone in Holiday spirit relaxing and enjoying a fun filled party. So until next year, Happy New Year & remember it's never too early to start shopping for you "Ugly Holiday Sweater." Bet there are some good deals now!

CARDINAL FASTENER INC. PROUDLY ADDS 4 NEW MANUFACTURER REPRESENTATIVES continued from page 72

Doug Cook of GMD Assembly Solutions

GMD Assembly Solutions was formed in January of 2001 with the focus of supplying professional sales representation to Distribution Sales and Large OEM Manufacturers in Aerospace and Commercial manufacturers.

Douglas G. Cook, one of the original founders of the company is now sole proprietor and has over 20 years of experience in the specialty fastener industry that includes rivets, cold headed specials, custom plastic fasteners, metal stampings and other specialty products. He has successfully worked with OEM Engineers in Commercial, Aerospace and Distribution regarding new applications for fasteners. Doug has extensive qualifications to make GMD very successful in providing high quality specialty fastening systems, services, and R&D to customers and expanding manufacturers' markets. GMD Assembly Solutions is based in the Seattle area and services the Pacific Northwest covering the states of Oregon, Washington and Idaho.

GMD Assembly Solutions Tel: 253-973-2249 Email: gmd-dcook@comcast.net

In June of 2013, Cardinal Fastener Inc. added *Jim Lawson of JM Lawson Associates*, *LLC*. Jim and his team have extensive experience in the Fastener Industry and bring a high level of technical assistance capability to their distributors.

Specifically, they represent Cardinal in the states of Maine, New Hampshire, Vermont, Massachusetts, New York, Connecticut, and Rhode Island.

JM Lawson Associates, LLC. Tel: 860-653-7449 Email: jlawson@jmlassociates.net O



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Woodruff Imberman

An economic historian by training, the author, Dr. Woodruff Imberman, is President of Imberman and DeForest, Inc., management consultants. He has published many articles in Distributor's Link on improving managerial effectiveness, supervisory training, improving employee productivity, and on implementing Gainsharing Plans in the fastener industry. For further information on these subjects and the articles, please contact him at Imberman and DeForest, Inc., IMBandDEF@aol.com.

YOUR SHIP OF STATE: WARSHIP OR GARBAGE SCOW?

Only those fastener producers and distributors that improve their overall productivity faster than do their competitors will prosper as the economy revives.

In the fastener industry, overall productivity growth over the last 20 years has declined, according to figures compiled by the Bureau of Labor Statistics of the Department of Commerce. (see chart). Best defined as the units of output produced compared to units of asset inputs – labor, capital, managerial skills, and/or better technology – overall productivity has dropped 1.2 percent recent years, even high quality specialty fasteners. But now, as foreign labor costs – and prices – have increased, domestic fastener buyers, especially those purchasing specialty ones, are "reshoring" their purchases because the price differential between American-made and foreign fasteners has shrunk enough so putting up with all the difficulties of dealing with suppliers 8,000 miles away is an unnecessary headache. ("American Fastener Makers: What 'Reshoring' Means to You," Distributor's Link, Fall, 2013)

annually during this period

Overall productivity dropped average of 1.2% annually over from 1987 to 2011, the most recent year for which statistics are available.

According to the BLS, productivity fell 7.1% annually during the 2007-2009 period. This record no doubt reflecting the market



Before I paint too rosy a picture of the future, let's look at two snapshots of today's reality.

First, major industries buying fasteners – the automotive industry alone purchases about 37% of the industry's output, and Aerospace, Industrial Machinery, and Other buys another 33% – are reviving; and with their

slump, especially in the automotive industry, and the fastener industry's reluctance to cut skilled help during those two years, despite obvious overcapacity. Productivity then improved to 2.1% annually during 2009-2011, showing how better markets and full use of skilled factory employees can affect productivity measurements. Who knows which fastener companies can maintain sales strong enough to keep employees fully occupied?

Perhaps this lackluster growth in overall productivity during these decades explains why imports took a growing share of the domestic fastener industry's markets in renaissance fastener orders have grown. Since a rising tide lifts all boats, from hungry warships cutting through flashing waters to garbage scows slowly navigating lumpy seas, higher overall demand for specialty fasteners has meant even inefficient producers have healthy order books. And because of this first picture, a second one comes into focus. That is, executives of fastener producers are so busy dealing with new orders and putting out the fires that they find little time to consider their long term needs of boosting their overall productivity and enhancing their market competitiveness.



MWFA HOLIDAY PARTY PHOTO BOOTH DECEMBER 12, 2013



















































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DISTRIBUTOR NEWS

SPIROL Industries Ltd. is pleased to announce the addition of their newest product line; the Series CL600 & CL610 Aluminum Compression Limiters.

SPIROL offers several different standard types of Compression Limiters to meet specific application requirements and assembly methods. They are replacing the current line of machined brass Compression Limiters with this aluminum series due to the following advantages:

Lightweight: Aluminum is 1/3 the weight of brass. *Strength:* Extensive testing has proven that the aluminum and brass Compression Limiters have similar compressive strength.

Lead free: Even though SPIROL's brass Compression Limiters meet the RoHS standard for lead content, the new aluminum Compression Limiters are lead free.

Cost Savings: Aluminum Compression Limiters offer a reduction in cost over brass Limiters

For more information contact Spirol International at Tel: 1-860-774-8571, Fax: 1-860-774-2048, Email them at: info@spirol.com or you can visit their website at www.spirol.com.

DISTRIBUTOR NEWS

General Inspection LLC recently redesigned and improved the Gi-100: the new Gi-100DT

features a dial table style glass top, which allows the parts to be stable. The stability of the parts allows for better image analysis, better data capturing and greater precision.

The Gi-100DT is primarily used for sorting flat parts that have more than a 2:1 length



to diameter ratio - Nuts, valve spring retainers, rivets, bushings, washers, etc. – all at up to 1,000 parts per minute (though most parts average closer to 400 parts per minute).

Multiple sensors can be added to the Gi-100DT, including Eddy Current, Multiple Vision Stations with Gi specialty lenses and Laser Topography. Eddy Current ensures you check for metallurgical defects such as cracks, missing plating or hardness variations. Vision stations can be added to detect defects like chips in the ID, missing internal threads and even damaged threads on deep threaded holes, nylon ring presence, chips in grooves, cracks, missing or damaged weld projections and missing crimp. Our newest sensor, Laser Topography shows a 3D profile of the parts and can measure diameters, heights, as well as find defects like chips, dents and flatness.

The Gi-100DT is used to inspect 100% of the production. This Instrument of Lean, sorting machine, has great flexibility to sort a wide variety of parts. The Gi-100DT with its array of Patented and Patent Pending sensors allows customers to achieve zero defects and realize: improvement of the manufacturing process, reduction in variation, and improved profitability.

Contact General Inspection, LLC at 248-625-0529 or visit www.generalinspection.com for more information regarding their latest technology.

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SPIROL HOSTS MEMBERS OF THE NEW ENGLAND FASTENER DISTRIBUTORS ASSOCIATION

On February 6, 2014, SPIROL International Corporation was pleased to host the New England Fastener Distributors Association (NEFDA) at their North American headquarters in Danielson, Connecticut, USA. SPIROL has been an active member of the NEFDA for over ten years. As

part of the NEFDA's mission, they aim to advance the interest of the Fastener Industry by promoting the distribution of fasteners through those who will upgrade the image of the industry. SPIROL's National Distribution Sales Manager, Michael Lentini, was pleased to host the NEFDA with the primary goal of furthering the distributors' understanding of all of the reasons companies should partner with SPIROL.

Christie Jones, SPIROL's Market Development Manager, delivered a comprehensive interactive presentation which included a review of the industries and common applications that use SPIROL's products, an overview of SPIROL's global locations, and a comprehensive review of SPIROL's vast product lines and engineering services. After the presentation, the group went onto the production floor where they were able to tour the entire manufacturing facility starting at the raw material warehouse, through the metal forming and metal cutting operations, heat treat, finishing, sorting and packaging departments. They also visited SPIROL's Installation Equipment Showroom.

Upon completion of the tour, the group enjoyed a delicious lunch and engaged in conversation with SPIROL's CEO, Jeffrey Koehl. Mr. Koehl notified the group that due to a significant increase in sales volume, SPIROL is

embarking on a 30,000 square foot addition to their Connecticut operations. This major expansion will include a complete overhaul of the existing manufacturing facility and the addition of a completely new secondary operations line in addition to many other pieces of new equipment. Mr.



NEFDA attendees and SPIROL personnel

Koehl made clear that SPIROL is completely committed to undertaking this expansion without having it impact service to their customers whatsoever. In order to make sure that this expansion is absolutely seamless, the project will take place over a period of two years.

please turn to page 166



Christie Jones delivering interactive corporate presentation to all attendees from the NEFDA

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NATIONAL FASTENERS DISTRIBUTORS ASSOCIATION

NFDA/PAC-WEST JOINT CONFERENCE PROVIDED INSIGHTFUL EDUCATION AND ENGAGEMENT by Vickie Lester

The National Fastener Distributors Association (NFDA) and the Pacific-West Fastener Association (Pac-West) held a joint conference at the Renaissance Esmeralda Resort in Indian Wells, California, February 12-15, 2014. One hundred and sixty fastener industry professionals from across North America participated.

Feedback from attendees has been overwhelmingly positive.

- "As always, the networking opportunities and ability to share ideas/issues in a relaxed setting is invaluable."
- "I got a lot of perspective on the challenges other companies are facing, and how they are addressing these challenges (or opportunities) with their business plan."
- "Good take-home value."
- "It was excellent. One of the best I've attended."

Conference Education Sessions Included:

"Manufacturers are from Mars, Distributors are from Venus: Part 2." This followup session to the NFDA 2013 Annual Meeting panel was

presented as a debate, with the addition of the master distributor perspective. Representing manufacturers was Jamie Lawrence from AVK Industrial Products; Jay Queenin from Specialty Bolt & Screw represented distributors; and for master distributors Tim Robert Jr. from Star Stainless Screw. Andy Cohn from Duncan Bolt was the debate moderator, who fielded questions about the relationships up and down the supply chain.

"ISO 9001-2008. What Is It Good For? Absolutely **Something**" was an informative session presented by Carmen Vertullo from CarVer Consulting. It covered how a Quality Management System can make your company more profitable.

"Conflict Minerals Reporting Requirements" really opened the eyes of a lot of conference attendees, who

are bewildered about requests coming in from customers to comply with SEC requirements. Lawrence Heim, director of The Elm Consulting Group, shared his knowledge about a confusing topic.

"U.S. Economic Outlook for 2014" by Dr. Esmael Adibi, director of the A. Gary Anderson Center for Economic Research at Chapman University. The U.S. economy was discussed and audience questions answered.

"Ignite" Presentations" Five people gave presentations during a lunch program: Bill Derry (Field Fastener), Jonathan Spaetzel (Spaenaur), Carmen Vertullo (CarVer Consulting), Ryan and Chris

> McCaffrey, and John Wolz (Global Fastener News). This presentation style requires speakers to talk for five minutes using 20 slides that advance automatically every fifteen seconds. The result is quick, educational and often

entertaining as well!

Open forums for business owners and business executives had huge attendance. In these programs attendees share experiences and solutions in a frank interchange, moderated by their peers.

Social events for the conferences included an Olympicthemed opening reception, a Valentine's Day dinner, and offsite tours.

Looking ahead

The next NFDA event is the Annual Meeting and Executive Sales Planning Sessions, scheduled for June 18-20 at the Embassy Suites in New Orleans, Louisiana.

The Pac-West 2014 Fall Conference will take place August 6-9 at the Coeur d'Alene Resort in Coeur d'Alene, Idaho. 🔿



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Anthony Di Maio

Anthony E. Di Maio attended Wentworth Institute and Northeastern University. In 1962 he started working with Blind Fasteners as Vice-President of Engineering & Manufacturing for two blind rivet manufacturers. He has been Chairman of the Technical Committee of the Industrial Fasteners Institute (IFI) and is still involved in the writing of IFI specifications. In 1991, he started ADM Engineering and is working with Fastener Manufacturers developing new fasteners and special machinery. He can be reached at ADM Engineering, 6 Hermon Ave., Haverhill, MA 01832; phone and fax 978-521-0277; e-mail: tdimaio@verizon.net.

UNIQUE BLIND RIVET APPLICATIONS

No. 1 - The Use of a Blind Rivet As A Pivot



Figure 1

Sets blind rivet can be used as a pivot and still securely fasten two or more components together. A slight alteration to the setting tool's nosepiece will make this possible.



Note ${\bf 1}$ - Depth of the counter bore is the height of

the flange of the blind rivet plus the clearance you want between the two or more components you want to pivot. *Example:*- 4 series (1/8) blind rivet has a flange height of .042 and you want .010 clearance between the two components. 042 + .010 = .052 depth of the counter bore.

Note 2 - The flange diameter of a 4 series (1/8) blind rivet is .255. The diameter of the counter bore can be .010 larger than the blind rivet

flange diameter or .265.

Note 3 - The diameter of the nosepiece can be .375.

It is very simple to produce a nosepiece that will have the design as stated.

This nosepiece will accept blind rivets in the same way that a standard nosepiece does. This rivet pivot nosepiece can be used to set 3/32, 1/8, 5/32, 3/16 and 1/4open- end blind rivets. You insert the blind rivet into the nosepiece in the same manner as you would do with standard nosepiece. When you insert the blind rivet shank or barrel into the hole you are riveting, the nosepiece will contact the surface of the component you are riveting.

Figure 2



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more photos on page 131



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CELEBRATING 80 YEARS & THE 3RD GENERATION!

April 6, 2014 marked the 80th anniversary of Minneapolis Washer and Stamping, Inc. From humble beginnings, Minneapolis Washer is more viable and productive than ever before. Minneapolis Washer has succeeded by evolving and embracing change in products, production processes and variable economic environments as a team. MWSI is now a third generation run, family owned company in which over 50% of the current staff has more

than 25 years of service expertise with MWSI.

The following is the abridged history of the company.

In 1934, Evald C. Bank (E.C. Bank) was selling insurance for the W.B Foshay Companies in Minneapolis. Realizing

that the financial environment in postdepression Minneapolis was not an ideal situation for a commodity-based insurance salesperson, EC Bank began looking for other business opportunities. Eventually, he came upon a small, seasonal, 3-press stamping company located in downtown Minneapolis on what is now the campus of the University of Minnesota.

The company E.C. found was named Minneapolis Wrought Washer and was for sale on a contract for deed. Minneapolis Wrought Washer was a three-man operation that serviced the railroad industry. It consisted of three line shaft driven presses and the manufacturing facility was actually a tin-roof shed building. Complete with drop down tarp sides to seal in heat and protect from inclement weather, the company ran from April-October depending on the weather in MN.

At the time he found Minneapolis Wrought, EC and his wife were living in the basement of a large Minneapolis home owned by a wealthy lumber family. Their rent obligation was to maintain boiler heat in the winter months to heat the home. E.C. borrowed \$3000 from a family member and purchased



Minneapolis Wrought Washer on contract for deed.

A savvy salesman and manager, E.C. Bank took the company through its infancy and brought it into prosperity in the years following the Great Depression and World War II. Multiple manual presses, lathes and tooling were added. To accommodate the expansion, the company was moved to larger, more accommodating locations as it grew.

A successful businessman and Rotarian, EC manned the helm at Minneapolis Wrought Washer for almost 35 years. (Much to the chagrin of the of the original owner, who had received it back on contract for deed twice before 1934)

As demand from the railroad industry began to diminish, EC turned the focus of the company to standard size, domestically produced flat washers and special stampings with the goal of primarily producing product made from mild steel and spring steel.

In 1967, E.C. Bank encountered some health issues. He contacted his son, Kent M. Bank to see if he had interest in coming into the family business.

At the time, Kent was working at an advertising agency in Chicago and was on his way to a successful career. He recognized the opportunity presented to him, and at the tender age of 25, Kent



accepted the offer. Due to E.C.'s health condition, Kent moved back to Minnesota and immediately took the reigns of Minneapolis Washer. His mentor, in addition to E.C., was superintendent Kermit "Slim" Gilman. Slim was an original employee from 1934 and provided

excellent support and guidance for Kent, especially in the first few years of the transition.

Top: The original Minneapolis Washer & Stamping location. Middle: The new Minneapolis Washer facility circa 1977. Bottom: The current location in 2014.

Celebrating 80 Years of Service & Dedication

Kent and Chris Bank, 1977

Minneapolis Washer, Circa 1934

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RUMCO FASTENERS - PRODUCTS THAT PERFORM (Division of MW Industries Inc.)

As a leading cold-heading fastener manufacturer, Rumco Fastener Division specializes in a wide variety of SEMS and custom fastener products. Rumco's customers have made us their manufacturer of choice because of our ability to meet custom requirements, our depth of product lines, our manufacturing capabilities and our ongoing commitment to customer satisfaction.

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Other products include: Sheet Metal Screws, Machine Screws, Tri-Lobular Screws, Custom Screws, Shoulder Screws, Hi-Lo Screws, Thumb Screws & Captive Screws.



ADVANCEMENT IN TORQUE CALCULATIONS continued from page 8

For many years we have successfully used a very simple and effective way of finding a torque value for threaded fasteners. It is written:

$$T = K x d x Fp$$
 (or $T = K x d x P$)

Where:

T = Torque, *Ibfft* (foot pound force), *Nm* (newton meter) or other composite units.

K = a dimensionless factor, also called nut-factor.

d = nominal thread diameter (inch or mm)

Fp (or *P*) = preload force in lbf (pound force) or *N* (newton) or *kN*

We know "d" since we have already picked a suitable fastener. The preload force Fp or P we have to determine based on the expected external forces acting on the joint and various load losses we may encounter in service. That leaves the K to be taken care of.

The most common way of calculating K is:

$$K = \frac{0.16P + 0.58d2 \cdot \mu t + 0.5(dw \cdot \mu b)}{d}$$

Where:

P = thread pitch, inch or mm d2 = pitch diameter, inch or mm μ t = friction coefficient, threads μ b = friction coefficient, bearing area (tightened) dw = effective diameter bearing area, inch or mm d = nominal thread diameter, inch or mm

P, d2, dw and d are numbers we can pick right out of our fastener standards. Where we get into most trouble is when we try to find out the values for friction coefficients for μ t and μ b. We can have dry fasteners, oiled, plain, plated, waxed, phosphate and oil, hot dip galvanized, coated and so on. The friction coefficients can typically vary from about 0.07 for very effective lubricants to 0.35 for dry, hot dip galvanized or mechanically plated surfaces. I will show a little later on with a few examples why we absolutely must have a handle on this. In our engineering colleges the graduates go on with a poorly explained value for K taken from an old text book written by someone who should be in "jail with bread and water or hard labor". A K factor of 0.2 is what most newly graduated engineers think is delivered from very high places together with 10 non-engineering commandments. Since K is much dependent on geometry in addition to friction, a flanged fastener will have a much different (higher) K than a regular Hex Head screw. Using a common torque chart (DON'T!) which is typically made to fit a Hex Head will not be a very good idea for a Flange Head.

Even the World's best design guide line, VDI 2230, gives no precise values for friction coefficients but suggest friction classes from A to E where class B is recommended (μ range from 0.08 to 0.16). That range will require the use of some lubricants on defined material surfaces but still leaves room for some guess work.

IFI Torque Book for Fasteners

Joe Greenslade, Director of Engineering Technology of the Industrial Fasteners Institute, IFI, has collected friction data from lubricant- and coating manufacturers and also from various published technical papers by experts in the fastener field. This has resulted in a very useful 2013 publication called "Torque Book for Fasteners". I strongly recommend everyone involved in the fastener business to get this 30-page publication. In addition to some general information about tooling and torque calculations, the publication also includes an extensive table containing K factors for a wide range of finishes and lubricants. The K values listed in the table are developed with a standard head size (1.5 d) as a base. To find the actual friction coefficient it is suggested that the published K is divided by a factor of about 1.33. A K of 0.2 means a friction coefficient of approximately 0.15. This is important for two reasons. If we use a flanged fastener, the dw (see the K formula) is much larger than the dw for a regular Hex head and will result in a much higher K factor. Also, if we lubricate the thread only and the tightening area (nut or bearing area under screw head) is dry we will have different values for µt (thread) and µb (bearing area). A lubricated fastener will, of course, have the same friction coefficient for both µt and µb since the lubricant will act on all mating surfaces. If we have different friction coefficients (i.e. dry vs lubricated), we have to go in to the table and find a way of extracting individual values for µt and µb and apply these to our K factor calculation.



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ADVANCEMENT IN TORQUE CALCULATIONS continued from page 104

Let us now take a few examples to illustrate why we need to pay attention to the friction coefficients in our joint designs. I will use a Grade 5 fastener and an ISO 8.8 fastener of about the same size, both in as received condition (unplated with 0.15) and also with an engineering class coating (examples from Magni, Dacromet, Geomet, Xylan, etc.) with a 0.1 coefficient. Traditional approach has been to use a portion of the fasteners yield capacity in our joint calculations, but it is now more and more replaced by using the proof load as a base. Proof load is used to verify that the manufactured lot is not showing any permanent set (plastic deformation) when that test load is applied. Proof load test is performed on the actual fastener, yield testing requires a machined test specimen taken out of the fastener, and is only used for larger sizes or for special requirements. Proof strength is typically about 0.9 of yield and since older text books suggest using 75% of yield, I will be using 80% of proof load in the following examples.

Example 1

Hex Cap Screw, Grade 5 (SAE J429) 1/2UNC x L

Tensile strength/load	17 000 lbf (table value)
Yield strength 92 000 x 0.1419	13 055 lbf
Proof load	12 100 lbf (table value)
80% of proof	9680 lbf
P = 0.077 in	
d2 = 0.45 in	

dw 0.75 (for simplification I will use WAF)

 $K = \frac{0.16 \cdot 0.077 + 0.58 \cdot 0.45 \cdot 0.15 + 0.5(0.75 \cdot 0.15)}{0.5} = 0.215$ $T = 0.215 \cdot 0.5 \cdot 9680 = 1041/12 = 86.7 \text{ lbfft}$

Same fastener but with 0.1 as friction coefficient:

 $K = \frac{0.16 \cdot 0.077 + 0.58 \cdot 0.45 \cdot 0.1 + 0.5(0.75 \cdot 0.1)}{0.5} = 0.15$

 $T = 0.15 \cdot 0.5 \cdot 9680 = 726/12 = 60.5 \text{ lbfft}$

We can reach our target preload of 9680 lbf with a lot less effort if we have a good lubricant. But, there is a catch – suppose we have made our design decisions based on 0.1 coefficient but are using fasteners with 0.15 due to an error in shipment. Applying 60.5 lbfft of torque we will only get 6755 lbf in preload instead of 9680. Reversely, using a torque based on the 0.15 coefficient (86.7 lbfft) but getting fasteners with 0.1 lubrication, our preload will rise to 13 872 lbf, which is higher than the yield strength.

Example 2

Hex Head Screw, class 8.8 (ISO 898/1), M12 x L

Tensile load	67.4 kN
Proof load	48.9 kN
80% of proof	39.12 kN
P = 1.75 mm	
d2 = 10.9 mm	
dw using WAF 18 mm	

 $\mathsf{K} = \frac{0.16 \cdot 1.75 + 0.58 \cdot 10.9 \cdot 0.15 + 0.5(18 \cdot 0.15)}{12} = 0.215$

 $T = 0.215 \cdot 12 \cdot 39.12 = 101 Nm$

Same fastener but with 0.1 as friction coefficient:

$$K = \frac{0.16 \cdot 1.75 + 0.58 \cdot 10.9 \cdot 0.1 + 0.5(18 \cdot 0.1)}{12} = 0.15$$

T = 0.215 \cdot 12 \cdot 39.12 = 70.4Nm

Similar to Example 1 (inch) we have about the same situation here with insufficient preload going with low torque value on a higher friction condition and going above yield the other way.

When I worked my early professional years in the fastener business, we tried to be really smart by applying a very slick wax coating on nuts, calling them Nomy (no μ). That way the operators could use lower torque values with less effort to get to the target tension. But, reality set in pretty soon, since people were breaking fasteners all over the place because they used what they always had in terms of torque values and wrenches. I guess we humans are habitual creatures. We withdrew our brilliant idea after a shorter time period.

In conclusion, get the Torque Book from IFI and retire your torque charts.




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CARVING OUT SMALL SPACES continued from page 10

For storage of larger quantities or larger materials adding another layer of pallet rack beams and using a conventional order picker vehicle in the existing aisles is the preferred strategy. The larger truck will carry a standard pallet which allows for handling more materials on each trip down the aisle.



Most of the major lift truck manufacturers have these forklifts in their product line. In a typical Fastener Distributor context these are essentially a commodity item with minimal feature differences. Selecting a suitable vendor can be done on the basis of your satisfaction with an existing forklift sales/service distributor.

If individual bags, cartons and cases are to be stored adding a mezzanine above the existing shelving is a good alternative. Ideally the main floor shelving should have the capacity to support a higher structure, or with a lot more work the existing shelving can become the mezzanine storage units with heavier duty shelving below. In either case the first parameters to examine are the overall clear height of the space (absolute minimum is 14' clear), lighting, ventilation and fire protection.

For Fastener Distributors open grating for the aisles can solve many problems of air circulation but additional lights should be anchored to the underside of the grating over aisles (preferably with side mounted T-5 or T-8 fluorescent lamps). In a sprinklered building any aisle 4'-0" or more in width must have sprinkler protection at both the ceiling and underside of the mezzanine. Side aisles of less than 4'-0" might not have to be sprinklered at the discretion of the local Fire Marshall and building codes.



This can be the ideal solution for segregating portions of the inventory such as Industrial products from Aerospace, lot controlled items. Similarly consigned materials can be vertically separated from ordinary stock.

Stocking can be accomplished using existing lift equipment; with materials hand carried down or moved vertically using a kid's playground slide (cheap but risky) or under controlled conditions on a belt conveyor or vertical package lift.

The two major limitations are costs in excess of \$30 per square foot plus the price of the shelving, and sprinkler protection. If the building does not have a back flow protection valve or "RPZ" then one must be added to meet current building codes and this can start a cascade of expenses that may include a pump, sprinkler room and even an alternative power source. There are also floor loading and seismic considerations. Obtaining the often necessary building permits for these installations can therefore become a real problem. Nothing here that cannot be solved with the application of large sums of money, but still a headache for implementation.

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DISTRIBUTOR NEWS

The Aderman Company today announced its Coaching and Consulting Services for professionals in the fastener industry. The services provide clients with personal coaching, consulting, and accountability systems. Fees vary by engagement.

With 35 years of acquired skills and experience as a business owner in the fastener industry, President Mary Lou Aderman felt that the addition of this latest line of services to the company's offerings was a natural fit between her coaching background and her company's industry.

Aderman Coaching and Consulting Services offers structured systems to help executives discover barriers to growth and identify where to focus. "Anyone who has been near the fastener industry in the past 20 years knows the upheaval in the marketplace.

Our industry has been characterized by consolidation of distribution, offshore manufacturing and sales channel discontinuities. Businesses who want to remain profitable must reinvent themselves or be left on the sidelines," said Mary Lou Aderman, President of The Aderman Co.

The services offered by Aderman Coaching and Consulting Services help business professionals stay competitive, infuse new insights into their company, and create a higher level of personal satisfaction. This results in improved performance, innovation, and enhanced business relationships.

The Aderman Co. has over 45 years in business as a manufacturers representative for fasteners. Their Aderman Coaching and Consulting Services Division offers personal coaching and accountability services to executives in the fastener industry.

For more information about Aderman Coaching and Consulting Services, contact Mary Lou Aderman at 630-961-9627, via email at adermanco@aol.com, or visit their website at www.adermanco.com.

DISTRIBUTOR NEWS

International Fasteners Inc., "The Distributor's Choice" for Daggerz[™] brand quality construction fasteners is pleased to announce the opening of their newest stocking location in Elk Grove Village, IL. Customers in the Chicago area can now pick up product locally. This location also offers low prepaid freight minimums to the midwestern states.

Additionally, All American Systems out of Naperville, IL is now representing International Fasteners, Inc. in the IL and WI territory, which is being serviced by this new stocking location.

International Fasteners Inc. has six locations to service customers in Tampa, Charlotte, Chicago, Dallas, Philadelphia, and Phoenix.

For more information or to have a representative contact you, please call 1-888-241-0203, email at sales@daggerz.com, or log on to our website at www.daggerz.com.



Beta Steel Group

PO Box 189002, 44225 Utica Road, Utica, MI 48317 Tel: 1-800-594-9074 Fax: 586-323-6806 Email: sales@betasteel.com www.betasteel.com

THE BETA STEEL EXPERIENCE

At Beta Steel, we are committed to providing our customers with Agility, Speed and Strength. To back this commitment, Beta Steel prides itself on having the best people to interact with our clients as well as provide the solutions that surpass customer expectation.

To further this commitment, we are pleased to announce the addition of Richard Keegan as General Manager and Director of Product Development and Mark Martin as Commercial Manager. Collectively, they bring over 50 years of experience in the steel rod and wire industry.

In Rick's new role, he will lead Beta Steel's quality processing and manufacturing division, resulting in steel wire that exceeds customer expectation. Rick brings significant experience in the cold heading wire industry holding positions as an application engineer, fastener engineer, product assurance manager and quality manager. His legacy has included positions at McLaughlin Nut Company, Intier Seating Systems and MNP Corporation.



Additionally, Rick received Ouality

Engineering certification through the American Society for Quality.

Mark a Michigan State University graduate, has held purchasing, sales and operations positions servicing the automotive, agricultural and defense industries. Additionally, Mark has received extensive training in Wire Metallurgy, Advance Product Quality Planning (APQP) and Production Part Approval Process (PPAP). Mark is also a member of the Wire Association International where he continues to keep up with the latest technologies and processes.

Rick and Mark's knowledge and experience will add to Beta Steel's bank of dedicated staff committed to meeting all customer needs. Beta Steel has been a leader in the steel rod and wire industry since 1969. Our success is based on a history of providing customer service, innovation and meeting the dynamics of market needs.

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Exceeding customer needs - the workforce of Beta Steel



Beta Steel is proud of its ability to deliver agility, speed and strength to its customers. Ensuring that this legacy continues, we continually seek out the best talent in the industry. Our people are the foundation to providing continuous improvement in everything we do.

From our sales and order processing staff to our employees that fabricate and ship our steel, we are dedicated to delivering the best product, on time, exceeding customer expectation. This is what makes Beta Steel first choice of customers.

We encourage you to visit our website or contact us to find out how we answer our customer's most difficult challenges.

www.betasteel.com 44225 Utica Rd. Utica, MI 48317 800-594-9074

CRUISIN' FOR A BRUISIN': FASTENER DISTRIBUTORS STILL USING WINDOWS XP AFTER APRIL 2014 COURT PERIL continued from page 12

Even so, amidst all the reluctance and amidst all the recent grimacing over Microsoft's latest moves, fastener distributors still running XP are staring at a hard truth: Either migrate to a a newer version of Windows – or another operating system, such as Linux, Apple's iOs or Android – by April 8, 2014, or make preparations to take a seat in the 'Windows XP Next Victim Shooting Gallery.'

"This may feel like a scam by Microsoft to force you to spend money on an upgrade, but it's actually a natural part of the software lifecycle," says Jerry Fett, CEO, Smart IT (www.smartservices.com), a computer consulting firm.

"Upon upgrading from XP to Windows 8, you may be

pleasantly surprised to see a performance boost after dealing with XP after all these years," Fett adds. "This is primarily because XP came out before the latest and most commonlyused solutions were even conceived. Think back to what the Internet was like twelve years ago – that's what XP was designed for. Running new software on a new OS will yield you maximum productivity."

One suspects not every fastener distributor is as bright-eyed as Fett about migrating. But with the inevitable approaching, at least you'll have some tools to get you through:

**Microsoft:* Microsoft has a few tools to help fastener distributors migrate from Windows XP, including its Windows Assessment and Deployment Kit (*www.microsoft. com/enus/download/details. aspx? id=30652)* and the Microsoft User State Migration Tool (*www.technet.microsoft. com/en-us/library/dd560* 801%28v=WS.10%29.aspx)

*Dell: The company is

offering a soup-to-nuts services to help business migrate to more modern versions of Windows. For more info, check out: (www.dell.com/ learn/us/en/555/services/client-osmigration-consulting) and (www.kace.com/solutions/ business-needs/windows-7-migration)

*HP: This major PC player also offers a comprehensive migration service (www8.hp.com/us/en/ads/xp-migration/ landing.html?jumpid=ex_r11260_go_goodbyexp_ redirect). "By working with a company such as HP, which has hardware and services solutions in place, businesses can almost immediately start realizing the benefits of Windows 8 and Windows 7," says Enrique Lores, a senior vice president at HP.

HP is also advising businesses to use its HP Connected

Backup 8.8 service (www.autonomy.com/products/ connected-backup), which enables a business to back up all its data in the cloud, and enables IT administrators – as well as users – to access that data using their newer version of Windows.

***XPMigrations:** (http://xpmigrations.com) Smaller-tomedium sized fastener distributors may want to check out this co-op community. It's a nationwide group of independent, certified IT pros who specialize in migrating businesses from XP to Windows 7, 8 and other operating systems. The community is also hosting a series of ongoing, XP migration seminars in major cities across the U.S.





*Migrate 7: (http://tranxition. com/2013/08/migrate7-version-8-5released/), by Tranxition, \$29: This is simple migration software that preserves a PC's 'persona.' Migrate 7 automatically locates. stores. transfers and reconnects user settings and data files, including desktop configurations, mapped network drives, Internet settings and accounts, service and protocol information, Internet favorites and bookmarks, email services, address books and inboxes, custom dictionaries and many more. Similar software can be found with Google keyphrase, "Windows XP migration software."

* Pro and Enterprise Versions of Windows 8: Both versions of Windows 8 enable a fastener distributor to run a 'virtual' copy of another operating system – including a virtual copy of Windows XP. (There have been reports that getting this to work is difficult or impossible on some PCs.)

In practice, this enables a fastener distributor

course to run both XP and Windows 8 on the same PC - and most importantly, to run all those XP programs that they would otherwise have to abandon if they simply ran Windows 8 on their machines.

Essentially, running a virtual copy of XP on Windows 8 is a great, short-term fix to slowly move a fastener business from XP to Windows 8. But after April 8, 2014, the safest course is to run the virtual copy of XP only when the PC is not connected to the Internet, to avoid potential Internet viruses and break-ins.

The Windows 7 Pro, Ultimate and Enterprise versions also offer a similar virtualization – Windows XP Mode. But some users have complained that XP Mode on Windows 7 slows down their applications.

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more photos on page 122

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TO JAM OR NOT TO JAM? continued from page 14

When the standard nut was removed, the load dropped to 2,900 lbs. This was my first round of testing where I noticed the bottom nut turning as the top was tightened, so I tested another while keeping the jam nut from turning.

Tightening the jam nut first this time produced only 2,000 lbs. Holding the jam nut and tightening the standard nut produced a clamp load of 3,060 lbs. Removing the top nut dropped the clamp load to 1,946 lbs.

Standard Nut First, Grade 5

The target clamp load for a 3/8-16 Grade 5 fastener is 4,950 lbs at 30 lb-ft. Installing the standard nut first at torque produced a clamp load of 5,800 lbs, relaxing to 5,733 lbs. Tightening the jam nut increases the clamp load to 6,060 lbs. Removing the jam nut dropped the reading only to 5,886 lbs. However, the nuts were hard to remove.

Using a new standard nut and bolt, the clamp load was recorded at 6,260 lbs. While keeping the bottom nut from turning and tightening the jam nut, the load increased to 6,444 lbs. Removing the jam nut reduced overall clamp load to only 6,422 lbs.

Jam Nut First, Grade 5

Tightening the jam nut to 30 lb-ft produced a clamp load of 5,800 lbs but relaxing more to 5,677 lbs. Adding the standard nut increased the clamp load to 6,235 lbs. Removing the standard nut lowered the clamp load to 5,903 lbs.

Now using a new nut and bolt, but keeping the jam nut from turning, the jam nut recorded a clamp load of 4,500 lbs. Tightening the standard nut produced 4,856 lbs. Removing the standard nut drops the clamp load to just 4,615 lbs.

Standard Nut First, Grade 8

The target clamp load is now increased to 7,000 lbs. At a torque of 43 lb-ft, the clamp load recorded 7,165 lbs. Tightening the jam nut increased the clamp load to 7,455 lbs. Removing the jam nut dropped the clamp load to 7,254 lbs. However, both nuts were hard to remove.

Jam Nut First, Grade 8

Tightening the jam nut only produced a clamp load of 5,600 lbs, which relaxed to 5,525 lbs. Adding the standard nut brought the clamp load up to 6,356 lbs, which dropped to 5,500 lbs when the top nut was removed. It was decided that the top nut had no effect on the bottom nut at this strength level and tests were not done with holding the bottom nut with a wrench.

Summary

In all tests with three different bolt grades, the clamp load does increase when tightening the top nut. Normally, it would seem that when the bottom nut turns while tightening the top nut, the increase in clamp load was due to the friction at the interface between the two nuts, causing the bottom nut to be the one that is increasing the clamp load. However, this is only the case with the Grade 2 bolt. Proportionately speaking, the increase was just over 400 pounds difference regardless which nut was used first.

Using a second nut on the Grade 2 fastener did increase the clamp load from a low of 524 lbs to 1275 lbs. The increase was not that significant with the Grade 5 or Grade 8 fasteners, averaging little more than 300 lbs.

The jam nut being first does not work at all with the Grade 8 fastener because it is only 2/3 the thickness of a standard nut, so it is not designed to carry the full load of a higher strength fastener. When used first, it produced less than 1400 lbs less than the target clamp load. This is due to the increase in thread friction, as the much softer threads of the nut began to collapse and the material plastically mushroomed at the joint interface. The jam nut works better with the lower grades because it is similar in proof load capacity.

Conclusion

The second nut is assuming it is being tightened against the joint surface and not another nut. It was originally hypothesized that the compressive force of the top nut would unload the pressure of the bottom nut, causing relaxation. Instead, it is apparent that, while a compression unloading is occurring; further tensile loading is being allowed to take place in the top nut from its additional threads, thereby increasing the joint clamp load. This is illustrated by the massive loss in clamp load with the Grade 2 fasteners while the bottom nut was held stationary; 1430 lb. and 1114 lb. drop respectively. The Grade 5 did not lose very much, but it didn't gain that much either.

While it appears the 1950 hypothesis that the jam nut should be used first is true, it is only effective with Grade 2 bolts and to some extent, Grade 5 bolts. Jam nuts should never be used with any Grade 8 or 10.9 Property Class fasteners.

However, another perspective must also be examined: a longer fastener must be used to accommodate the extra nut. The longer fastener and extra nut will cost more, not to mention the extra time in assembly. The same may be accomplished by using a shorter fastener and a lock nut: especially with a Grade 8 or Property Class 10.9 fasteners.





Unbrako LLC

12833 South Spring Street, Los Angeles, CA 90061 Tel:310-817-2400 Fax: 310-817-2399 Email: unbrakousa@unbrako.com www.unbrako.com

MAJOR EXPANSION AT UNBRAKO

Building on its manufacturing success in India, Unbrako has invested \$100 million in its new state-of-theart manufacturing plant in Bhopal with high technology equipment. Covering an area of 300 acres (122 hectares), it is Unbrako's fourth production facility in India, besides the one in Ireland. Phase 1 of the project covering one-third of the new site is now fully operational. The plant will manufacture the Unbrako range from M2 to M39 diameters, using entirely cold forging technology, and will produce other hexagon head ranges in both metric and inch specifications. Along with cold forged stainless steel bolts, socket, nuts, washers in Grade SS304 & SS316.

With initial capacity of 300 ton per day, the new manufacturing plant will not only significantly add to the existing capacity but also allow for quicker deliveries at very competitive prices. Target markets for the additional output will be automotive, construction and aerospace sectors, all of which Unbrako is rich in experience. Unbrako bolts hold together some of the fastest & heaviest machines on earth, including Boeing, Formula One, Ferrari, Bugatti, Toyota, Land Rover, CATerpillar, Komatsu & John Deere, to name a few.

"The production would be for the world market. We need space and capacity to support the excellent demand for Unbrako products already established in North America, Europe and across the Asia Pacific region. Growth in Asia is extremely rapid and Unbrako wishes to respond positively to that opportunity", says Sanjeev Kalra, President of Unbrako.

Unbrako prides itself on sustained performance over time to meet and exceed relevant standards and to consistently deliver to schedule. To maintain this edge, Unbrako utilizes special bolt making equipment, including the latest in cold heading and thread rolling technology, and a state of the art heat treatment plant comprising integrated continuous processing.

Following the steady growth of the company in North America, Unbrako also recently opened a new warehouse in Los Angeles, USA. Covering an area of 30,000 sqft, it has been designed to provide procurement and purchasing services, localized warehousing and transport, JIT programs, a variety of packaging options and choice of delivery frequencies in order to provide the right answer to any customer need. Located just off the 110 freeway, the LA warehouse presents important logistical advantages.

Large capacity warehouses in the USA, UK, Europe, Asia and Australia, along with an extensive Unbrako distributor network, provide a well-connected infrastructure and availability in close proximity to end user demand.

From humble beginnings in 1911, Unbrako has become a brand to reckon with in the world of fasteners due to its unparalleled engineering knowledge, design ingenuity & manufacturing ability, with no less than 20,000 specialized fastener-related products, mostly available exstock.

For more than 100 years, Unbrako has designed and manufactured premium and custom designed fasteners and forged components for demanding applications. Its range includes premium socket screw products, standard and specialized fasteners for the construction, automotive, power generation, heavy machinery, petrochemical, solar power, windmill, aerospace, railway, water utilities and military sectors.

please turn to page 166



DISTRIBUTOR NEWS

At **Beta Steel**, we are committed to providing our customers with Agility, Speed and Strength. To further this commitment, we are pleased to announce the addition of Mark Martin as Commercial Manager.



Mark brings over 33 years of steel wire experience, holding positions in purchasing, sales and operations, servicing the automotive, agricultural and defense industries.Mark is a graduate of Michigan State University and has received extensive training in Wire Metallurgy, Advance Product Quality Planning (APQP) and Production Part Approval Process (PPAP). Mark is also a member of the Wire Association where International he continues to keep up with the technologies latest and processes.Mark's knowledge and experience will add to Beta Steel's bank of dedicated staff committed to meeting all customer needs.Beta Steel has been a leader in the steel rod and wire industry since 1969. Our success is based on a history of providing customer service, innovation and meeting the dynamics of market needs. The Beta Steel Experience.

For more information, contact Beta Steel Toll-Free at: 1-800-594-9074, Fax: 586-323-6806 or online at www.betasteel.com.



DISTRIBUTOR NEWS

Fall River Manufacturing Company is proud to announce that it has reached a new milestone. Fall River is celebrating 30 years of manufacturing stainless steel and non-ferrous screws bolts and nuts right here in these United States of America. The company is located in Fall River, MA and employs 55 very dedicated and hard-working people. Founded in 1984 by Timothy J. Csanadi and John Conte, who saw the need for a domestic manufacturing company that could provide a higher level of service and expertise that was missing in the market. The company continues to evolve and thrive in this global marketplace thanks to its employees and customers.

For more information contact Fall River Mfg. Co., 540 Currant Road, Fall River, MA 02720 USA, Tel: 1-800-275-6991, email: sales@fallrivermfg.com or visit them online at www.fallrivermfg.com.

THE POWER OF VALUE ENGINEERING - CONVERTING SCREW MACHINE PARTS TO COLD HEADED PARTS continued from page 26

The final primary consideration is strength. Because cold forming and thread rolling deform and reposition the material, the grain flow is realigned with the shape of the part. In other words, if a head or collar is formed, the axial grain of the material is "bent" around as those features are formed. This realignment can provide significant additional strength. Like features on screw machine parts have not had the grain direction changed as they have been formed by cutting away excess material and thus don't have this added strength benefit.

Anyone who has ever split an oak log for firewood can appreciate this phenomenon. If the log being split is from the clear, center section of the tree, the log splits cleanly down its axis with minimal effort. However, if a similar log had a branch sprouting from the side, so that the grain was bent around the protuberance, one can attest that the effort to split the log through that bent grain portion is considerable.

Although these three generally represent the primary considerations, there are a number of specific characteristics one should look for when reviewing whether a part is a good candidate for conversion. These include:

Round Parts with Multiple Steps and Transitions

Multiple diameter reductions are common and well suited to the cold forming process, however, in screw machining, each reduction represents increasing metal removal time and scrap. Figure 1 illustrates several cold headed parts exhibiting multiple diameter steps.



Figure 1

Round Parts with Collar or Significant Diameter Differences

When the diameter differential is small, as one finds on many shafts or pins, there may be little advantage to cold forming, however, when that diameter difference is significant, as illustrated in Figure 2, once again, the metal removal time and scrap from screw machining can be substantial.



Figure 2

Parts with Internal Recesses

The screw machine process is unable to form internal recesses. To achieve such internal drive features, costly, secondary drilling and broaching operations are required. Figure 3 illustrates several common recesses that have been cold formed.



Figure 3

Parts with External Hexagonal Features

Although hexagonal bar stock is commonly utilized in screw machining, if the hexagonal feature is smaller than another feature on the part (such as a washer or flange feature below the hex), the process will require milling or some form of secondary. These would likely be time consuming and expensive compared to the trimming or forming processes employed in cold forming. Figure 4 illustrates several common hex shapes, including a hex stem on the far right.



Figure 4



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more photos on page 165

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Integrated System

The ideal way to implement a quality assurance system is to have it fully integrated into the in-house ERP system. This way the ERP system can handle all of the following tasks with ease:

- Problem Reporting
- Corrective & Preventive Actions
- Daily Reminders of Past Due Corrective & Preventive Actions
- Pareto Reports, which show where problems occur, where they are found and help to get at root causes are generated automatically based on daily activity. With the ranking in these reports, it is easy to prioritize which problems are having the most impact and should be scheduled to fix first.
- Control and Calibration Records of Measuring Devices
- Daily Reminders of Past Due Calibrations
- Customer and vendor report cards are automatically updated based on actual transactions that occur.
- Product drawings can be attached to products.
- Certifications and test reports can be scanned in and attached directly to the lot that they represent.
- Required documents can be sent out

automatically with packing slips and invoices.

- The system can enforce that no product is shipped to a customer that doesn't meet their documentation requirements.
- Detailed records are kept in the system of what documents were sent to whom and in what form, eMail, fax or printed for mailing. Copies of the document as it looked each time it is sent are kept by the system, along with the person, date and time that were involved in any change.
- Reports in the System Help
 Analyze Data
- Data can be exported into Excel for Custom Reports
- The system can maintain the Approved Vendor List
- Product Inspection results can be entered directly into the system when performed.
- Maintenance Logs are kept and people that need to do the maintenance receive follow ups.
- The system stores Critical Product Specifications, Inbound & Outbound Communications.

Having the Quality Assurance system integrated offers many benefits. A huge benefit is that when the auditor shows up everything is up to date and in sync. Beyond that, it saves time every day and it makes quality a much more useful process for the company. Since the information is updated automatically it becomes a vibrant and living part of the business, rather than another task to do at the end of the day. Since all the information is available at the touch of a button the quality system becomes a tool and an advantage rather than a burden.

The follow-up reminders in the system keep everyone on their toes all year long. If the warehouse person does not check the forklift on a timely basis, the warehouse manager gets an eMail so that he or she can then follow up on a timely basis. Similarly, any out of date calibrations are flagged and corrected long before the auditor finally shows up.

Do It Once And Do It Right

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FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 38



On January 28, 2013, **TriMas Corporation** (Nasdaq: TRS) purchased **Martinic Engineering**

Inc. ("Martinic"). Founded in 1978 and located in Stanton, California. Martinic manufactures complex CNC components (from castings, forgings and bar stock) for commercial and military aircraft applications, including electrical, hydraulic & pneumatic systems and auxiliary power units. Martinic generated net sales of \$13 million in 2012. Following the transaction closing, Martinic became a business unit of TriMas' Aerospace and Defense segment, which is dominated by Monogram Aerospace Fasteners ("Monogram"). Located in Los Angeles, Monogram is a leading manufacturer of blind bolts for the aerospace market. TriMas is a diversified global manufacturer of specialty engineered products for a diverse range of industrial, aerospace, commercial and consumer end-user markets. TriMas has approximately 5,500 employees at more than 60 facilities around the world and generated net sales of \$1.27 billion in 2012. Purchase price: \$19 million



On February 19, 2013, **The Hillman Companies Inc.** ("Hillman") purchased **H. Paulin & Co. Limited** ("Paulin").

Founded in 1920 and headquartered in Toronto, Canada, Paulin is a distributor and manufacturer of fasteners, fluid handling systems, automotive parts and retail hardware components. Paulin has four manufacturing facilities located in Ontario, Canada, along with six distribution centers spread across Canada and in Flint, Michigan and Cleveland, Ohio. Listed on the Toronto Stock Exchange (symbol: PAP.A), Paulin generated net sales of Can\$139 million in calendar 2011. Founded in 1964 and headquartered in Cincinnati, Ohio, Hillman is a valueadded distributor of fasteners, key duplication systems, engraved tags and related hardware. Hillman's customer base includes home improvement centers, national & regional hardware chains, mass merchants and pet supply stores. The company supplies more than 20,000 retail customers in the United States, Canada, Mexico, South America and Australia. Hillman is a porfolio company of Oak Hill Capital Partners, a NYC-based private equity firm.

Purchase price: Can\$103 million

Ginfastech

On February 27, 2013, **Stanley Black & Decker Inc.** (NYSE: SWK) purchased **Infastech™**

Limited. Headquartered in Hong Kong, Infastech is a global manufacturer and distributor of engineered fasteners, supplying the electronics, automotive, construction and general industrial markets. The company's product brand names include: Avdel; Elco; iForm; Nacro; and Dril-Flex. Infastech operates seven manufacturing facilities in the United States (2), the United Kingdom, China, Taiwan, India and Malaysia and employs more than 2,000 people worldwide. Infastech generated net sales of approximately \$580 million in 2012, with more than one-half of its revenue coming from the Asia / Pacific region. Stanley Black & Decker is a diversified manufacturer of hand tools, power tools, engineered fastening systems, mechanical access systems and electronic security solutions. Following the transaction closing, Infastech will be integrated with SWK's Emhart Teknologies fastener division and the combined entity (now with annual net sales of approximately \$1.5 billion) will be named Stanley Engineered Fastening.

Purchase price: \$850 million



On March 22, 2013, Elgin Fastener Group LLC ("EFG") purchased Telefast

Industries Inc. ("Telefast"). Founded in 1986 and located in Berea, Ohio (outside Cleveland), Telefast manufactures nuts in diameters between 1/4 inch (M6) and 7/8 inch (M20) and bolts in diameters between 1/4 inch (M6) and 5/8 inch (M16). Telefast manufactures both standard and specialty (made-to-print) parts for the distributor market and for a diverse range of OEM/MRO end-users. Headquartered in Batesville, Indiana, EFG manufactures a diverse range of cold-headed, externally-threaded specialty and semi-standard fasteners. Prior to the addition of Telefast, EFG was comprised of seven fastener businesses and a metal finishing operation. Each of EFG's fastener business units produces a distinctly different product range for separate industrial applications and end-user markets. Telefast is the first EFG business unit to produce internallythreaded fasteners. EFG is a portfolio company of Audax Group, a Boston-based private equity firm with more than \$5.0 billion under management.

Purchase price: not available



standards also available









Critical Customers - Critical Components - Critical Service

Manufacturing Division 800-528-4255

SWIMMING IN A SEA OF NUTS & BOLTS LOOKING FOR THE NEXT BIG WAVE continued from page 40

Are these beliefs based on reality? Can they be challenged? Can you see how you can pivot from a belief in the lack of potential to a sea of potential clients that have been waiting for a company that will step up and will actually deliver the quality service and products that they have been waiting for?

[4] Take Action

Now that you know what you want to expand, who you want to target and what has been holding you back you can create an action plan. What actions can you start taking immediately that can create a road toward your success? Write these down. Do these match the

desires of your target audience? Make sure

you filter the ideas and focus only on the ones that support your target audience's needs. Remember not to dilute your efforts or your message. Who do you need to contact to have on your team for this success to be achieved?

When you find

a way to ... help others in

their desire to succeed...

you are on the road to

limitless success.

Your company has just identified a need in a specific area of the market; one that individuals and companies have been in need of for ages. Your time, energy and actions will aid these other companies in their desire to grow, create stability and advance in their own markets.

The world we live in can sometimes feel like a sea of people and companies just wanting to take and get their share. When you find a way to change that dynamic and help others in their desire to succeed by providing a product or service that will make their lives easier or better then you are on the road to limitless success. Finding the way to serve and create a win for your customers

means that their loyalty and investment in your company will only increase. So, when you feel like you are in a sea of nuts and bolts with no idea where to go, just know that you have the power to create the next big wave and ride it all the way to the bank!

SDS INFO SHEETS CONFORM TO GLOBAL HAZMAT RULES continued from page 46

There are a number of commercially available wall hangers, posters, and binders in the now familiar yellow and red colors for keeping the SDS information. In addition to plant floors, sales counters and key worker areas, binders of material must also be available with delivery trucks where the potential

hazardous chemicals are being transported.

The GHS program should result in easier compliance, reduced costs, and safer transport, handling and use of chemicals. Emergency response should be faster. There should be less confusion in

accessing and using the information. But businesses must make the initial effort now to get in compliance. If you missed the training deadline there are commercial training programs readily available complete with video presentations and self-testing material.

Are the Safety Data Sheets frequently used? From my own experience I would have to say it is infrequent. This is especially so for a distributor or other reseller of material in sealed cartons. We have had very few instances where people specifically ask for

> the information and none where an emergency spill has sent us scurrying to check the first aid instructions. But, it only takes one time of true need. When that emergency happens you will be glad to have this information readily accessible, organized alphabetically and paginated with

an index. It will be important that it is kept up to date with the latest data.

It's time to get with the program! Check out the new changes now.

It has been a problem that the MSDS have varied in format and style... thus, in an emergency, time could be lost as the people involved struggle to interpret the information in its uniquely presented form.



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Sems and Specials Inc. 6483 Falcon Rd, Rockford, IL 61109 Tel: 815-874-0000 Fax: 815-874-0100 www.semsandspecials.com

objectives." states Morrissey.

SEMS AND SPECIALS: A DOMESTIC FASTENER MANUFACTURER SEES GROWTH AND CHANGE IN 2014

As our domestic fastener business is growing, so is our team. There is unmeasurable value in the people that implement the vision and mission of Sems and Specials. It is important to us that we mark this time and applaud the new faces of Sems, as we believe we have built a team that will be taking our growing business to new heights.

Providing guidance in new applications, expediting turn around when imports are late or fail, and providing stock and release programs are just a few examples of the "unparalleled service" Josh Ballard believes we offer. As an Account Manager since January of 2012, Josh values his relationship with each customer and is driven to seek



Left to right: Mike Kanaval, Lynn Wilsie, Terry Morrissey, John Sundstrom, and Josh Ballard.

a solid organization that takes care of the employees and customers. There is a great sense of quality, pride, and teamwork here, and further, we have the freedom to be involved and to exercise our creative instincts." Lynn's

The New Year also brought the

addition of Lynn Wilsie to the

Account Management Staff.

"It's a pleasure to be a part of

and provide solutions. His approach lends to Sems and Specials being a top tier domestic manufacturer.

Account Manager, John Sundstrom, joined the team in June of 2012. John's responsibilities reach far beyond inside sales and expediting. He is personally delivering a level of service that he believes separates us from our competitor. "Efficiently, we provide a high level of service. Our systems work cohesively with our distribution customers' systems; truly making us an extension of the distribution world."

Terry Morrissey was recently named Director of

fastener experience along side two decades of management and customer service experience will not be underutilized.

Manufacturing (October 2013). A 37-year veteran of the

fastener industry, Terry has an extraordinary amount of

experience and talent he is lending to every department.

He bases his diligence on his belief that the core of

quality is customer care. "Controlled growth and never

losing focus on caring for the people are my main

Another long-time member of the fastener industry, Michael Kanaval accepted an Account Manager position with Sems and Specials in March of 2014. Michael has a plethora of diverse knowledge that will be put to great use. Mike expressed, "My focus will be to help our customers grow their business by providing expert fastener application knowledge and supplying them with the domestic products they need to grow."

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FOLLOW TO PAGE 136





Schnorr Corporation

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SCHNORR - PIONEERING INNOVATION

As a pioneer in disc spring applications, Schnorr was founded as an owner-run family company in 1908. Adolf Schnorr designed and manufactured high quality, reliable and economic disc springs for a variety of practical uses.

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Washers. What makes our Original SCHNORR Serrated Safety Washer perfect for bolted connections? They offer the highest level of security through friction on the both sides of the washer. Since they are actually springs, SCHNORR Safety Washers also maintain preload over a variety environments that would otherwise cause loss of proper bolt torque: vibrations, thermal cycling, dissimilar materials, uneven surfaces, etc. These serrated washers have diameters that coordinate to cap screw dimensions in metric or inch, matching practically any screw and bolt type.

Alternatively, the Heavy Duty Safety Washers or

HDS Series, manufactured to DIN 6796 standards are specifically designed for highstrength bolts. They provide high load, matched to the corresponding bolt torque, resulting in uniformly distributed axial load and deflection or 'spring action'. The elastic reserve of the fastener is effectively multiplied. The High Load Safety Washers or HS series are

used when the space available is insufficient for standardized load washers.

Materials and finishes Applications are too numerous to list individually but are used in anything from automotive engineering to machine aggregate and plant engineering. Provide your customers with the most reliable serrated, heavy duty or high load safety washers available.



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- Lubricates fastener threads to reduce driving friction, thread galling and provide uniform clamp force.



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- Low viscosity

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R	Ν	S	т	T	Ρ	0	В	С	s	т	Е	L	Е	G	Button head Shaving Clinch nut Step bolt
R	н	F	Ν	Е	L	Е	s	κ	Е	т	L	L	D	U	Clipped washer Tank bolt Cracks Tapping screw
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FEBRUARY 2014 FASTENER INDUSTRY TECHNOLOGY UPDATE continued from page 56

ASTM F16 Structural Bolt Standard A new standard is in the works which is a compilation of inch and metric bolt standards including A325, A490, F1852, F 2280, A449, A354, A325M, and A490M. This is an effort to make the requirements of these related bolt standards consistent. One ballot has closed and the results were discussed at the F16 November meeting. A new ballot will go out in early 2014.

ASTM F1941 Electroplating Standard for Fasteners. One ballot closed in early October. The negatives and comments were discussed at the November F16 meeting and a revised ballot opened in January and will close in February, 2014. This revision specifically addresses how to deal with testing and baking of case hardened screws.

ISO/CD 13469 Riveted Joint Testing. This standard was reviewed at the ISO TC 44 meeting on December 9 in Miami. All comments were addressed and the final ballot should go out in early 2014.

ISO 10683 Zinc flake coatings for fasteners, is out for final ballot and will hopefully be published by mid-2014.

ISO 4042 Electroplating finishes for fasteners was discussed at the ISO TC 2 meetings in Paris during the third week of October. The majority of the work was on Appendix B which addressed hydrogen failures and how to manage process variables to decrease its potential effects of hydrogen. An ad hoc group meeting was held in February, 2014 in Milan and more progress was achieved. No ballot is expected until 2015.

ISO 3269 Fastener acceptance, first draft proposal to convert this standard from an AQL plan to a C=0 plan has been submitted to the ISO TC 2 by the US. This was discussed at the ISO TC 2 meeting in Paris in October, 2013. There was agreement on the approach that is being taken. Work will be done on selecting a C=0 sampling plan to include in the first draft for ballot in early 2014. The book titled Zero Acceptance Number Sampling Plans, fifth edition, by Nicholas Squeglia will serve as the resource document for the basis of the US sample table proposal. An ad hoc group meeting is taking place in Milan in February to discuss the proposed sample tables for c=0.

ISO 6157 Fastener surface discontinuities was discussed in Paris in October 2013. Work will continue in working group in 2014.

ISO 2320 Locking nut performance – this was discussed in Paris at the ISO TC 2 meeting in October 2013. There

was general agreement except on the specification for test bolt finishes. This will be worked out during the balloting process. A ballot should be issued in early 2014.

ISO 1891-4 Terms and terminology related to quality assurance. This was worked on at an ad hoc meeting in Paris in June, 2013. This should be balloted before the end of 2014.

2. IFI Technical Working Group Activities In Progress

IFI Division III – A Guide for Ultra-high Strength Metric Fasteners

The work is on-going. More testing is in process. Parts made from the same material some with a martensitic microstructure and others of the same hardness with a bainitic microstructure are being fatigue tested to determine the relative fatigue performance of the different microstructures.

GM, Chrysler, and the IFI have committed to jointly sponsor a research project on evaluating the hydrogen susceptibility of ultra-high strength bolts at the same hardness with a martensitic verses a bainitic microstructure. The research will be conducted at McGill University directed by Salim Brahimi. The research funds will be matched by a Canadian government group that supports research conducted in Canada. A web conference was conducted on December 10, 2013 to review the progress of the various on-going tests. The next web conference is scheduled for March 18, 2014.

3. Other Technical Information

Fastener Training Institute

Fastener Training Week will be offered three more times in 2014: April 28-May 2 in Spokane, Washington, July 28-August 1 and November 17-21 in Independence, Ohio. For information on this and other future programs go to www.fastenertraining.org. (See attached participant comments on the November 2013 Fastener Week Program).

FTI/IFI Aerospace Fastener Technology, August 27 - 29, La Mirada, California.

For information on this and other future programs go to www.fastenertraining.org.



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SOUTHWESTERN FASTENER ASSOCIATION

JOE GREENSLADE & JUSTIN BLUMBERG SEMINAR LEADERS AT SFA SPRING CONFERENCE & EXPO, APRIL 24-27, 2014

Joe Greenslade, Industrial Fastener Institute, will kick off the Southwestern Fastener Association Spring Conference with a presentation on Metric Fasteners. The presentation will include information on Boron being included in Grade 5 and 8 material on Friday morning, April 25, at 9:00am.

The location of the spring Conference is the Westin DFW Airport Hotel, 4545 West John Carpenter Expressway, Irving, Texas, conveniently located in the heart of the DFW Metroplex. The conference will open with a reception on Thursday evening the 24th. The Association's Annual

Business Meeting will start the activities on the 24th at 8:00am, followed by the presentation on Metric Fasteners. Golfers are in for a special treat Friday afternoon. Tour 18 offers one fantastic challenge after another, creating a uniquely memorable experience for SFA golf participants. Friday will conclude with a reception and awards dinner for full conference

registrants Friday Evening.

Justin Blumberg, Industrial Metal Finishing, will kick off activities on Saturday, April 26 with a presentation on New Techniques in Metal Finishing. Following the opening Seminar, the 2014 EXPO will open at 10:00am. This is a departure

from previous show hours. The Conference and EXPO will conclude at 2:00pm.

One of the features of the Conference and EXPO is the Will Rodriguez Scholarship Fund Raffle. The Grand Prize is a custom made rifle by Battle Rifle Company, Houston, Texas. It is a one of a kind, AR 15 hunting rifle. Additional prizes valued between fifty dollars and one hundred fifty dollars will also be awarded during the

EXPO. The drawing for the Grand Prize will be conducted at the conclusion of the 2014 Show. Raffle tickets are \$25 each or 5 tickets for \$100. Tickets may be purchased via the SFA web site, www.sfa-fastener.org. The person with the winning ticket for the Grand Prize does not have to be present to win.

SFA Welcomes New Members

Cube Global LLC, 1966 Quincy Court, Glendale Heights, IL 60139 is a supplier of High Tensile Socket Products. They sell ISO/TS 16949 certified Socket Products made in Taiwan and China. Cube is proud to provide high quality products to Fastener Distributors around the world.

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G.L. Huyett, located in the heart of the United States, in Minneapolis, Kansas 67467, is a leading supplier for all sorts of non-threaded fasteners from washers to keystock to grease fittings and much more. G.L. Huyett specializes in short runs and odd configurations. *Contact Chris Bell at: Tel:* 985-392-3017, *Fax:* 985-392-2845, *Email: cbell@huyett.com, Web: www.huyett.com.*

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Lindstrom Metric, LLC, 2950 100 Court NE, Blaine, MN 55449 is an Importer of Metric Fasteners. Lindstrom focuses on a



comprehensive line of metric fasteners ranging from hex head and socket head cap screws to thread forming screws, nylon insert locknuts, lock washers and groove pins and markets its products exclusively through Distributors. All-Spec Sales,

Inc. represents Lindstrom Metric in the Southwest. *Contact Mike French at Tel:* 317-418-4375, *Fax:* 763-780-0554, *Email: mvfrench@cs.com, Web: www.lindfastgrp.com.*

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DISTRIBUTOR NEWS

Bay State Cable Ties, America's leading manufacturer of nylon cable ties, announces that its patent-pending EZ-Off[™] cable ties are the first ties that are designed specifically to be removed easily without a tool, yet remain tamper proof. EZ-Off[™] ties are simple to apply; feature a strong, secure locking device; and can be removed without any cutting tools needed. To remove, simply pull off the teardown arm located on the right side of the head of the tie. EZ-Off[™] ties come in a range of colors: black, red, orange, yellow, purple, green, blue, and natural, and are 5.375" long and .14" wide with a tensile strength of 30 lbs.

"Our EZ-Off[™] ties are very convenient and easy to use," said Bay State Cable Ties Vice President of Sales Tim Bagley. "They are excellent for tote boxes and for temporary or one-time usage situations. As with all of our products, EZ-Off[™] ties are made here in the United States. All colors are currently in stock in Florida."

Bay State Cable Ties is America's leading manufacturer of nylon cable ties. Located in Crestview, Florida, our state-of-the-art facility operates 24/7/365 and boasts the most advanced production processes in the U.S. We offer an extensive line of cable ties in a variety of lengths, tensile strengths, and colors, plus accessories such as mounting pads and cable clamps.

Bay State Cable Ties' specialty products include EZ-Off[™] ties, releasable ties, customprinted ties, and HVAC duct straps. All cable ties use virgin nylon 6/6 to guarantee superior quality and are UL Listed and Mil-Spec approved. We maintain a full inventory of all cable ties for Just-in-Time delivery to our national distributor network.

For more information on the range of cable ties, contact Tim Bagley, Vice President of Sales by calling 1-888-463-3454 or emailing him at tbagley@baystatecableties.com. Visit their website at www.BayStateCableTies.com.




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Front View: From left to right, in this application, the hole begins to creep out of alignment.

Side View

ladders every year and are

treated in the emergency

room. Many look for

damages from the ladder

companies. These damages

could then be passed

through the supply chain if

any party is found negligent. That's why any failure is a

call to action and an

opportunity to hone in on

the root cause of the failure.

Finding the root cause and

correcting it through an 8

a larger or an oval shaped hole. This would definitely

sacrifice the strength of that step (a load bearing object),

which could lead to serious consequences. In fact, according

to the World Health Organization, 164,000 people fall off

The result is slow production speed, down time, scrap, rework, etc. So there's the dilemma...Is it best to open the hole tolerance, OR tighten the punch/bend tolerance so that rivets are easy to install? Most often, decisions are made to

change the hole design outside of the rivets design parameters without the guidance of the rivet manufacturer, which will ultimately cause problems.

The engineers or production staff may collaborate to solve this problem by increasing the hole size for better hole alignment. Some customers even make oblong holes to ease the assembly process.



The above figure shows the preferred methods of riveting if hole size tolerances cannot be met.

These changes could cause a potentially dangerous condition and there is great concern for how it affects the rivets performance.

Blind Rivets have hole specifications dictated by the manufacturer and the Industrial Fasteners Institute (IFI) to insure joint strength values and rivet performance. The rivet's performance is key... not only in terms of the riveting process (i.e. pull, break, eject), but also in the joint itself. If the hole specifications are not adhered to, then the rivet is being used outside of its design intent. The riveting process may then be affected, requiring more than one actuation or jams and further slowing production. What's worse is the end user may not achieve the shear and tensile strength they had expected from the rivet in the first place; a potential liability.

As an example, a ladder manufacturer is having trouble aligning the holes of the frame to those of the steps. Hole sizes were in tolerance, but to aid in the assembly and speed up the process, the ladder manufacturer decides to switch to Discipline (8D) process is an effective way to prevent reoccurrences.

Getting The Most From Your Rivets

Some of the most common symptoms of hole prep failure include:

- 1) Jammed guns
- 2) Need to rework
- 3) High break mandrel is spearing from head
- 4) Pull through mandrel is pull directly through the head
- 5) Mandrel head is not retained after break
- 6) Countersunk is not sitting flush
- 7) Grip range or air gap between substrates
- 8) Mandrel is breaking at or near the jaw area

These are all signals that something is not working properly. It is the responsibility of all those involved to work toward a solution. Distributors should also help end users understand what technical resources are available to them from the manufacturer.

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1 of 1

XBar Chart (using R)

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THE DURASQUIRTER[™]: THE BEST JUST GOT EVEN BETTER continued from page 68

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BLIND RIVETING 103: THE "HOLE" TRUTH continued from page 144

The following practices can help with alignments when it becomes a necessity to step slightly outside the IFI hole requirements.

- If possible, keep hole tolerances and bend tolerances to a minimum allowed tolerance
- If this proves too difficult or costly, try:
 - Making the Primary Hole 10% larger than the Secondary Hole (Secondary Hole to be within IFI Specification)
 - Using a backup washer, or seek engineered bulbing type rivets on the above to reduce force on the secondary substrates pulling through the larger primary holes
 - Using thicker or harder materials towards the secondary side of the assembly to give the hole some additional radial support in the target area and improve clamp up
 - Minimizing the length and diameter of oblong holes as much as possible (Note: Oblong holes are not recommended)
- Consult the applications engineer of a qualified blind
 rivet manufacturer

An experienced blind rivet manufacturer should be able to help with recommendations such as those above,



among others, to reduce failure modes while also improving joint strength and installation reliability/ repeatability. When looking for a blind rivet manufacturer, ensure you choose one with field level support, years of application experience, a great reputation, advanced shear and tensile testing systems, maintained ISO certification and a QC lab that is ISO 17025 compliant. Having such as supplier can help you and your customer effectively develop a solution by isolating the variables, benchmarking the results and documenting them to prove the effectiveness. This will ultimately protect all parties involved by minimizing downtime and costs associated with failures.

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Toll Free: 855-966-AJAX (2529) 119 Bloomingdale Road, Hicksville, NY 11801 www.ajaxwire.com ajaxwire@aol.com SURVEY OF THE FASTENER INDUSTRY: 2013 YEAR END continued from page 64



Business Performance Up For Most

More than a quarter of fastener companies reported a strong increase in business performance for 2013 plus more than an additional third a moderate increase.

The percentage of companies improving is down slightly. A year ago in the End of 2012 FIN Survey seven in 10 participants reported overall business performance improved. The End of 2011 FIN Survey had 75% gaining. This year 64% rated their company performance for 2013 as better than 2012.

However, the "Moderate Decrease" category dropped from 11% at the end of 2012 to 4% for 2013.

No company reported a "Strong Decrease" (vs. one company at the end of 2012).

Fastener Price Gains Slow

Roughly one in three fastener businesses — 37% — successfully raised prices in 2013, according to the FIN Survey.

Price increases ranged from 2% to 10%, with an average increase of 3.3%.

Nearly four in ten respondents — 39% — reported flat pricing for 2013.

Pricing pressure moderated somewhat, as 11% of FIN Survey participants reported price reductions during the year, down from 12% of fastener companies that cut prices the previous year.

Price reductions in 2013 ranged from 2% to 10%, with an

average decrease of 5.9%, compared to a 7.9% average price cut in 2012.

For 2014, 54% of businesses forecast price gains — the same as last year — while 25% anticipate no price changes this year.

2013 Share Gains Widespread Among Fastener Companies

For the second straight year the FIN Fastener Stock Index outperformed an index of related industrial stocks. The FINdex gained 33.3% in 2013, compared to a 27.1% increase by other indices.

Only one out of the 18 public companies tracked by the FINdex saw its share value decline in 2013, GlobalFastenerNews.com reported. Stanley Black & Decker shares fell 0.02% to \$80.69, hurt by a 10.9% stock slide in the final quarter.

The biggest FINdex gain was achieved by Park-Ohio, whose shares swelled 146% to \$52.40 in 2013, having achieved a quarterly growth rate of at least 30%.

H. Paulin held the top FINdex spot in 2012 before being acquired by the Hillman Companies in early 2013.

Other FINdex companies gaining share value of 25% or more in 2013 included Anixter, B/E Aerospace, Barnes, Chicago Rivet, Dorman, Grainger, ITW, Precision Castparts and TriMas.

During the fourth quarter the FINdex rose a modest 7%, with fourteen of the the 18 public companies tracked by the FINdex gaining share value.

The four fastener companies recording Q4 stock losses were Grainger, MSC Industrial, Simpson Mfg. and Fastenal, whose shares declined 5.5% after the company downgraded its Q4 sales and profit forecast.

During the first half of 2013 the FINdex gained 15%, besting a 12.2% gain by an index of related industrial stocks.



HACKING & ID THEFT: ARE YOU NEXT? 7 TIPS FOR PROTECTING YOUR IDENTITY & MONEY continued from page 76

[4] Secure your digital habits and data: Change your passwords at least twice a year on a nonscheduled basis – don't be predictable. Have a strong firewall if you shop online, and only access sites that are protected by a strong firewall and high industry standards. Access accounts of a financial nature only from your personal computer.

[5] Protect your banking information: While in the bank, keep account numbers and other data out of sight, and avoid stating account numbers, Social Security numbers and similar information out loud. When planning a bank visit, have items such

as deposits and withdrawal slips prepared in advance.

[6] Account for your interactions with vendors: Every time you speak to someone with whom you do business, write down the time, date, name and the purpose or outcome of the call. If an identity theft occurs on the vendor's end, you will be able to reference these prior conversations effectively. Be sure to note any animosity or reluctance from the vendor.

[7] Don't carry around your birth certificate or Social Security card: Unless it's necessary, keep

> those vital items in a safe, or at least a firebox. If you know someone is going to need a copy of your tax returns or your driver's license, for example, make the copies ahead of time. This avoids the need for a firm's employee to leave the room with such information.

"Of course, you can greatly reduce being a victim of such recent hacks that occurred

at the major retailers by using cash more often," he says. "But if you're going to use credit, use a card from a national bank or a national credit union and never a debit card, no exceptions."

Unfortunately, the millions affected by the recent hacks may be dealing with similar repercussions in the years ahead



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Although Western Wire Products is celebrating a 100th Anniversary in 2014, its origins date back to 1904 when the uncle of the company's founders invented a machine that made woven wire fabric. The patent on this machine is considered by some historians to be the original precursor to today's chain link fence.

The woven wire was made into door and bar mats and sold door to door by family members. Soon the wire fabric was used as a bed spring, marketed by the Great Western Wire Fence and Manufacturing Company. The "Never Sag Knitted Wire Bed Spring" gave a lifetime guarantee and was sold in several St. Louis stores and national wholesale hardware companies.

In 1912, another family inventor Ira J. Young applied for a patent on a machine for forming cotter pins. He manufactured cotter and split pins under the name Wire Manufacturing Company. Subsequently the assets of Wire Manufacturing were transferred to Western Wire Products Company, which was incorporated February 26, 1914. Harry M. Young, Ira's brother, and Alvin L. Bauman were the principle shareholders in Western Wire Products.

After Harry M. Young retired as president of the company, his son H. Melvin Young took the reins. H. Melvin ("Bus") extended the company's product lines and introduced innovative production methods during his tenure which lasted almost 60 years. Current family member Gene B. Young has been with firm for 39 years.

Over the years Western Wire has occupied three different factory locations in the St. Louis area with its current 132,000 square foot operation in Fenton, Missouri. And while the company now operates equipment with the latest mechanical and electronic technologies including 18 CNC wire formers, some of those 1912 cotter pin machines are still hammering away to this day.

Examples of the company's current offerings are: the venerable split cotter pin, ring cotters, clinch pins, pipe hooks, perforated hanger bar, pipe straps, tie wires, tag fasteners, spring (roll) pins, hitch pin clips (AKA hair pin cotters), lock pins, hog rings, upholstery rings, J-hooks, S-hooks, V-hooks, D-rings, split key rings, lock washers, stud guards, lock washers, and point of purchase hooks and hangers. The company also provides made-to-print wire forms and metal stampings.

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NORTH COAST FASTENER ASSOCIATION

THE NCFA TALKS "TRIBE" WITH CLEVELAND INDIANS BOSS BOB DIBIASIO by Marty Nolan, NCFA President

The North Coast Fastener Association decided to set aside all discussions of fasteners and hydrogen embrittlement for a night and purposefully hold a meeting that would allow NCFA members to forget the snow and cold and concentrate on Spring Training and a warm weather sport.

The NCFA hosted the Cleveland Indians' Sr. Vice President, Public Affairs, Bob DiBiasio to their meeting. Bob has been with the Indians organization since 1979, and has been witness to a huge chunk of Cleveland Indians history and he shared many stories and previewed the upcoming season. So, for this one evening, there was no discussion of thread pitch, but rather discussions of pitch count and the evening was a successful networking, social event. To our friends from the Midwest Fastener Association, we did have a season ticket holder from the Chicago White Sox in attendance, but understandably, we did not allow him to ask any questions! Play Ball!!



For information regarding the NCFA, membership or upcoming events, please visit their website www.ncfaonline.com, email Lgraham@ncfaonline.com or call 440-975-9503.

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YOUR SHIP OF STATE: WARSHIP OR GARBAGE SCOW? continued from page 86

"This is a mistake, says Ford Motor Co. Chairman Bill Ford, Jr., 'I've learned you have to go faster and bet bigger when you are doing well,'" (Ramsey, Mike, "Fuel Goal Tests Ford's Mettle," Wall Street Journal, 13 Jan, 2014, pg. B1)

Executives in the fastener industry who look beyond tomorrow know there are three ways to "bet bigger:" boost worker productivity, increase supervisory efficiency, and improve managerial effectiveness. All three can be mastered with a modest investment, a relatively small expenditure of time, and a willingness to challenge the status quo before it comes the status woe. All together, they will result in lower per-unit costs and the ability to compete successfully now and tomorrow as the economy continues its lurching climb.

Let's start at the simplest and fastest to accomplish, and move to the complex.

Employees and Employee Productivity

The simplest way to boost productivity at the worker level by creating incentive systems to motivate them to work smarter, and if needed harder, to increase their output.

Most workers want to do a good job, be productive... and be rewarded for their efforts. When a reward system like Gainsharing is implemented by an expert with

experience in the fastener industry, history shows that productivity will improve from 17 to 22

percent.("Productivity Sharing Programs: Can They Contribute to Productivity Improvement?" U.S. General Accounting Office, 1991).

But how to measure productivity? While many executives sit up late thinking of ways to improve productivity, few in my experience do an adequate job of measuring it. Most settle for a simple figure - sales dollars per man hour worked, even though they make a wide mix of specialty fasteners for the electronics/office equipment/consumer durables industry (10% of industry output); or more robust ones for construction (another 18% of total production), despite the fact that pricing is determined more by competition than anything else. Having dealt with dozens of fastener executives in my career, few of them, especially in smaller factories (most employ between 50 and 100 workers), devote enough time formulating understandable productivity measures that can be communicated to employees, or to developing effective incentives that motivate workers to strive for the continuous productivity improvement needed to please

today's price-conscious customers.

A simple measure of productivity is pounds of good fasteners produced per man hour worked. That can be measured in terms of direct labor, overall plant labor, or all labor, plant as well as office. This measure is easily understood by all.

Obviously, pounds of fasteners per hour worked is a crude but understandable measure. Corrections should be made for the types of fasteners produced, i.e., stainless steel ones for medical or office equipment and specialty ones for automotive or aerospace applications are more expensive and require more attention to clips and burrs than mild steel ones for the merchant trade for which quality specs are rather loose. But once corrections are made – and often include the average order size, and pricing – fastener executives have a simple, effective measure that is easily communicated and understood.

The latter is key, because fastener makers wishing to improve employee productivity must provide

understandable bench marks for workers to shoot for as well as rewards for exceeding them. Surveys report celebration lunches quickly become entitlements. ("How To Motivate Your Employees Effectively," Distributor's Link, Winter, 2012)

Moreover, astute managers in fastener production and distribution look beyond direct labor productivity. They

focus on overall productivity by including other workforce segments in their calculations. By adding additional classes of employees – supervision, quality and technical support, and/or office workers – fastener industry executives can quickly determine their effect on overall productivity and bottom-line profitability as well. Whether to hire another maintenance man or additional office staffer then becomes an easier decision.

Supervisory Efficiency

There are two reasons why few fastener makers drill down to measure supervisory efficiency and the effectiveness of their managers or make many efforts to improve either of them. First, it is usually difficult to measure results and second, inertia. It is easier to blame "lazy" workers for mediocre profits than to upset longterm supervisors and mid-managers who are set in their ways. For most fastener producers, especially the smaller ones, "good enough is often good enough," if a modest profit is made. ("Better Think Now for A Better Tomorrow," Fastener World, Sept/Oct. 2012).

While many executives sit up late thinking of ways to improve productivity, few in my experience do an adequate job of measuring it.

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UNIQUE BLIND RIVET APPLICATIONS continued from page 96

When using a standard nosepiece, it is the flange of the blind rivet that contacts the surface of the components when the mandrel of the blind rivet is pulled by the blind rivet setting tool, the flange of the blind rivet is pulled up inside the counter bore thus leaving the .010 clearance between the surface of the components being riveted and the flat surface of the flange of the blind rivet. When the mandrel of the blind rivet is pulled to it's maximum tensile strength and breaks, the body of the blind rivet is set tight but the two components will have .010 clearance between each other and pivot.

The advantage of using a blind rivet with this designed nosepiece is that you will always have the .010 clearance between the two components each and every time you set a blind rivet with this designed nosepiece. Another advantage is that the set blind rivet will not loosen under vibration and extensive use.

Some applications where this pivoting blind rivet has been used is the linkage between the covet and box of a tool chest. Another application is a single moving linkage arm on a stationary component as in a toaster oven door.

Another good advantage is that you can have the blind rivet setting tool with this designed nosepiece part of the assembly line. You do not have to carry the application to a solid or semi-tubular setting machine.

No. 2 - Riveting Elongated Or Oversized Holes

Some blind rivet applications require elongated or oversized holes to achieve hole line up. This can be achieved in the following manner.



Figure 3A

Picture "A" shows an elongated hole in one component and a proper sized hole diameter in the other component.





Picture "B" shows an oversized hole in one component and the proper hole diameter in the other component.

Both the elongated and the oversized hole must be in the component that the flange of the blind rivet will contact. In these hole configurations, large flange blind rivets should be used in order to have a good surface contact with the surface of the components having the elongated and oversized holes. One component must have the proper manufacturer's specified hole size. The proper size hole should always be on the upset side of the set blind rivet. The upset side is the opposite side of the flange of the set blind rivet.

No. 3 - Low Mandrel Tensile Strength

The tensile strength of the mandrel of a blind rivet is the setting force of the blind rivet.

I had a blind rivet application from an automobile windshield wiper company that was solved using a lower tensile mandrel the application consisted of riveting together .040 stainless steel to .030 stainless steel. The .030 stainless steel was on the upset side of the blind rivet. The blind rivet had to be stainless steel body and mandrel. The standard tensile of the 304 stainless steel mandrel was must too high and it would deform the .030 stainless steel. I calculated the setting force that I wanted and I purchased a much lower stainless steel wire to produce these mandrels. The lower tensile mandrel functioned very well and gave the windshield wiper manufacturer a constant quality assembly.

To conclude, the blind rivet's tensile, shear and clamping forces can be altered to give a secure and quality riveted assembly.

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more photos on page 204

MAJOR EXPANSION AT UNBRAKO continued from page 118

Unbrako operates globally with customers in over 35 countries with sales and manufacturing sites servicing all key global markets. Unbrako offers cost competitive precision engineered fasteners to meet and exceed recognized international standards, resulting in higher tensile strength, improved fatigue resistance, improved ease of installation, reduced total cost of maintenance and extended product life cycle.

With advanced manufacturing, engineering and logistics facilities, ISO/TS and CE certification, Unbrako continues to innovate. It recently added the Durlok[®] wedge washer to its Durlok[®] range of free-spinning vibration resistant bolts and nuts.

The Durlok[®] washer when used in combination with

standard hex helps achieve self-locking properties. It is an anti-vibration solution that not only prevents bolted joint failure, but also enables the bolted joint to retain its pre-load, thus reducing maintenance requirements.

Unbrako's prestigious applications already include the Torre Caja Repsol Tower in Spain, Melbourne's Rectangular Stadium (AAMI Park), the Delhi Metro, Mumbai's Bandra-Worli Sea Link and Terminal 5 of the London Heathrow Airport, among others. "With this major expansion and investment in advanced manufacturing processes," says Sanjeev Kalra, "we are looking forward to many Unbrako products featuring on many more prestigious applications

throughout the world." 🔿

SPIROL HOSTS MEMBERS OF THE NEW ENGLAND FASTENER DISTRIBUTORS ASSOCIATION continued from page 92

In a follow up letter written by Joseph Soja, Managing Consultant of the NEFDA, he wrote "On behalf of the NEFDA, I want to thank you for arranging the impressive tour of SPIROL International Corporation. Everyone

remarked how much they learned about the company and its vast range of products." He went on to say: "It was nice of Jeff Koehl to take the time to have lunch with us. I wish more CEO's shared his philosophy of community and people. He made us all feel right at home. This is one of the best tours I have been on. You are very

fortunate to be working for this sensational company!"

SPIROL was equally pleased to host this event with the NEFDA, and looks forward to hosting similar events in the future to provide a better understanding of the organization, to network with new and existing customers, and above all, to proudly share an inside look at the hard work, good spirit and commitment to reinvesting back into the business that

makes SPIROL as successful as they are today!

Attendees from the NEFDA include: Joseph Soja and Margaret Soja, the Managing Consultant and Assistant Managing Consultant of NEFDA; Todd Marin, Jonathon Xu,



NEFDA visits SPIROL

Richard Fohlbrook and Jon Queenin from Specialty Bolt & Screw; Sarah Patell and Lesley Carr from Northeast Fasteners; Richard Paladino and Heidi Carpe from All-Tech Specialty Fasteners; Ken Gruhl and Joel Koppe from Metric & Multistandard Components Corp; David Stefanelli and Brian Meduinn from Electronic

Fasteners; Chuck Karalekas from Arnold Industries; John Sullivan from Accurate Fasteners and Rich Rudolph from Rick Rudolph Associates. SPIROL staff involved in the event: Jeff Koehl - CEO, Michael Lentini - National Distribution Sales Manager, Christie Jones - Market Development Manager, Tim Thorstenson - Regional Sales Specialist for US Distribution and Hollie Parks - Marketing Intern.

www.unbrako.com

unbrakoLA@unbrako.com

DISTRIBUTOR NEWS

Akro-Mils, a North American leader in storage, organization and transport products, announces the next-generation tote for maximizing space in automated storage and retrieval systems (AS/RS) — the Multi-Load Tote.



The Multi-Load Tote expands and improves upon traditional tote design by providing maximum flexibility as users' storage needs change — it can be used as a stand-alone tote, or with optional, removable bin cups and dividers to create individual compartments within the tote. The sidewall clip design (patent pending) allows the cups and dividers to attach quickly and securely to the tote. Individual cups can be removed from the tote for easy handling at a picking or packing station.

The tote features a reinforced flat bottom for smooth conveyor travel, and ribbed sidewalls and a reinforced rim for maximum durability and long service life. This stackable container also features large label areas.

Akro-Mils' versatile and customizable Multi Load Tote is ideal for maximizing space in Mini Load Automated Storage and Retrieval Systems, conveyor systems, order picking and packing, and general storage and logistics applications.

More information on the Multi-Load Tote is available online at www.akro-mils.com/ Products/Industrial/Totes-Containers/Multi-Load-Tote.aspx.

For more information or to request a catalog, contact Akro-Mils at 1-800-253-2467, Fax 330-761-6348, or visit the company's award-winning website at www.akro-mils.com.



There could you be suff of hybrid to the mean tolerances? At Unbrake, our fasteness incorporate fully formed radiused heads, rolled to maintain continuous grain flow for increased fatigue strength. It is part of our commitment to giving you the very best in every way. It's what makes us number one in the world of fasteners with unparalleled engineering knowledge, design ingenuity, manufacturing & testing ability.

Our quality measures go beyond to include Total Traceability. Our patented E-code head marking system allows tracing of test records for each production lot. At Unbrako, we don't compromise on reliability. And neither should you.



DISTRIBUTOR NEWS

Advance Components celebrated Super Bowl Week 2014 by donating a pallet of food to the North

Texas Souper Bowl of Caring.

The Advance Team put on their game day jerseys and brought in over \$500 worth of food for the charity



which raises funds and food for families in need throughout North Texas. This is Advance's 2nd year to participate in the fund raiser which raised close to 3 million dollars in food and cash this year.

"Donating to the Souper Bowl really brings out the best in everyone," says Advance CEO Suzy Cravens who led the event this year.

"The Advance family is happy to give to such a worthy cause that helps so many families in our area. We think the Souper Bowl is super."

Go Team Advance!

For more information, contact the Advance sales team at 1-800-275-7772 or visit the website at www.advancecomponents.com.



Join us for MWFA's 33rd Annual Fastener Show

Belvedere Banquets – 1170 W. Devon, Elk Grove Village, IL 60007 Set-up Time: 9:00am-12 noon Show Hours: 1:00-6:00pm Fastener Bash: 6:00-8:00pm

Exhibitor Registration

(Please print or type – info will be used for show book)			
Company			
Brief Product/Service Description			
Street Address City, State, Zip			
Phone Number Fax Number			
E-mail Website			
Representative: (to receive further info & listed in show book)			
We would like (number) exhibit spaces for 2014. \$550 MWFA Member \$650 Non-Members			
Exhibit space includes: Skirted 6' x 30" table, 2 chairs, company table sign, two luncheon tickets, free attendee passes and Fastener Bash (open to all badge holders).			
Location choices (<i>please list three</i>) See reverse side for floor plan.			
We will need electric* (additional \$25) Yes No Additional Lunch Tickets \$25 Yes No. of tickets _			
Invoice Us Check Enclosed Bill My Credit Card MasterCard Visa American Expr	ress		
Card Number Exp. Date	NOTE:		
Signature This is a Table Top Shorplease do not bring booths. Return this form with fees to: MWFA, P. O. Box 5, Lake Zurich, IL 60047. Note: No refunds after May 1st. Cancellation prior to May 1st subject to a \$100 service fee. *If you require electric, please select perimeter table or contact MWFA Office at 847-438-8338.			

Glow in the Dark Night Golf - June 23rd, 2014 / 8:30 p.m.				
Register Now Limited openings! Glow Golf follows Fastener Bash.	Golfer:			
4 holes / 8:30 p.m Golf \$50 per golfer No. of Tickets	Golfer:			
Includes glow in the dark ball & necklace, drink ticket.	Golfer:			
Total Due	Golfer:			
	We will make arrangements for those not part of a foursome.			
62nd Annual MWFA Golf Outing - June 24th, 2014 / 1:00 p.m. Shotgun Scramble				
Please reserve tickets (tickets to be picked up at the course) for the following:	Seating is open, but you can reserve a table for a			
Golf, Cart, Lunch & Dinner \$160 members (after 5/30 \$180)	group of 8 for an additional fee of \$50.00 Yes No			
No. of Tickets	We reserve the right to fill open tables.			
Golf, Cart, Lunch & Dinner \$180 non-members (after 5/30 \$200) No. of Tickets	Total Due			
Golfers order your Putting Contest, Betting Hole tickets and Mulligans now:				
Putting Contest: \$5.00 per person No. of Putting Hole Tickets	Golfer:			
Betting Hole (there will be two): \$5.00 per hole No. of Betting Hole Tickets	Golfer:			
Mulligans (Limit two per golfer) \$5.00 per hole max 8 per team No. of Mulligans	Golfer:			
Dinner Only (Casual attire) members \$60 per person, \$70 non-members	Golfer:			
No. of Tickets (after 5/30 members \$70.00) – (after 5/30 non-members \$80)	We will make arrangements for those not part of a foursome.			

Sponsorship Registration

Sponsor a Green or Tee	\$150	Company
Sponsor a Skill Contest	\$250	Phone Number
Sponsor Course Refreshments	\$500	Company Representative
Sponsor Cocktail Hour	\$500	E-Mail:
Donate a door prize		
Donate a silent auction item		
Donate a Gift for each Golfer		

Please Return a COPY of completed forms to MWFA, P.O. Box 5, Lake Zurich, IL 60047 or fax to 847-438-7580 by June 10th.			
Questions may be referred to Nancy Rich: 847-438-8338 mwfa@ameritech.net	Check Enclosed Invoice Us		
Company	Bill Credit Card: M/C Visa AmEx		
Phone	Toatal Due:		
Address	Card Number		
City, State, Zip	Exp. Date		
E-Mail:	Signature		

ACCURATE MANUFACTURED PRODUCTS GROUP DOES IT ALL continued from page 80

Wireless Warehouse Makes It Possible

The system efficiency begins with the product put away. Each receipt is Lot traceable, and uses a random

put away methodology. All of these functions, including the internal bar code label happen at the handheld wireless device (gun) and portable printer, which speeds up the operation. This also insures 100% accuracy, since it happens at the location in real time.

No Physical Inventory Needed

Because this system is so accurate, AMPG was able to do away with their annual physical inventory. The Inventory Audit that their CPA firm does each year has shown that their inventory numbers have been

100% reliable. Since each box is lot traceable, when you get to the end of each lot, you are either perfect, under, or over, and you make that change at the gun in real time.

Customer Package Quantities

Customer package quantities were always a problem before The BUSINESS EDGE 2.0 software, and were almost impossible to manage. Now, the gun shows the package quantity to the picker in the first line of the

description, and the label is generated at that time as well.

Shipping Is Easy

The Shipping process is also streamlined, and integrated into the invoice process. When the order is

packed, the individual parts are scanned, which commits the inventory, generates the packing slips, and triggers the inventory relief when they update the invoice.

Huge Savings

The final step in the full implementation of The BUSINESS EDGE 2.0 happened during 2011. At that time, the Wireless Warehouse was fully implemented. Since then, AMPG has realized so much benefit from the system, that while their volume has more than doubled since 2009, the number of people in shipping went from 15 to 3, a reduction of 80%, while errors dropped to virtually zero.



More Information

For more information about APMG, contact: Mr. Matt Goldberg, Accurate Manufactured Products, Inc. 8090 Woodland Drive, Indianapolis, IN 46278. Tel: 317-472-9000, Fax: 317-472-9010, Email:

matt@ampg.com or www.accuratemfg.com.

For more information about The BUSINESS EDGE, contact Dennis R. Cowhey, Computer Insights, Inc. 108 South Third Street, Bloomingdale, IL 60108. Tel: 1-800-539-1233, Fax: 630-893-4030, Email: dcowhey@ciinc.com or visit online at: www.ci-inc.com.

visit them online at:



Fastener Brain for Only \$125

Mechanical Fastening and Joining by Bengt Blendulf



Bengt Blendulf is acknowledged as one of the leading fastener authorities in the world today. In 2013 he was honored with the *IFI Soaring Eagle Award* for his 50 years of technological contributions to the North American fastener industry.

The IFI worked with Mr. Blendulf for over two years to capture the fastener knowledge that resides in his fantastic fastener brain for the on-going benefit of the fastener industry. The result was the book entitled *Mechanical Fastening and Joining* which is a compilation of over 60 articles written by Mr. Blendulf on a wide variety of crucial and timeless fastener topics.

Every sales and technical person working in the fastener industry should read this book. How can you pass up a whole brain's worth of fastener knowledge for just *\$125*?



http://www.indfast.org/shop/

DISTRIBUTOR NEWS

The Auto Bolt Company, a premier manufacturer of quality fasteners in Cleveland, Ohio proudly announces that after 65 years in our downtown Cleveland facility, we have moved to a larger facility near Cleveland Hopkins Airport. The move was completed in December 2013. The new facility will allow us to grow, offer more variety of products and meet the demands of our customers in an ever-changing world.

Auto Bolt would also like to announce the addition of Jennifer Smith to the Auto Bolt Sales & Service team. Her email is jsmith@autobolt.net. Jen comes to us with 13 years of expediting, customer service and shipment planning background. She will be responsible for customer service and order expediting. Please join us in welcoming Jen to the Auto Bolt Team.

For more information on Auto Bolt's product contact them at 4740 Manufacturing Ave., Cleveland, OH 44135 or visit their new and improved website at www.autobolt.net.

WORD SCRAMBLE

Can you form 5 terms by unscrambling these 5 groups of letters and placing a letter in each square? All 5 terms relate to fasteners.



Solution on Page 197

CELEBRATING 80 YEARS & THE 3RD GENERATION! continued from page 100

A University of Colorado business graduate, Kent brought a fresh outlook and clearer identity to the company. More manual as well as automatic presses were purchased and quality-oriented systems were put in place, adding to the capacity and capabilities of the company.

A strong focus on customer service along with growing the scope and overall customer base of the business were paramount to Kent. 1972, Minneapolis Wrought Washer had a push for exponential growth – office personnel, manufacturing staff and outside sales professionals were

hired to help facilitate the expansion. The company had great momentum and became the largest washer specialist west of the Mississippi.

Many of the 1972 "new hires" remain employed at the company today. This veteran team of dedicated employees averages 25 years of stamping business experience with the company.

1977 was a landmark year for Minneapolis Washer and Stamping, Inc. The company was moved to a brand-new, custom-built building on the shores of the Mississippi River in Minneapolis. The new 44,000sq.ft. facility, complete with in-house de-burring, an expanded tool and die facility, more efficient design flow and



Top: Kent and Chris Bank, 1977

Right (left to right): Adam Bank, Chris Bank, Kent Bank and Chris Spaulding

additional room to grow enabled Minneapolis Washer to really stretch its legs and expand its capabilities.

With added manufacturing and storage space, additional staff and manufacturing personnel were also added. The crew size at the company had more than doubled. Increased infrastructure was matched by increased backlog. The company began running 3 shifts, 5 days per week.

One of the industry's first fully computerized quoting systems were installed in 1977. Constant upgrades and improvements have been made over the past 30 years to the

company's operating systems. Minneapolis Washer combines real-time quoting, real-time order status, real-time shipping information and internet-based communication with its customers. From before the time of the Telex (remember that?!), Minneapolis Washer has relentlessly strived to accelerate the speed of business while increasing the quality.

With the recession of the early 1980's, Minneapolis Wrought Washer again had to re-focus and evolve as a company to survive. The standard washer business was in the early stages of off-shore outsourcing. Kent Bank

> recognized that the stamping world was shifting as a new global economy was evolving. Standard size washers were a commodity based business where foreign countries were capable of being price competitive. The shift in focus created a migration to specialize in built-to-print special washers and stampings and continues through today.

> Minneapolis Wrought Washer celebrated its 50th anniversary in 1984 by officially changing its namesake to Minneapolis Washer and Stamping, Inc. The name was seen as a more accurate, informative way to refer to the company. Interestingly, at one time there were numerous companies using the



term "wrought" as part of their name. The original Minneapolis Wrought Washer logo was evolved to reflect the new Minneapolis Washer and Stamping name but also to hold true to the company's original corporate branding.

Dennis Barthel, Head

Foreman at Minneapolis Washer and Stamping, has been with the company for 42 years. Dennis is an innovator and excels at generating the highest levels of performance from the equipment and manufacturing staff. Through automation, in-house tooling and secondary services, relationships with vendors and a passion for the stamping process, Dennis and his staff today are over 150% more productive now than they were years ago with a staff less than half the size.





Now has a company representative in the U.S.

Headquartered in Taiwan with two factories in China and a monthly production capacity of 500 million blind rivets. SRC offers break stem blind rivets of various materials and some high strength STRUC-TURAL blind rivets. Because of our high production capacity we offer good prices and service. SRC has been supplying blind rivets to some of the largest companies in the blind rivet market.

SRC now has a company representative in the U.S. to serve our customers. Tony Di Maio is well known in the blind rivet industry and he will assist you in every way he can. We appreciate the opportunity to quote your blind rivet needs. Contact Tony for catalogs.

SRC offers the following:

- Quality ISO Approved and Manufactures to IFI Specifications
- Competetive Pricing Fast Delivery
- Fast, Accurate Communication Technical Assistance by Tony

Contact: **Tony Di Maio** 6 Hermon Ave. • Haverhill, MA 01832 Phone: 978-521-0277 • Email: tdimaio@verizon.net

CELEBRATING 80 YEARS & THE 3RD GENERATION! continued from page 172

In the early 1990's, Minneapolis Washer and Stamping recognized the need for a quality-focused process control system to be put in place. A Continuous Improvement program rolled out in 1993. This award winning program was instituted by Executive Operations Manager, Paul Spaulding. In an effort to constantly evolve as a company, the Continuous Improvement Program has been ongoing and has provided a measurable, visible vehicle to constantly push forward in the relentless pursuit of quality improvement at Minneapolis Washer and Stamping, Inc.

The Continuous Improvement project initiated by Paul proved to be a spring-board toward additional quality oriented programs. In 2003, Minneapolis Washer and Stamping, Inc. passed its audit and was awarded ISO 9001:2000 status by DNV of Houston, TX. Quality, on-time delivery and process documentation in manufacturing are an expectation from the customer, and Minneapolis Washer strives to meet and exceed the customer's expectations with every job produced.

Kent M. Bank retired in August of 2010 after over 40 years at the helm of Minneapolis Washer and Stamping, Inc. In October of 2010, Kent passed away in a pheasant hunting accident. The family takes solace in knowing that he departed while enjoying his favorite past time.

Oldest son, Chris Bank, assumed the role of President/CEO upon Kent's retirement in 2010. The company officially entered into its current tenure as a 3rd generation, domestic manufacturing company. Chris graduated from the University of St. Thomas in MN, and has an extensive background in sales and marketing, as well as manufacturing. Through years of preparation, Chris was well-prepared for the transition. Goals of organic new customer growth, new growth with existing customers, expansion into complimentary markets, blended sourcing and new company acquisition have been the primary focus of the company since Chris took over.

The staff at Minneapolis Washer and Stamping, Inc. prides itself on providing the highest levels of personal service that started the company on its way in 1934. It began with an insurance salesman E.C. Bank, was continued on with Kent M. Bank and his staff, and now continues with the team today with third generation sons Adam and Chris Bank. Processes may have changed, the equipment has improved, and business today is done at an accelerated rate, but the core of what the company has done for nearly a century has remained unchanged. The goal at Minneapolis Washer and Stamping, Inc, is now, and has always been, "Customer Satisfaction."

CARVING OUT SMALL SPACES continued from page 108 Pushing the Storage Tighter

Making the aisles narrower is another usable alternative. If the current aisles are 12'-0" using 6'-0" aisles instead saves 6' per aisle and can theoretically double the number of shelving runs in the same space. In actual practice columns and other obstructions would dictate the layout and the space gain will be less. There is also the possibility of splitting a back to back run of racking into two single runs accessed from both sides. This adds about 50% more "fronts" with a sacrifice in the depth of stocking.

In a sprinkler protected space under the old National Fire Protection Association (NFPA) 231-C design code or the newer NFPA-13 code additional sprinklers will be necessary. The difference is that with single runs these will not be required within the confines of the pallet racks. Ceiling lighting should also be changed and this would be an ideal time to utilize energy saving fixtures with occupancy controls. The lighting payback can help justify other expenses.

It is also possible to utilize hybrid layouts with shelving within the pallet racks. Many Distributors have tried this with limited success. The problem is finding products that fit within a fairly narrow range of size, weight and activity. For example one might put a high volume 1/4-20 bolt or nut on pallets across from the various sizes and shapes of the related ?" family. Alternatively, open stock can be across the aisle from consigned inventory if the storage mediums are dictating a clear differential.

Here again the major limitation is throughput. Narrowing the aisles means that two individuals or vehicles cannot pass each other. One way of avoiding this is to zone the warehouse with specific aisles assigned to an individual or separated by time. This might imply that restocking is done during the morning with picking in the afternoon or some similar scheme that takes into consideration the methods and timing of shipping. Late afternoon pick up by FedEx or UPS for example can work well with afternoon picking. Shipping on your own truck might dictate a split shift coming in very early or picking overnight.

Product placement can also alleviate the throughput problems. If 80%+ of the picks are coming from less than

10% of the SKU's then these products can be arranged as a ring around the other inventory. The super fast movers are typically located in pallet racks on the perimeter of the shelving with the related items located nearby.

Micro Storage...Divide and Conquer

Within shelving or pallet racks bins, compartmented boxes or other sub dividers can cut the space vertically and/or horizontally to reclaim shelf frontage. A wide range of cardboard, corrugated and plastic storage aids are readily available from a variety of sources. Generally the more durable materials will outperform the paper based bins, but this might not be an important factor in your operation. Color coding of the storage bins is often a useful byproduct.

A more expensive alternative is to use individual drawers with internal dividers. If it is likely that the total inventory size is stable this is an excellent alternative. Exotic tooling, single purpose fasteners and specialty parts would fall into this category especially if the inventory must be tightly controlled. One good trick is to leave a glass marble in any unused subdivision. This will produce a distinct clicking sound whenever a drawer is opened and an automatic indication of space availability. Drawer inserts are available to fit most major shelving sizes and styles. Contact the original shelving vendor to determine what is in production. The manufacturer's name is usually on the shelf clip or post.

More Exotic Solutions

For those with deep pockets or "More dollars than Sense" mini load stackers, horizontal carousels and vertical carousels are available. Widely touted as a space saving alternative the reality is frequently far from the advertised claims. When one includes the space requirements for back up stock elsewhere in the warehouse, increased restocking time (often on an additional shift) and total installed costs the payback period could be infinite. Let the buyer beware...and always examine the total operation including handling, stocking, picking, cycle counting/inventory and especially "hot picks" of an impatient customer standing at the counter.

DISTRIBUTOR NEWS Quantum Storage System announces its NEW patented Wire Stack & Hang Bins which are an industry exclusive!



The innovative mesh design offers a nickel-chrome finish and a $3/8" \times 3/8"$ grid pattern allowing complete visibility of the bin's contents. This unique mesh pattern provides a dust and dirt free storage environment. Ultra strong design allows for superior hang capacity perfect for IV fluid storage or anything where hang capacities are vital. In chrome, the bins are available in 9 popular sizes, Quantum's Mesh Bins stack one on top of the other and feature a rear hanger that allows them to hang from any louvered wall panel or rail system. The open hopper design allows for easy picking while allowing visual access to stored contents. Two optional label holders are available for all Mesh Bins.

Great storage products, quickly at the delivered guaranteed lowest prices -Quantum!

For more information, or to order a new catalog, call tollfree: 1-800-685-4665, email: sales@quantumstorage.com or visit them on the internet at www.quantumstorage.com.



DISTRIBUTOR NEWS

Epicor Software Corporation, a global leader in business software, supply chain management software solutions manufacturing, distribution, retail and services organizations, today announced that it has moved the efficiency and improve profitability. headquarters office of its enterprise resource planning (ERP), wholesale distribution and human capital management (HCM) business in the Americas to the Horizon Corporate Center in businesses Bensalem, Pa. The Horizon Corporate Center is directly accessible from the Pennsylvania offices and affiliates worldwide. Turnpike as well as Route 1.

With over 40 vears small. experience serving midmarket and larger enterprises. Epicor has more than 20,000 customers in over 150 countries. Epicor enterprise resource

planning (ERP), retail management human for (SCM), and capital management (HCM) enable companies to drive increased With a history of innovation, industry expertise and passion for excellence. Epicor provides the single point of accountability that local. regional and global demand. The Company's headquarters are located in Dublin, California, with

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THE POWER OF VALUE ENGINEERING - CONVERTING SCREW MACHINE PARTS TO COLD HEADED PARTS continued from page 120

Parts with Internal Bores

Long or stepped internal bores can be time consuming metal removal processes and may be more efficiently created using a cold forming, back extrusion process. Figure 5 shows three internal bore features on cold formed parts. The two upper parts are copper. Forming the internal bore eliminated a significant amount of expensive material scrap.



Figure 5

Parts Made of Expensive or Exotic Materials

Today, even steel, is expensive, but this is quickly magnified when one is working with red metals, aluminum, nickel based and other exotic materials. In cold forming, there is little or no waste of material, whereas a screw machining process may remove a significant portion of the pre-machined bar. When material costs are four to five dollars a pound (or much more for the nickel and exotic alloys) the savings can add up very quickly. Figure 6 illustrates parts produced with a variety of non-ferrous materials. The two parts on the left are copper, the upper middle part is aluminum, the lower middle part is stainless steel, and the part on the left is an exotic nickel based material.



Figure 6

High Volume Parts

It is difficult to say there is a specific rule of thumb here, as each case needs to be reviewed on its own merits. However, once a part begins to approach an annual usage of one hundred thousand or more pieces and possesses one or more of the other considerations for conversion, it would normally become a good potential candidate.

Parts with Special, Extruded or Trimmed Features

Often parts require special flats or splines, such as shown in Figure 7, that allow them to lock something inplace or transmit power. These features would normally require the screw machine version to be milled or broached, while it might be possible to form the same feature by extrusion or shearing in the cold forming operation.



Figure 7

Parts Requiring Extra Strength or Fatigue Resistance

Cold formed and roll threaded parts, as previously described, provides mechanical performance benefits that increase strength or fatigue resistance.

The following case studies provide several real examples of how these considerations were employed to convert a part that was screw machined to cold formed. One of the significant advantages of screw machining is the tighter dimensional tolerances that can be achieved. To duplicate these, therefore, it would be commonplace to include secondary operations on the cold formed blank to end up with an equivalent part to the screw machined version. Naturally, this will offset some of the savings that could be obtained by conversion, yet, as these following examples illustrate, the improvements are often so compelling that even with the offset they make good sense.
Inique industries, inc. large stock of standards available for immediate delivery: anchor bolts, round u-bolts, wilson anchor sleeves, etc. materials: carbon and stainless steel.

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FASTENER INDUSTRY COALITION

FASTENER INDUSTRY COALITION: BREATHING NEW LIFE

Back in the 1990's, the Fastener Industry Coalition (FIC) was formed by industry associations to jointly address the common concerns faced by the

implementation of the Fastener Quality Act. During that time, several industry groups and associations joined forces to educate and influence the individuals working on this government initiative. Since that time there has not really been an industry issue the magnitude of the FQA but the Fastener Industry Coalition has continued to meet

annually. Over the last two years, the FIC has gathered more frequently and in 2013 a task force was formed to explore how members of the FIC could work together to share and build on current programs and offerings.

During recent meetings in Chicago, Las Vegas and most recently in Cleveland, several FIC committees were formed to address programs in the following areas: industry communications, networking, advocacy and government relations as well as education and training. By looking at, and sharing, best practices from each member association, the FIC hopes to expand inter association programs and also produce new programs.

> At the Cleveland FIC meeting in November, Joanne Bialas of International Fasteners, SEFA and Jay Mancino of BMB Fasteners, MFDA were selected as Co-Chairmen of the FIC Board. Each FIC task force committee will report back to them in January with plans for 2014.

Members of the Fastener Industry Coalition include the Industrial Fasteners Institute, Metropolitan Fastener Distributors Association, Mid-Atlantic Fastener Distributors Association, Mid-West Fastener Association, National Fastener Distributors Association, New England Fastener Distributors Association, North Coast Fastener Association, Pacific-West Fastener Association, Southeast Fastener Association, Southwest Fastener Distributors Association, and Women in the Fastener Industry.





FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 126



On March 26, 2013, TriMas Corporation (Nasdag: TRS) purchased

Wulfrun Specialised Fasteners Limited ("Wulfrun"). Founded in 1986 and located in Wolverhampton, United Kingdom, Wulfrun is a niche manufacturer and distributor of specialty fasteners and CNC machined components for the oil & gas, power generation and pipeline & process equipment industries. The company focuses on supplying quality-critical parts typically used in heat-resistant, pressure-resistant and corrosion-resistant applications. Wulfrun, a privately-owned company, generated net sales of approximately \$10.0 million in 2012. Following the transaction closing, Wulfrun became a division of Lamons Gasket Company ("Lamons"), a wholly-owned subsidiary which comprises the Energy Division of TriMas (this division generated net sales of \$190.2 million in 2012). Lamons is a manufacturer and distributor of gaskets, bolts and nuts for the global petrochemical, oil & gas refining, chemical processing, power generation and pulp & paper industries.

Purchase price: \$9.6 million



On March 28, 2013, Horst Engineering

& Manufacturing Company ("Horst") purchased Sterling Machine Company Inc. ("Sterling"). Founded in 1966 and located in Lynn, Massachusetts, Sterling is a niche manufacturer of made-to-print machined components for the aerospace industry. Sterling supplies several of the world's leading jet engine manufacturers with closetolerance, high-strength parts and employs a total of 33 people. Founded in 1946 and headquartered in East Hartford, Connecticut. Horst is a contract manufacturer of precision machined components for the aerospace, medical and other high technology applications. The company's core manufacturing processes include: Swiss screw machining, turning, milling, centerless grinding, thread rolling and assembly. Horst employs 85 people at its headquarters location and 35 people at its Mexican subsidiary located in Guaymas, Mexico.

Purchase price: not available



On April 1, 2013, Elgin Fastener Group LLC ("EFG") purchased **Vegas Fastener Manufacturing**

("VFM"). Founded in 1998 and located in Las Vegas, Nevada, VFM is a niche manufacturer of premium-quality fasteners and made-to-print specialty parts which are hotforged or machined from stainless steel and a broad range of "exotic" alloys. The major end-user industries supplied by VFM include: power generation; ship building; environmental / pollution control; oil & gas refining and processing; heavy construction; and heavy equipment manufacturing. Following the transaction closing, EFG was comprised of nine fastener manufacturing businesses and a metal finishing operation. Each of EFG's fastener business units produces a distinctly different product range for separate industrial applications and end-user markets. VFM manufactures both externally and internally threaded fasteners and is the first business unit within EFG to produce hot-forged parts. EFG is a portfolio company of Audax Group, a Boston-based private equity firm with more than \$5.0 billion under management.

On

Purchase price: not available



2013. April 8. Southco Inc. purchased Unikev Metalurgica

Ltda. ("Unikey"). Located in Sao Paulo, Brazil, Unikey is a manufacturer and distributor of latches, locks, hinges, ventilation systems and related assess/assembly hardware. Unikey supplies a diverse range of end-user industries including industrial machinery, electrical equipment, mass transportation and telecommunications. Unikey sells throughout South America via an extensive network of authorized distributors and has a European sales office in Founded in 1945 and headquartered in Portugal. Concordville, Pennsylvania, Southco is a global manufacturer of engineered access / assembly hardware. The Southco product range includes: latches; locks; captive fasteners; quick-release fasteners; inserts; hinges; and handles. Southco operates eight manufacturing facilities in the United States (2), United Kingdom (2), China (2), Korea (1) and India (1), along with nine sales / distribution centers around the globe. Prior to the transaction closing, Southco had two distribution centers in Mexico, but did no manufacturing in North America or South America outside the United States. Purchase price: not available



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YOUR SHIP OF STATE: WARSHIP OR GARBAGE SCOW? continued from page 162

Those trying to upgrade their supervisors often purchase inexpensive training programs from the internet or a trade association. While these generalized courses might be a good introduction for bewildered "newbie" supervisors, they give the more experienced ones inured to the inevitable little reason for change. Moreover, most canned training is aimed at helping supervisors manage the behavior of their subordinates, rather than showing them how to manage the work of their subordinates. Teaching supervisors how to deal with sassy employees is fine, but does little for productivity. But constraint theory, real-time scheduling to coordinate and track the fasteners from wire rod on the receiving dock through cut-offs and thread-rollers to packaging and shipping does. After all, isn't improving departmental efficiency why supervisors are paid?

These deficiencies can be rectified by retaining a knowledgeable trainer who takes the understand existing time to and supervisory practices attitudes before making recommendations to improve them. This understanding can be easily accomplished by interviewing the supervisors to determine how they perceive their work environment and then talking with mid-

managers to obtain an overall view of how operations are actually conducted. Only then can realistic

plans be made about the content of the training; how to set proper goals to measure its effectiveness;, conducting the training with enough pizazz to keep even the most jaded of supervisors from nodding off; and finally, measuring the results over time and communicating them back to the supervisors in question. ("Realistic Training for Today's Realities," Distributor's Link, August, 2004)

Management Effectiveness

Improving managerial skills through development efforts is a fraught subject. The most obvious skill most managers need is making better use of their time – their scarcest resource. Managerial effectiveness can be improved by helping individual managers define their key objectives and then teaching them how to focus their time on those, leaving the hum-drum to subordinates.

Again, the first step is for a knowledgeable expert to

spend time interviewing a company's executives to find out how they perceive the problems, and then checking carefully with mid-managers to validate their concerns. Once accomplished, effective training can be designed based on boots-on-the-ground reality. This is a more realistic approach than merely inflicting upon unsuspecting managers lists of KPI's (Key Performance Indicators) and then expecting them somehow to shine.

Effective training then begins with helping individual managers set their key goals, obviously with input from upstairs. Then, after managers are asked to demonstrate just how they actually spend their time, a trainer can show them objectively where they are spinning their wheels and when they are devoting their time to those activities that contribute the most to their key goals. Managers can be shown how much each of their individual activities contributes to all of their goals. Then, managers

can be shown how all their activities contribute to each of their individual goals. Once internalized and re-enforced, managers can use their time to maximum advantage – for themselves and their employer. ("How To Make More Profits With Your Training Dollars," Distributor's Link, Spring, 2013)

Capital Investment

Finally, another way to improve overall productivity is to substitute capital for labor, a trend that sparked the Industrial Revolution. Again, in my experience, few fastener executives – especially those in smaller operations – have ever asked themselves what return on capital they want before investing in new equipment or "better" technology.

Let's say a new 200 ton punch press for stamping out washers and specialty fasteners from strips of sheet steel will save labor and speed production. If the press and its support equipment costs \$750,000 and the owner wants a 25% initial return on his investment, then he needs to ask whether the \$750,000 he invests will result in \$187,000 in savings, i.e., perhaps by having one man run an additional presse and through a reduction in maintenance expense. Obviously, depreciation schedules and other tax issues complicate the issue, but that's what accountants and tax attorneys are for.

Who knows which fastener companies can maintain sales strong enough to keep employees fully occupied?



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NORTH COAST FASTENER ASSOCIATION

NCFA HOLIDAY BASH 2013 by Kelly Quittenton, NCFA Vice President

The North Coast Fastener Association has had another great year. In a show of apprecia-tion, we held a Holiday Party at The Corner Alley in downtown Cleveland, Ohio. This was a special treat this year, as we changed venues to host a more laid back, casual atmosphere.

The Corner Alley is an upscale restaurant/bowling alley. We reserved a private party room, with our own bar, 4 bowling lanes, and pool table. With an open bar and food, there was plenty of fun to be had. Friendly competi-tions in bowling games took place. We laughed and enjoyed each other's company tremendously, bringing another year to a close in style and holiday spirit.

The NCFA Board appreciates all member companies for coming out to support all of our events this year.



Some of the 2014 NCFA Board. Back Row from left to right: Kurt Triptow, Marty Nolan, Scott Faidiga, Ken Graham, Michael Delis, Joe Tomaro. Bottom row from left to right: Andy Graham, Jackie Ventura and Kelly Quittenton

NCFA Distributor Social - May 8, 2014

Mark your calendars for May 8, 2014 for the North Coast Fastener Association's 6th Annual Distributor Social! This event will once again be held at the Crowne Plaza Hotel in Independence, Ohio from 5p.m. to 8:00p.m. and is completely free for all Fastener Distributors!

This year we are happy to announce that we will be hosting a complimentary lunch and open house/tour of Kerr Lakeside, courtesy of Mr. Charlie Kerr, a long standing NCFA member and a member of the NCFA Hall of Fame. Starting at noon, Kerr Lakeside will be serving lunch followed by tours of their manufacturing facility. The NCFA is also very pleased to be hosting our good friends from the Midwest Fastener Association who have graciously added our event to their calendar. The trip between Chicago and Cleveland is not that far and we hope to see a great number of our Chicago based fastener friends make the trip to Cleveland for this event.

Many thanks to Nancy Rich, Executive Director of the MWFA and to Rich Cavoto, current MWFA President and National Sales Manager, Metric & Multistandard for adding this to their calendar.

Attendance to this event has reached between 225-250 people for the last sever-al years and we hope that 2014 will be bigger and better than ever. Please contact the NCFA website for details on being a Supplier Sponsor for this event. Also, if you work for a Distributor in any part of the country and are going to be in the Cleveland area at that time, please feel free to sign up and join us. This event is open to all distributors, not just NCFA member companies.

NCFA 2014 Board President

Marty Nolan (R.L. English Co.)

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For information regarding the NCFA, membership or upcoming events, please visit their website www.ncfaonline.com, email Lgraham@ncfaonline.com or call 440-975-9503.



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CARVING OUT SMALL SPACES continued from page 174 Time to Move?

Moving to a new location is certainly a viable alternative, especially if this moves acts as a catalyst for getting more out of your operation. Replacing an overfilled, older, run down facility in what has become a less than desirable location will often remove many artificial constraints and enhance morale.

On the other hand if you love where you are but space is at a premium leasing some nearby short term space can take a lot of pressure off of your operation. In a multi-tenant building negotiating on contiguous space is

ideal and now is the best time to put a "First rights of refusal" clause in place with the landlord. Check the lease for this clause and if it is omitted be sure to insert it into any lease extension.

Perhaps the ultimate move in an Internet age is to

outsource the warehouse and order fulfillment functions. Everyone from automakers to zoo suppliers is going this route. It can refocus your efforts on what you do best-sales and marketing-with deeper pocket professionals taking care

Every Fastener Distributor...has a unique set of operational constraints and their own philosophical approach to satisfying their audience.

of delivering on the promises you are making to the customers. This is a huge "leap of trust" but many companies are finding the results to be superior to what they were providing on their own. Looking into these "Third Party Logistics Providers" (3PL's) might even trigger some good ideas for improving the existing

operation.

Every Fastener Distributor, even competitors in the same market serving the same customer base with similar products, has a unique set of operational constraints and their own philosophical approach to satisfying their audience.



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THE POWER OF VALUE ENGINEERING - CONVERTING SCREW MACHINE PARTS TO COLD HEADED PARTS continued from page 178

Case Study 1: Aluminum Piston

Figure 8 illustrates an aluminum piston. This part was originally screw machined and then precision ground to obtain required dimensional tolerances on several of the cylinder diameters. Figure 9 shows the external view of the cold formed blank and an internal cut away. One immediately notices the significant reduction of material from the collar to shank diameter and the long internal bore. Although the outside of the cold formed blank required multiple secondary operations to meet the required dimensional tolerances, the internal bore was back extruded complete with no additional work needed. In this case, conversion to a cold formed part saved significant cost by reducing the amount of expensive aluminum scrap, reduction of metal removal time on both the exterior and internal bore, and increased the strength of the collar.



Figure 8



Figure 9

Case Study 2: Spindle

Figure 10 shows a spindle which was originally screw machined. On the right is the cold headed blank and on the left the finished part. It should be noted that the blank pictured was an early prototype and does not include the extruded double flat on the end, pictured in the finished part. The final version integrated these flats in the cold forming process. Although there were secondary operations required on this part, the cold formed version provided increased strength to the collar, threads, and flats on the end (important for reduced fatigue risk), reduced overall manufacturing time, reduced scrap, and provided sufficient capacity to fulfill the high volume requirements.



Figure 10

Case Study 3: Aluminum Piston

Figure 11 illustrates another aluminum piston. This is one of a family of similar parts that were historically screw machined. The right illustration is of the finished part. One sees the complex geometry and can envision the precise tolerances that go with these features. Although at first blush this may look like it would be best screw machined, it is also an excellent example of a potential candidate for conversion. Like the example in the first case study, there is a significant diameter differential, and being aluminum, cold forming significantly reduced the amount of expensive scrap and time-consuming metal removal that was required. Like the previous examples, the cold formed version required secondary operations to machine the top and point the end, yet even with these operations the reduction in process time was noteworthy. In an additional interesting development, this part was originally tempered to a T6 aged condition after forming, but eventually a process was developed to use wire in the T6 condition, forming the part into a finished complete state, and providing additional cost saving advantages.



Figure 11

In summary, there are usually compelling reasons that a part is screw machined, so that true candidates for conversion are in the minority. However, in those cases where parts possess some of the characteristics discussed in this article, the cost savings can be significant. In this day and age where customers are expecting value engineering from their suppliers, and suppliers are looking for ways to stand out from the crowd, this is one area that may be worth pursuing.



FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 180



On April 22, 2013, **MSC** Industrial Direct Co. Inc. (NYSE: MSM) purchased the **Barnes**

Distribution business unit of Barnes Group Inc. (NYSE: B). Based in Cleveland, Ohio, Barnes Distribution is a value-added distributor of fasteners and MRO supplies. Barnes Distribution has a strong footprint throughout the United States and Canada, supplying approximately 31,000 customers with more than 1,300 employees, including more than 800 field associates. The company specializes in lowering customer's inventory procurement/ management costs through storeroom organization and vendor managed inventory programs. Barnes Distribution generated net sales of approximately \$300 million in calendar 2012. MSC Industrial is a value-added distributor of metalworking and MRO supplies headquartered in Melville, New York. MSC Industrial operates primarily in the United States (customers in all 50 states), with four distribution centers and 106 branch sales offices. In the 12 months ended September 1, 2012, MSC Industrial generated net sales of \$2.36 billion.

Purchase price: \$550 million

Purchase price: not available



On April 29, 2013, **TriMas Corporation** (Nasdaq: TRS) purchased **Tat Lee (Thailand) Ltd.**

TAT LEE (THAILAND) LTD. Established in 2006 and located in Rayong, Thailand, Tat Lee is a manufacturer and distributor of standard and specialty gaskets for petrochemical, chemical processing and general industrial applications. Following the transaction closing, Tat Lee became a wholly-owned subsidiary of Lamons Gasket Company ("Lamons"), which comprises the Energy Division of TriMas. Lamons is a manufacturer and distributor of gaskets, bolts and nuts for the global petrochemical, oil & gas refining, chemical processing, power generation and pulp & paper industries. Headquartered in Houston, Texas, Lamons generated net sales of \$190.2 million in 2012.



On April 30, 2013, **EFC** International Inc. ("EFC") was recapitalized by **Quad-C** Management Inc. ("Quad-C"), in

partnership with existing EFC ownership and the senior management team. Founded in 1983 and headquartered in St. Louis, Missouri, EFC is a value-added distributor of specialty fasteners and assembly hardware, which supplies automotive and industrial OEMs and the distributor market. The company offers more than 40,000 SKUs across a broad range of product categories including: cold-headed fasteners (internally & externally threaded); specialty clamps; panel fasteners (metal & plastic); electrical wire management hardware; and specialty stampings. EFC specializes in providing advanced technical and design engineering support, along with Supply Chain Management Services. EFC maintains four branch warehouses/sales offices in Atlanta, Chicago, Detroit and Phoenix. Based in Charlottesville, Virginia, Quad-C is a private equity firm which partners with high-quality management teams of middle market companies to support long-term growth and value creation.

Purchase price: not available



On May 28, 2013, **Bossard Holding AG** ("Bossard") purchased **Intrado AG.** Located in Hünenberg, Switzerland, Intrado is the import division of Jacob GmbH, the global

specialist in electrical cable glands, connectors, adaptors and plugs. Headquartered in Kernen, Germany, Jacob manufactures and distributes a broad range of electrical connector products for the global marketplace. The addition of Intrado to the Bossard Group brings an expanded product range and a business unit staff with extensive technical knowledge about electrical engineering products. Intrado employs a total of ten people and generated net sales of \$3.0 million in 2012. Founded in 1831 and headquartered in Zug, Switzerland, Bossard is a value-added distributor of fasteners and assembly hardware. Employing more than 1,800 people in over 60 locations worldwide, Bossard generated net sales of \$451 million in 2012. Bossard shares are traded on the Swiss Stock Exchange (symbol: BOS). Purchase price: not available

<u>DISTRIBUTOR NEWS</u>

Akro-Mils, a North American leader in storage, organization and transport products, announces the expansion of its industry leading line of Louvered Hanging Systems with the addition of the new Double-Sided Louvered Floor Rack model 30658 (18" W x 25" D x 66.37" H).

This new louvered rack, which comes in Gray, has a weight capacity of 500 lbs. Racks can hold multiple sizes of Akro-Mils' AkroBins[®] and InSight[®] crystal clear bins.

Akro-Mils' Louvered Hanging Systems offer users a complete line of 12 customizable vertical storage configurations for hanging bins. These systems — which include Louvered Panels. Bench Racks and Floor Racks - are constructed from 16gauge, cold-rolled steel for strength and durability. An attractive. powder-coated finish stands up to heavy-duty daily use. Select models also come in Beige. Mobile Kits are available for select models to increase storage options.

Akro-Mils, a Myers Industries, Inc. company (NYSE: MYE), is a leading manufacturer of plastic and metal storage, transport, organization and material handling products for use in industrial, healthcare, commercial and consumer markets.

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DISTRIBUTOR NEWS

Valley Fastener Group, LLC announces the hiring of Seina Savoji as General Manager of our Forgo Fastener Division. He will have full responsibility for the division with a special emphasis on growing its manufacturing capabilities and sales. Additional responsibilities include assisting quality, sales, and operations of all VFG locations.

Seina started his career as a manufacturing engineer with Pioneer Screw and Nut Company in Elk Grove Village, IL in 1985, and stayed through the acquisitions of Medalist and ITW. During his 28 year tenure he was promoted to Engineering Manager, Director of Engineering and Quality, Business Unit Manager, and finally to General Manager of multiple locations.

For further information please contact our Sales team at 630-299-8910 or visit online at www.valleyfastener.com.

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METROPOLITAN FASTENER DISTRIBUTORS ASSOCIATION, INC

ANDREW DUGUAY, OF ITR ECONOMICS ADDRESSES THE MFDA

On February 11th, 2014, the MFDA hosted its annual Economic Forecast at Moran's Restaurant in the heart of I

Manhattan's Chelsea District. Thank goodness the weather cooperated, as the meeting was originally slated for January 21st, but had to be re-scheduled due to the impacts of a major snowstorm. This was the first in a series of educational seminars scheduled for 2014 in greater New York City.

Jay Minichino, President of the MFDA, welcomed approximately 45 guests, who were all eager to hear Andrew Duguay, of ITR Economics, presentation "Ahead of the Curve: The Economy 2014 & Beyond". This was the first occasion that Andrew presented to

the MFDA membership, however ITR Economics, has presented many times over the past few decades. Andrew is a senior economist with the ITR Economics, where he provides economic consulting services for small businesses, trade associations, and Fortune 500 companies across a spectrum of industries. His economic insight and forecasting experience play a key role in the long-term 94.7% accuracy rating for his firm.

Andrew stated that the US economy has been growing each



year since 2009 and will continue to grow over the next 3-5 years. Leading economic indicators show no signs of collapse, as we

> have been hitting pre-recession levels since 2009. He also discussed how near-shoring or re-shoring, is going to help our continued economic growth, as companies are bringing jobs back to the United States. He went on to tell the membership about the incline in online sales, and according to the Fastener & Bolt Index, the fastener industry is growing slowly but securely. He suggested that we try to hold on to employees that hold special skill sets, and that we invest in training programs, as finding skilled workers in the future will be difficult and costly.

Duguay concluded the presentation with his suggestions of we should do during this business cycle. We should stay realistic; realize that growth is organic and leveraged. We should build efficiencies to maintain the margins, while we cross train personnel. As business people we should assess our capacity while keeping an eye for the business cycle upturn in 2015, and do our best to lock in cost ahead of the rising interest rate and inflation.

YOUR SHIP OF STATE: WARSHIP OR GARBAGE SCOW? continued from page 182

Moreover, returns on changing the plant lay-out to streamline production or on implementing an ERP system to monitor work flow are hard to estimate. But efforts should be made. The results of many of these changes are often over-estimated by gung-ho managers for two reasons: first, because many need a stronger shot of reality in their morning coffee, and second, because little effort is

made to include employees in the decisions. Workers then see proposed changes in equipment and process just as head-chopping exercises and find subtle ways to torpedo them. Luddites lurk in the dark corners of every plant.

All Together Now

One can easily sympathize with the executives of small-to-medium size specialty fastener makers who constantly

juggle the day-to-day realities of maintenance breakdowns, tooling problems, lame supervisors, ineffective managers, and customer demands for lower prices and last minute schedule changes. Some of these problems are the eternal nature of the fastener business, especially that portion that supplies Detroit. ("Why Detroit's Past Is Important to Your Future," Distributor's Link, Winter, 2009). Customers might not always be right, they are customers. There are too few of them... and too many competitors willing to put up with their transgressions.

Other problems are self-inflicted. It is very easy to sympathize with harried executives so immersed with the concrete day-to-day problems of juggling customer

demands that they delay challenging internal inertia within their own companies. This long term threat to their companies' future can be overcome by dealing with subordinates openly and honestly: by rewarding performers outstanding and sanctioning mediocre ones at all levels; by showing managers how to function with high effectiveness; by providing supervisors with the training

needed to run their departments with

measured efficiency; and by implementing incentive systems like Gainsharing for better productivity at the lower levels.

If you don't do it, you'll be watching the wakes of your competitors as they speed over the horizon while you slowly but inevitably sink beneath the waves... **O**

By adding additional classes of employees fastener industry executives can quickly determine their effect on overall productivity and bottom-line profitability

as well.

76. Foreign ruler

77. ___ Boleyn 78. Mr. Wallace 80. Mideast nation

82. High-pitched bark

wrench

87. Small thin metal

disks with holes

in the middle

89. Mortgage lender

90. Caramel-and-

candies

chocolate

91. Brief time, briefly

96. Cream of the crop

92. Jupiter, for one

98. Singer Tennille

99. Reddish horses

101. Toy building brick

108. Prefix for angle or

95. More miffed

102. Foundation

104. Ms. Horne

105. Adder's sign

106. Fast jet: abbr.

cycle

110. Blood analysis

112. One in charge:

facility

abbr.

83. ____ of; free from

86.

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Test Your Knowledge!

ACROSS _ washer; 1. _

79. Patio covers 81. "Ave Maria" or "Te Deum"

88. "The Distributor's __"

94. Early time, for short

97. Basketball positions: abbr.

-tooth washer

103. Pal of Winnie-the-Pooh

104. Record albums, for short

95. Religious group

100. Pacino and Gore

83. room

89. Wonderful

91. Chowder

92. Cushions

93. Palm or ash

96. Golfer Ernie

_ pin

111. Hard coatings

114. Food sampler

117. Red edibles

14

21

25

35

42

46

52

62

68

72

79

89 90

94

100

107

113

16

109. Role on "Seinfeld"

113. Sudden increase

115. Fastener that can be

116. Designer Christian

118. Mex. women's titles

37

36

63

64

85

adjusted manually

- 84. Atlanta's old stadium 85. Actress Joanne's kin
- 86. Single cut

101.

107.

102. Boring

- 10. Surface defects 87. Accompanied by
- 14. Most nouns that

fastener that

slides easily

over a bolt

5 Bent fastener

- end in "s" 17. Catch a thief
- 19. Baghdad native
- 21. Temporarily
- 22. Scanty
- 23. Improper
- application
- 25. So-so grade
- 26. TV's Dobbs
- 27. King Cole and
- others 28. Secondhand
- 30. Everybody
- 31. Repair
- 32. Luau instrument 33. Self-drilling, self-
- tapping screws
- Long journey
- 35. Partial amount
- 38. Night fliers
- 40. Enthusiastic
- reply in Spain
- 41. Leafy vegetable
- Wicked
- 43. Cambers
- 44. bolts
- 45. Be a tattletale
- Sportscaster 46.
- Albert 47. Pub order
- 48. Cruel
- 49. Shopper's
- clippings
- 52 of hand;
- magician's skill _ Ripken
- 55. Ms. Fitzgerald's namesakes
- 57. Cut off
- 58. __ Miserables"
- 58. ___ MIS 59. Landed
- 60. Public disorder
- 61. Explosive
- mount
- 62. Book spine info
- 65. Moved smoothly
- 66 "...to St. Ives, _ a man...'
- 67. "O ___ Absau ..." (Lament of _ Absalom, David in 2 Sam. 18:33)
- 68. Tennis pro Arthur
- 69. Jones or Martin
- 70. Refrain syllables
- 71. Observe
- 72. Fraternity letter
- 73. Pick-me-up
- 74. Long, long time 75. Small appliance brand

- DOWN
- 1. Iceberg
 - 2. Attraction 3. Coach Parseghian
 - 4. Piece of furniture
 - 5. Second fasteners that
 - prevent loosening Surface cracks & bursts 6
 - 7. Give an address
 - Lower limbs 8.
 - Poet Eliot's initials
 - 10. Citrus fruits
 - 11. Dry
 - 12. Daddies
 - 13. Fasteners that give a rustic look in a new
 - structure
 - 14. Jr. enlisted rank
 - 15. Roaring animal
 - 16. Hex nut's mate
 - 18. Most accurate
 - 20. Wight and Capri
 - 24. BPOE members 29. Go downhill fast
 - 31. "Moby Dick" author

 - 33. _ clips 34. Pitfall

16

15

43

47

26

53

73

101

108

58

- 35.
 - Screw & washer assemblies
 - point; crowned 36
 - fastener end

17

22

27

32

54

81 82

39

50

86

109 110

117

114

38

65

91

95

- 37. Slushy mud 39. Wonderment
- 40. Red or Dead
- Gulager & others
- 43. Words of disgust
- 44. rivets
- 45. Canoe or skiff
- 48. Housekeeper 49. Blood problem
- 50. Words to Nanette
- 51. Extend across
- 53 "Wow!"
- 54. Fastener that won't rotate on you 55. Whoppers

61. Fasteners with anchor

Three Ships"

65. McCain & Hatch: abbr.

as; for example

motion between two

34

61

84 88

93

112

118

20

30

57

76

77 78

104 105 106

Solution on Page 197

24

51 50

73. Fastener with a flange

75. Fastener that prevents

rotating parts

11 12 13

41

67

10

19

23

45

71

75

97

103

111

115

98 99

83

66. Most common metal

rings for heads

Casual farewell

64. Certain anchor

69. Chows & collies

70. 98.6°, e.g.: abbr.

59. Jai

67. Sirs

62

63.

71.

18

28 29

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55 56

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92

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102

48

FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 190



On June 6, 2013, **Carlson** Systems Holdings Inc. ("Carlson") purchased **Western** Tool Supply. Founded in 1982

and headquartered in Salem, Oregon, Western Tool Supply is a distributor of fasteners and tools for construction, woodworking and general industrial customers. The company's product range includes fasteners, power & hand tools, staplers and nailers. Western Tool Supply operates 14 branches in Oregon, Washington, Idaho, Utah and Montana. Founded in 1947 and headquartered in Omaha, Nebraska, Carlson is a distributor of product assembly systems serving the fastening and packaging requirements of a diverse range of general industrial and construction customers. The company's product range includes fasteners, hand-held nailers & staplers, marking & labeling products, stretch/shrink wrappers and strappers. Carlson operates 52 branches spread across 22 states and parts of Mexico. Carlson is a portfolio company of Industrial Opportunity Partners LLC, an Evanston, Illinois-based private equity firm with \$460 million of committed capital. Purchase price: not available



On July 5, 2013, **NORMA Group AG** purchased **Guyco Pty. Limited** ("Guyco"). Founded in 1994 and headquartered in

Adelaide, South Australia, Guyco is a designer, manufacturer and distributor of fittings and valves for agricultural, plumbing and general industrial applications. Guyco's product range includes threaded fittings, camlock couplings, joiners & connectors, valves and risers - all in a full range of materials and configurations. Guyco supplies more than 700 customers across Australia and New Zealand and generated net sales of 7.0 million EURO in 2012. Guyco significantly expands NORMA Group's presence in the Asia / Pacific region and is a good strategic fit with the recent acquisitions of Davydick & Co. Pty. Ltd. (located in Sydney, Australia) and Chien Jin Plastic Sdn. Bhd. (located in Ipoh, Malaysia.). NORMA Group is a global manufacturer and distributor of a broad range of highly-engineered clamps, connectors, fittings and joining products. NORMA Group employs around 4,500 people worldwide and generated net sales of 604.6 million EURO in 2012.



On July 16, 2013, *MW Industries Inc.* purchased *Mohawk Spring Corporation*

("Mohawk"). Founded in 1960 and located in Schiller Park, Illinois (a suburb of Chicago), Mohawk is a niche manufacturer of precision springs, wireforms and metal stampings. The company's products are used in consumer electronic devices, home appliances, medical devices, aerospace subassemblies and numerous other general industrial applications. Mohawk is the forth bolton acquisition completed by MW Industries in the last two years. MW Industries is a leading manufacturer of highly-engineered springs, specialty fasteners and other precision-formed components. The company is headquartered in Rosemont, Illinois and is comprised of fifteen operating divisions located in ten different states. MW Industries is a portfolio company of Genstar Capital LLC, a San Francisco-based private equity firm with more than \$4 billion under management. Purchase price: not available



On September 10, 2013, Southwest Fastener LLC purchased The Bolt Company of New Mexico LLC ("TBC of NM"). Founded in 2009 and located in

Albuquerque, TBC of NM is a stocking distributor of fasteners and industrial supplies for the construction and general industrial markets. The Southwest Fastener company also fabricates anchor bolts and studs used primarily for construction applications. Following the transaction closing, the employees, inventory and manufacturing operations of TBC of NM were relocated to the nearby Albuquerque location of Southwest Fastener. Founded in 1989 and headquartered in Phoenix, Arizona, Southwest Fastener is a stocking distributor of fasteners, assembly hardware and industrial supplies for the construction and general industrial markets (both OEM and MRO accounts). The company maintains branch warehouses in Tucson, Arizona; Albuquerque, NM; and Irvine, California.

Purchase price: not available

Purchase price: not available

DISTRIBUTOR NEWS

Industrial Parts House is a full-line supplier of Industrial Maintenance Supplies including fasteners, chemicals, electrical, hydraulics & fluid transmission, janitorial and shop supplies, cutting tools, abrasives and many other professional grade MRO products.

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FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 194



On September 20, 2013, **HCI Equity Partners LLC** ("HCI") purchased **Polygon Aerospace Inc.** ("Polygon"). Founded in 2002 and headquartered in Houston, Texas, Polygon is a stocking

distributor of fasteners and consumable hardware for the aerospace market. The company focuses on supplying the global MRO requirements of the Embraer and Airbus fleets, along with the OEM requirements of Embraer (direct) and its Tier suppliers. Polygon maintains a branch warehouse and manufacturing facility in Sao Jose dos Campos, Brazil to supply Embraer's principal regional aircraft production plant located nearby. HCl is a Washington, DC-based private equity firm which invests in growth-oriented manufacturing and service companies. HCI typically partners with high-quality management teams to support growth opportunities and operational improvements. HCI invested in Herndon Products Inc. - in partnership with the founders - in October 2009 and still retains that investment. Herndon Products is a valueadded distributor of aerospace fasteners and consumable hardware, which focuses on the military/defense market. Purchase price: not available



Purchase price: not available

On October 1, 2013, **Park-Ohio Holdings Corp.** ("Park-Ohio") purchased **Henry Halstead Limited.** Founded in 1880 and headquartered in Preston, England,

Henry Halstead is a value-added distributor of fasteners and assembly hardware that supplies a diverse range of OEM customers. The company specializes in providing supply chain management services and bin-stocking programs. In the fiscal year ended March 31, 2013, Henry Halstead generated net sales of approximately \$24 million. Headquartered in Cleveland, Ohio, Park-Ohio (Nasdaq: PKOH) operates two primary business segments: i) Diversified Manufacturing; and ii) Supply Chain Management. The Diversified Manufacturing segment is comprised of 14 niche manufacturing businesses producing a diverse range of products and engineered components. The Supply Chain Management segment is comprised of Supply Technologies LLC, which provides advanced supply chain management services to OEM customers around the world. Supply Technologies operates 45 logistics service centers located in 10 countries and generated net sales of \$489.6 million in 2012.



On October 11, 2013, **Brighton-Best** International Inc. ("Brighton-Best") purchased **Porteous Fastener** Company ("Porteous"). Founded in

1966 and headquartered in Santa Fe Springs, California, Porteous is the largest full-line fastener importer and stocking master distributor in North America. The company focuses exclusively on supplying the distributor market. Porteous operates 16 branch warehouses in 12 states and in British Columbia, Canada. Founded in 1965 and headquartered in Tainan, Taiwan, Brighton-Best is the largest importer and stocking master distributor of socket screw products in North America. Brighton-Best operates 29 branch warehouses in the United States (19), Canada (3), Australia (4), New Zealand (1), Brazil (1) and the United Kingdom (1). Porteous and Brighton-Best have nearby/competing warehouses in 9 different locations- Southern California, Seattle, Vancouver, Chicago, Cleveland, Houston, Dallas, Tampa and Atlanta - so significant synergies are expected to be realized by consolidating the overlapping operations. Brighton-Best is owned by a consortium of Taiwanese investors led by Ta Chen International Inc. ("TCI"). TCI is the US distribution arm of Ta Chen Stainless Pipe Ltd., (Taiwan Stock Exchange: 2027) a manufacturer of stainless steel pipe, tubing, fittings and valves. Purchase price: not available

MAC⇔FASTENERS

On October 25, 2013, **TriMas Corporation** (Nasdaq: TRS)

purchased Mac Fasteners Inc. Founded in 1989 and headquartered in Ottawa, Kansas (near Kansas City), Mac Fasteners is a manufacturer of stainless steel bolts for the commercial aerospace and defense markets. Mac Fasteners operates manufacturing facilities in Ottawa (55,000sq.ft.) and a 25,000 sq.ft facility in Paris, Arkansas. The company supplies aerospace OEMs, after-market repair companies and military & commercial aerospace fastener distributors. Mac Fasteners is an approved supplier to numerous global aerospace OEMs including Airbus, Embraer, Cessna, Gulfstream, Bombardier, BAE Systems, Lockheed Martin and Raytheon. In the fiscal year ended September 30, 2013, Mac Fasteners generated net sales of \$17.5 million and employed a total of 80 people. Headquartered in Bloomfield Hills, Michigan. TriMas is a global manufacturer of engineered products for a range of industrial, aerospace, commercial and consumer applications. TriMas has approximately 5,500 employees at more than 60 facilities around the world and generated net sales of \$1.27 billion in 2012. Following the transaction closing, Mac Fasteners became a business unit of TriMas' Aerospace and Defense segment.

Purchase price: \$34 million cash at closing, plus up to an additional \$6 million based upon future operating results

FASTENER PUZZLE SOLUTIONS

Fastener Crossword Solution



Fastener Wordsearch Solution



Word Scramble Solution

Words: Screws Washer Shank Camber Bolts Circled letters unscrambled: Socket Wrench

FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 196

PERMASWAGE

On October 31, 2013, **Precision Castparts Corp.**

(NYSE: PCP) purchased Permaswage SAS. Founded in 1938 (as Deutsch Metal Components) and headquartered in Gardena, California, Permaswage is a designer and manufacturer of fluid fitting systems and related installation tooling for airframe applications. The company has particular expertise in swaged fittings, which establish a permanent connection between two tubes, and a growing presence in separable (threaded) fittings. Permaswage proprietary and standard components can be found on virtually every major commercial and military aircraft program. The company operates manufacturing facilities in Gardena, California; Paris, Franc; and Suzhou, China. Permaswage employs approximately 680 people worldwide and generated net sales of 120.5 million EURO (US\$165.2 million) in 2012. Headquartered in Portland, Oregon, Precision Castparts is a global manufacturer of structural & airfoil investment castings, complex forged components and highly-engineered fabricated components for the aerospace, power generation, transportation and general industrial markets. In the fiscal year ended March 31, 2013, Precision Castparts generated net sales of \$8.38 billion and employed approximately 28,500 people worldwide. Following the transaction closing, Permaswage became a business unit of the Airframe Products segment of Precision Castparts, which also includes the company's aerospace and industrial fastener manufacturing operations. The seller of Permaswage was Bridgepoint Advisors Limited, a London-based private equity firm. Purchase price: \$600 million



On November 1, 2013, **Park-Ohio Holdings Corp.** ("Park-Ohio") purchased **QEF Global Limited** ("QEF"). Founded in

1989 and headquartered in Cork, Ireland, QEF is a valueadded distributor of fasteners and assembly hardware which focuses on supplying OEMs in the electronics, medical devices, high technology and general industrial markets. The company specializes in providing customers with high-quality, brand name products and advanced supply chain management solutions. QEF has branch offices in the United States, Scotland, Northern Ireland, England, Hungary, Hong Kong and China. In the fiscal year ended December 31, 2012, QEF generated net sales of approximately \$14 million. Headquartered in Cleveland, Ohio, Park-Ohio (Nasdaq: PKOH) derives 57% of its net sales from a diverse portfolio of manufacturing businesses and the balance of net sales (43%) are derived from Supply Technologies LLC (a wholly-owned subsidiary). Supply Technologies operates 45 logistics service centers located in 10 countries and generated net sales of \$489.6 million in 2012. Following the transaction closing, QEF became a business unit of Supply Technologies.

Purchase price: not available

РАМ[®]

FASTENING TECHNOLOGY, INC.

On November 15, 2013, OMG Inc. purchased PAM Fastening Technology Inc. ("PAM"). Founded in

1982 and located in Charlotte, North Carolina, PAM is a designer, manufacturer and distributor of: i) auto-feed screw systems and collated screws for deck and flooring applications; ii) hot-melt installation tools and adhesives used for a broad range of automotive, construction, packaging, assembly and general industrial applications; and iii) cutting machines and fasteners for woodworking, furniture and millwork applications. The company sells its products under the PAM® and Buhnen® brand names via a network of distributors and manufacturer reps throughout the US and Canada. Formerly known as Olympic Manufacturing Group, OMG is North America's largest manufacturer of roofing fasteners and roof edge systems for commercial and residential construction applications. Through its FastenMaster business segment, OMG also manufactures a line of specialty fasteners for drywall installation and repair, along with specialty deck screws. Following the transaction closing, PAM will be integrated into the FastenMaster segment. Purchase price: not available

Hahn Systems

On November 22, 2013, Hahn Systems LLC ("Hahn") purchased ECS Fasteners LLC. Located in

Westport, Indiana, ECS Fasteners is a domestic manufacturer of machine-grade bulk nails utilized by the wood pallet industry. Following the transaction closing, Hahn intends to consolidate ECS Fasteners' product line into its own private-label brand - Fusion Fasteners. Hahn intends to significantly expand the production capacity of ECS Fasteners by investing in new, state-of-the-art nailmaking machinery. Founded in 1938 and headquartered in Indianapolis, Hahn is a stocking distributor of construction and industrial materials including tools, fasteners, abrasives, lumber, drywall, ceiling tile and MRO supplies. Hahn intends to significantly expand the production capacity of ECS Fasteners by investing in new, state-of-the-art nail-making machinery.

DISTRIBUTOR NEWS

Specialty Resources, Inc. is celebrating 30 years as a leader in global sourcing and inventory management! What began as a humble fastener distribution company in 1984 has grown to become the go-to Global Supplier for a diverse range of industries. SRI has achieved success over the past 30 years due to a steadfast belief in our 3 major principles:

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Value Added Services: Specialty Resources prides itself on being a one-stop source for a diverse range of manufacturing industries. We provide custom packaging, internal assembly capabilities, complex kitting, and inventory management. Our customers are able to focus on their core business by taking advantage of the value added services we provide. This eliminates the headaches associated with the entire sourcing process.

Family: Specialty Resources was founded as a family owned company in 1984 and those values are what drive the company's success today. We pride ourselves on being a partner, not just another supplier. We work with our customers on a personal level and are enthusiastic about our joint success. The past 30 years would not have been possible without the support of our loyal partners, dedicated employees, or our belief in more efficient global sourcing. Contact SRI today and join our growing family!

For more information please contact Specialty Resources, Inc. at 112 Oscar Way, Chester Springs, PA 19425. Tel: 610-321-0900, Fax: 610-321-0999, Email: info@@srifast.com or visit them online at: www.srifast.com.



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FASTENER COMPANY ACQUISITIONS COMPLETED IN 2013 continued from page 198

Founded in 1938 and headquartered in Indianapolis, Hahn is a stocking distributor of construction and industrial materials including tools, fasteners, abrasives, lumber, drywall, ceiling tile and MRO supplies. Hahn supplies tools, consumables and materials to wood-based manufacturers and residential & commercial contractors all across the Midwestern United States. Hahn employs 70 full-time employees and operates 7 distribution centers in Indiana (5), Kentucky and Michigan. Purchase price: not available



On November 22, 2013, Atlas Copco AB (Stockholm Stock Exchange: ATCO) purchased Tentec

Limited. Founded in 1988 and headquartered in West Bromwich, England, Tentec designs, manufactures and markets proprietary bolt-tightening and tensioning equipment. The company's products are used in the assembly of large structures and heavy equipment and are utilized globally by the oil & gas, mining and power generation industries, along with many others. Tentec employs 65 full-time employees and generated net sales of £9.8 million (US\$16.3 million) in the 2012 calendar year. Headquartered in Stockholm, Sweden, Atlas Copco designs and manufactures machinery and equipment for a diverse range of industries and applications. Atlas Copco employs approximately 39,800

employees worldwide and generated net sales of 10.5 billion EURO in the 2012 calendar year. Purchase price: not available

ALL TOOL SALES

On December 20, 2013, Accurate Component Sales

Inc., doing business as Accurate Components & Fasteners ("AC&F"), purchased All Tool Sales Inc. Founded in 1962 and located in Franksville, Wisconsin, All Tool Sales operates through two subsidiaries: i) All Fasteners Inc. is a value-added distributor of fasteners, assembly hardware and "C class" components, which supplies industrial OEMs; and ii) All Tools Sales Inc. is a value-added distributor of hand tools, cutting tools, coolants & lubricants and other MRO supplies, which supplies industrial MROs. Both business units focus on customers in Wisconsin and the surrounding states. Founded in 1986 and located near Minneapolis, Minnesota, AC&F is a value-added distributor of fasteners, assembly hardware and "C class" AC&F offers vendor managed inventory components. programs, along with product application solutions, to its OEM customer base. AC&F is a portfolio company of High Road Capital Partners LLC, a New York City-based private equity firm.

Purchase price: not available



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Tomás Garza

Tomás Garza is a conflict resolution and personal development expert with over 12 years of experience helping people erase pain, turmoil, and doubt from their lives. Tomás has served on the faculty of Portland State University, and is a former President of the Oregon Mediation Association. He has worked with thousands of people as a presenter, facilitator, and mediator, and believes that people CAN move beyond habitual patterns and fear and connect with their deepest selves and purpose. For more information on Tomás' programs, visit www.garzainitiative.com, email him at tomas@garzainitiative.com, or call 541-230-4477.

CONSTRUCTIVE CONFRONTATION IN THE WORKPLACE: THREE THINGS TO KEEP IN MIND

To successfully navigate workplace conflict, managers must be able to confront team members in a positive, productive manner. Whatever the situation, whether two people are actively quarreling, or whether one person's behavior is impacting the entire work culture, a manager must be able to step in, take charge and do so in a way that does not contribute to the drama. the language on you. For example, you can say, "I notice you missed the last two staff meetings," or "The other day I overheard your comments about the director." The alternative would look like this: "You missed the last two staff meetings," or "You made those comments about the director." One statement talks about your observations, what you saw, noticed, or heard. The other puts everything squarely on them.

How, then, do you constructively confront team members? How do you both get your point across and preserve team chemistry?

For any manager, these conversations can be crucial. Ongoing conflict and drama can, of course, have a ripple effect on everyone, and the last thing any organization needs is a dip in morale. Assuming this is not a situation that calls for firing, there is a great deal a manager can do to help resolve the problem, be firm and preserve group harmony.



In having these conversations, here are three things to keep in mind:

1) Use Non-Accusatory Language

For many of us, it is tempting to place blame and pin an entire problem directly on someone else. After all, aren't they the ones causing the disturbance in the first place? A constructive solution, despite our first impressions, involves shelving the urge to blame and taking a step back.

How you phrase things here makes all the difference. You can make the conversation productive by focusing

This may seem subtle. iust а matter of semantics, but in constructive confrontation vour word choice matters. When you talk about your observations, people naturally feel less defensive. When people do not have their guard up, you will be able to get more accomplished.

2) Be Clear

As a manager attempting to put a stop to harmful behavior, you must be clear in this conversation.

Your group cannot afford any mixed messages. Therefore, be as clear as you can about the following:

• **What you heard or saw.** Make sure there are no ambiguities here. If you didn't experience any of the events first-hand, be sure you have gathered sufficient information. The person you are talking to needs to know exactly what it is they are doing that damages your group chemistry.

• **How this impacts the group.** Be very clear on this. Often, people do not intend any sabotage, but their behavior may, nonetheless, have a detrimental impact. It is perfectly fine to be direct about this impact; often the person really needs to hear it.







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CONSTRUCTIVE CONFRONTATION IN THE WORKPLACE: THREE THINGS TO KEEP IN MIND continued from page 202

• **Your expectations.** If you don't clearly state your expectations for future behavior, this conversation will be a waste of your time. Unclear expectations create needless confusion and can lead to future problems. As a manager, you must say what you expect. Luckily, this can be done in a non-accusatory manner that

strengthens the group rather than pulls it apart.

3) Listen

A conversation—even one you must have with an employee about their behavior—is just that, a conversation. This means it involves two people. Though you will need to come into the dialogue with an

agenda and get your point across, the process will be infinitely more productive if you give the other person a chance to speak and, more importantly, to be heard. This means you must take the opportunity to listen.

When the other person speaks and feels you have

...there is a great deal a manager can do to help resolve the problem, be firm and preserve group harmony.

heard them, their tension level goes down. Defensive posturing that might otherwise stand in your way will disappear. The person may even feel grateful for your hearing them out, and appreciated. This can be crucial to maintaining group harmony. Provided you take the opportunity to clearly state your expectations,

there is absolutely nothing to lose in taking a moment and listening.

Also, if you listen attentively enough, the other person may offer suggestions or solutions you hadn't considered. You will never know unless they get an opportunity to speak, too.

Consider these three suggestions the next time you have to

confront somebody in the workplace. In most situations, you can preserve group harmony, show respect and appreciation for the other person, and be sure you have clearly stated your expectations. It is indeed possible to become a pro at constructive confrontation. Do it, and your organization will benefit.

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DISTRIBUTOR NEWS

TimberHex Log, Timber Truss & Landscape Screws Top **Screw Products, Inc.** 2014 Line-up. Used for landscaping timber connections, log homes, trusses and other exterior or interior applications, these 5/16" hex head screws range in size from #14x4" through 14" long and #17x5" through 11" long. They install faster and have much greater holding power over traditional timber and landscaping spikes.

"There are a lot of timber screws on the market, but what sets ours apart is the quality and ease of use plus they are reusable, which certainly doesn't hurt," noted Screw Products Inc. President/CEO, Jim Miller.

TimberHex Log, Timber, Truss and Landscape hex drive screws are currently available in the following specifications:

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- 14x8" Timber Hex 5/16" Head Log, Timber, Truss & Landscape Screw
- 14x10" Timber Hex 5/16" Head Log, Timber, Truss & Landscape Screw

- 14x12" Timber Hex 5/16" Head Log, Timber, Truss & Landscape Screw
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For more information, call Screw Products on 1-877-844-8880 or visit their online store at www.screw-products.com.



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THE NATIONAL ASSOCIATION OF WHOLESALER-DISTRIBUTORS (NAW) ELECTS 2014 OFFICERS

Members of the National Association of Wholesaler Distributors (NAW), during the association's Executive Summit in Washington, DC, this week, elected as Chairman of the NAW Board of Directors Dan M. Blaylock, President of Adams-Burch Inc., headquartered in Landover, Maryland.

Mr. Blaylock succeeds Patrick L. Larmon, President and CEO of Bunzl Distribution USA Inc., headquartered in St. Louis, Missouri. Mr. Larmon will remain active on the NAW Board as Immediate Past Chairman. Bunzl Distribution USA Inc. is also a member of the International Sanitary Supply Association, the Food Marketing Institute, and the NPTA Alliance. Says Mr. Blaylock of his new post, "During the many years Adams-Burch has been an NAW Direct Member, we have enjoyed the many products, services, and networking opportunities that NAW offers. It is my honor to be elected to serve NAW as its next Chairman. I look forward to working with NAW and our members in 2014 and contributing to NAW's ongoing, dynamic work for our industry."

Adams-Burch is also a member of the Foodservice Equipment Distributors Association, the International Sanitary Supply Association, and the NPTA Alliance.

The following wholesale distribution industry leaders also were elected as NAW Officers for 2014:

Chairman-Elect: Manuel Perez de la Mesa, POOLCORP Covington, LA. POOLCORP is also a member of The Association of Pool & Spa Professionals.

First Vice Chairman: Richard W. Schwartz, WinWholesale Inc., Dayton, OH. WinWholesale Inc. is

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Clamps Incorporated, a manufacturer of U Bolt, Specialty Formed wire Products, Custom Small Stampings, Saddles for all types of Clamps and Band Clamps announced the design change in its' current products with coined / flat U-bolts.

"We have added a patent pending knurling in the inside bend radius of the U-bolt" according to Nino Carollo, President of Clamps Incorporated. Mr. Carollo states: "The knurling in the product stops the clamp from twisting and provides a better gripping power on the application. Our initial test of the products shows increase in the pull-apart strength."

This change was a result of one of our inhouse Continuous Improvement Projects. "This design change will give our customers a functionally better and more consistent product; the integrity of the component is unchanged with this feature. This part provides the end user with a stronger, better clamping product, at no additional cost." According to Tom Shackelford,

Vice President of Manufacturing.

The knurled process is also available on our custom coined U-bolts. The knurling feature does not change the part from a dimensional standpoint. The U-bolt is offered without the knurled feature if requested by customer. It also is available with the customer's choice of surface finishes.

Clamps Incorporated founded in 1957 a leading manufacturer of U-bolt and Band clamps, custom U-bolts, stamping and brackets used throughout trucking, automotive, agriculture, construction, mining and other industries.

Clamps Incorporated is an ISO certified 9001:2008 company. Please feel free to contact us with any technical question you may have.

If you would like to our quarterly newsletter, "Clamp Tech", contact us a info@clampsinc.com. Please visit our website at www.clampsinc.com or you may contact us at 1-800-837-0141 or 419-729-2141.



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