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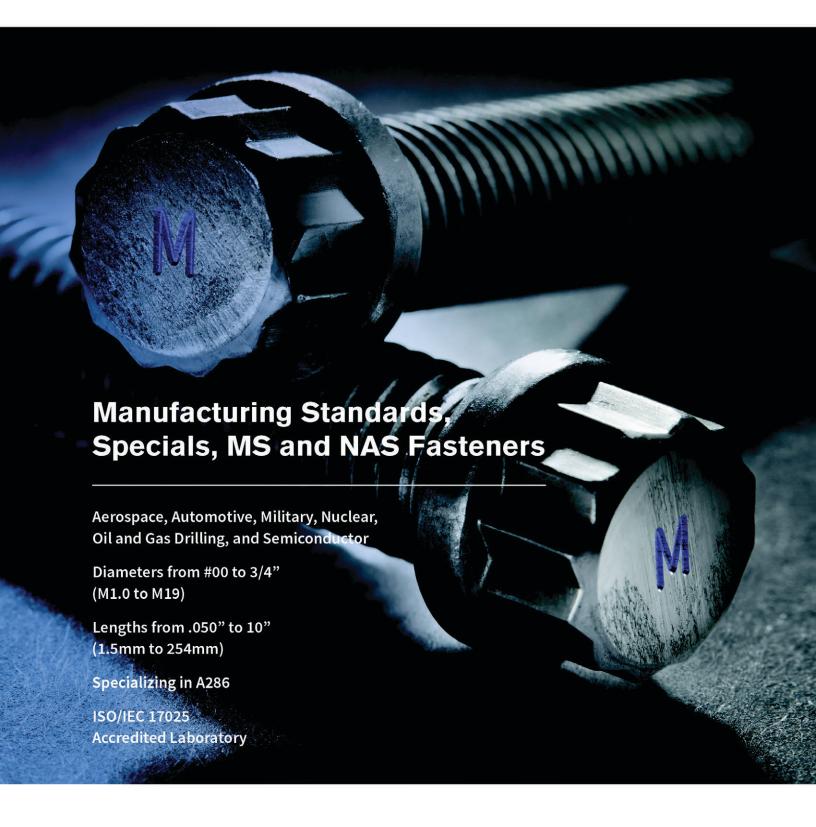








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THE NATIONAL MAGAZINE FOR FASTENER DISTRIBUTORS







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distributornews

Goebel Fasteners, Inc. announces a new and exciting partnership with Integrity Products & Supplies Inc. – a solutions based company dedicated to developing new products focused on CUI mitigation. The two companies entered into an agreement that sees Integrity Products become the exclusive distributor for Goebel Fasteners in Canada. The agreement was signed in person by Integrity's COO, Andrew LeMoine, and the CEO of the Goebel Group, Marcel Goebel, in Dusseldorf, Germany while both men were attending the 2018 IEX Conference in nearby Cologne, Germany.

"Goebel Fasteners is pleased to partner with Integrity Products to exclusively distribute our products throughout Canada. Integrity's core values, vision, and commitment to innovation in the corrosion under insulation market are a great fit for our company's vision and we are looking forward to working together for years to come.", said Marcel Goebel, CEO of the Goebel Group.

Andrew LeMoine, COO of Integrity Products was equally pleased stating "the entire Integrity team is excited to add Goebel Fasteners to our growing product line up. The Goebel brand and products are recognized worldwide for quality and excellence and are a perfect fit for our portfolio".

Integrity Products creates, manufactures & distributes world class products for various industries, including Oil & Gas, Petrochemical, Pulp and Paper, and Power generation. Specializing in Corrosion Under Insulation, their core products include the patented inspection ports, Integrity Plugztm, and a growing line of Corrosion Under Insulation (CUI) products.

The Goebel Group is a family-run and internationally active business group of joining and assembly technology. Considered specialists in the development of innovative and high-quality joining elements and corresponding processing systems, their friendly and experienced staff, representatives, and distribution partners take care that customers are satisfied and actively support the entire supply chain as well as value chain.

Contact Goebel Fasteners, Inc. by Tel: 713-393-7007, Fax: 713-393-7084, email: sales@goebelfasteners.com or at www.goebel-fasteners.com.

Pivot Point Incorporated, a manufacturer and importer of fastening solutions, has announced that they have recently achieved certification to the new ISO 9001 standard of ISO 9001:2015.

Pivot Point initially became ISO Certified in the year 2000, and has consistently maintained certification to the relevant versions ever since. The 2015 version is the newest ISO 9001 standard. and the company worked diligently over the past year to become compliant well before the deadline of September 2018, at which time the previous ISO 9001:2008 version becomes invalid.

Says company President Dave Zimmermann. "We are very proud of the integrity of our ISO systems and Quality Management System in general. We've received accolades from different external auditing companies over the years, and others have in fact modeled our activities."

The company is located in Hustisford, WI, which is about 35 miles northwest of Milwaukee.

For more information, contact Pivot Point at PO Box 488, Hustisford, WI 53034. Call Toll-Free at: 1-800-222-2231, Tel: 920-349-3251 or Fax: 920-349-3253 Visit them online at www.pivotpins.com.

R&R Engineering posted a record setting 20.5% growth in May for client shipments, breaking 49 years of records.

R&R Engineering is the largest volume manufacturer of U-Bolts, threaded Studs and Wire Forms in the United States.

R&R recently completed its newest building addition and added several new Automated Bent Bolt machines leading into the record setting month of May 2018.

The company, who is competitive with imports, recently celebrated their 49th anniversary.

R&R supplies Solar, recreational vehicles, Agricultural Manufacturers, National Distribution accounts.

For more information contact R&R Engineering by Tel: 1-800-979-1921, Fax: 1-800-345-9583, Email them at: sales@randrengineering.com or visit them online at www.randrengineering.com.

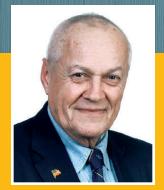
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Bengt Blendulf

Bengt Blendulf was educated in Sweden and moved to the US in 1974 to start a subsidiary for a Swedish fastener manufacturer. After working as a technical consultant 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. 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.

FASTENER FRICTION — FRIEND OR FOE?

When we are tightening a threaded fastener we are actually working on a rather uphill battle. The moment of force we are applying, also called tightening torque, is to a large extent wasted in overcoming friction. It is generally understood that for a "normal" fastener, where the head size is about 1.5 times the nominal diameter of the bolt/screw, we are wasting about 90 % in overcoming the under-head and thread friction when tightening. This leaves us only a small portion to produce the workable tension in the system. This is how it relates:

....of 100% moment of force or torque:

50% is wasted in the bearing area 40% is wasted in thread friction 10% is producing the preload

If we, instead of using a Hex Cap Screw or Socket Head Screw, are using a Flange Screw, where the much larger bearing area give us also a larger friction resistance, we may not get the desired clamp load unless we put in a higher moment of force. In addition, the friction between the internal and external threads will also cause a buildup of torsional stresses in the fastener that will lower the load bearing capacity of the fastener. I leave the torsional issues until later in this article.

Let us begin with the preloading issue. If we approach

the tightening (try to avoid the term Torquing even if you use torque as a method) issue first, there are some rather straight forward mathematics available to us. First of all we need to know the coefficient of friction. How do we get a good number on that? The best way is to buy a publication from IFI called "Torque Book for Fasteners". It is a 30-page book developed by Joe Greenslade when he was the Director of Engineering Technology at IFI. Joe collected information from the industry and made a table showing the nut factors for a variety of lubricants. Since the nut factors were based on a standard size of a Hex Cap Screw, I suggested a conversion factor to get to the actual friction coefficient. This was also done so we can use it also for larger bearing area fasteners like flanged fasteners. The 80 various finishes include also the new engineering class coatings like Dacromet, Geomet, Magni, etc. in addition to the more general surface conditions.

Let us now start with the nut factor, sometimes we use the term K-factor. In the following I will use lower case "k" for this factor to follow international standards. Capital "K" is the SI symbol for kelvin, the Thermodynamic Temperature and should not be used in issues related to the tightening of fasteners. The "k" factor is essential for the development of the moment of force (also called torque for simplicities sake).



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Guy Avellon

Guy Avellon has been in MRO and Fastener Distribution for over 30 years, in such positions Sales Engineer, Chief Engineer, Manager of Product Marketing, Product Engineering & Quality and Director of Quality & Engineering. He founded GT Technical Consultants where he performs failure analysis, lectures on fastener safety, works for law firms and designs/audits Quality systems. He is a member of SAE, is Vice Chairman of the ASTM F16 Fastener Committee, Chairman of the F16.01 Test Methods Committee and received the ASTM Award of Merit in 2005. Guy can be contacted at 847-477-5057, Email: ExpertBoltGuy@gmail.com or visit www.BoltFailure.com.

WHAT FASTENER DISTRIBUTORS NEED TO KNOW ABOUT SUBSTITUTIONS

There are times when a customer wants a certain product that is temporarily out of stock. In this case, there are two choices: back order the item and hope the customer will still want the product later or give the customer a substitute part.

You want to accommodate the customer but substitutions have been won and lost in court rooms if precautions aren't taken. To avoid liability, it is imperative that the customer understands that they are receiving a substitute part. Then, it is necessary to understand where the part(s) may be used. Once the part is used, any remaining parts should not be co-mingled with present stock, where the 'irregular' part may unknowingly be used in another application which may have critical consequences.

Nuts

Generally speaking, a substitution of one strength grade higher is acceptable without any consequences. However, there are always exceptions with other substitutions that need caution: ASTM structural nuts and finished hex nuts.

As a supplier/distributor who has access to both products, many can be substituted but with the consent of the buyer. This is to avoid having comingled stock and to be aware of the change. The ASTM products can mostly be used with SAE products but the SAE products can not interchange with the ASTM nuts.

SAE Grade 2; can use ASTM A563 Grade A, B or C

hex, heavy hex and hex thick nuts.

SAE Grade 5; can use A563 Grade C or D and even DH hex nut; C or D heavy hex nut; B or D hex thick nut.

SAE Grade 8; can use A563 Grade DH hex; D and DH heavy hex; D and DH hex thick nut, or the ASTM A194 Grade 2 heavy hex or 2H hex or heavy hex.

The ASTM A563 nuts are furnished either plain, noncoated, or zinc coated. The zinc coating may range from organic coating, plating, mechanical galvanizing and hot dip galvanizing. Depending upon the thickness of the coating, some threads are over tapped prior to coating while some hot dip zinc coatings may require tapping after coating.

Due to the assembly and installation requirements of some of the structural products, many will also have a lubricant applied, which will affect non-structural assemblies if not expected.

Hex, Heavy Hex, Hex Thick

There is some confusion with remembering the terminology differences, so here is the explanation:

Hex Nut: this is the basic, standard nut. The nut is slightly thinner than the diameter of the bolt to which it mates.

For example; a 1/2" hex nut has a WAF (width across flats) of 3/4" (0.750") and a thickness of 7/16" (0.4375").

A formula for the nut dimensions: 1/4" WAF is 1.50 D + 0.062" H = 0.0875 D

5/16 - 5/8": WAF = 1.50 D





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. Telephone: 631-256-6602; web: www.joedysart.com; email: joe@joedysart.com.

WEB SITE NOT ENCRYPTED? GOOGLE WILL TURN BUSINESS AWAY FROM FASTENER DISTRIBUTOR SITES

Come July, Google Chrome will start turning business away from your Web site if it deems your site to be unencrypted.

"Google is rolling it out to all versions of Chrome

this summer," says Peter Boyd, founder, PaperStreet, a Web design firm (www.paperstreet.com).

Specifically, Google Chrome will brand your Web site as 'Not Secure' in the address bar of its browser if it senses you're operating without encryption (https://security.googleblog. com/2018/02/a-secure-web-ishere-to-stay.html).

"Users presented with this warning will be less likely to interact with these sites or trust their content, so it's imperative that site operators," get their Web sites encrypted," says Patrick R. Donahue, security engineering product lead, Cloudflare (www. cloudflare.com), a Web services provider.

Moreover, this move by Google to police the Web will be replicated by Mozilla Firefox, Microsoft Internet Explorer, Microsoft Edge

and Apple Sarfari sometime after July, according to Donahue.

Given that those browsers together service more than 90% of all the people surfing the Web, according to Netmarketshare (www.netmarketshare.com), it's no surprise that the 'Not Secure' branding campaign is

expected to trigger a stampede of fastener distributors desperately looking for encryption come July.

The easiest way for fastener distributors to determine their business will be impacted is to type the Web address

> of their Web sites into the Google Chrome browser come July.

> If your Web site is lacking encryption, you'll find a warning from Google in the address bar stating that your Web site is 'Not Secure.'

> Indeed, even now, Google is posting more subtle warning notes in its browser about many Web sites that operate with encryption.

> Essentially, the warning appears as an exclamation symbol in the address bar, which you need to click on to retrieve Google's admonition that the site is not secure.

> In contrast, the search giant has decided that come July, its warning will be stark and dramatic. Visit any fastener distributor site that's not encrypted and that site will be branded with the words 'Not Secure' right in the Goggle Chrome address bar - no clicking necessary.

"Google has been gearing up for this change since 2014," Donahue says.

For years, the campaign to encrypt Web sites has been mostly limited to ecommerce Web sites, where shoppers enter credit card and other highly sensitive information that hackers are looking to steal.



HACKERS HAVE TRIGGERED BROWSER MAKERS TO DEMAND ENCRYPTION FOR ALL SITES ACROSS THE WEB.

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COME JULY, GOOGLE CEO SUNDAR PICHAI WILL BE BRANDING YOUR WEB SITE AS 'NOT SECURE' IF IT'S WITHOUT ENCRYPTION.



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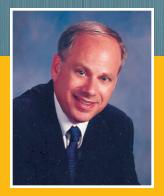
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Robert Footlik

Robert B. Footlik, PE is a retired Professional Industrial Engineer. With over 50 years' experience as a Warehouse and Logistics Consultant to a wide variety of clients including Fastener Distributors, Bob has a wealth of valuable information for our industry and he is willing to share it. While Footlik & Associates is now closed, his expertise is still available to his friends and our readers. For friendly advice, a second opinion or just to start a conversation, he can be reached at robert@footlik.net.

EVALUATING YOUR FORKLIFTS AND OPERATORS

While the overall design of a forklift has not changed very much since the first sit down riders were offered by Towmotor and Yale & Towne almost 100 years ago only the base concept remains. Every other aspect of the vehicle has evolved with new materials, different paradigms and operational requirements. Over the last 15 years two trends in particular have guided the design

and marketing of these vehicles, ergonomics and telematics.

Reconsidering Ergonomics

Past studies have shown that an operator's productivity is best during the first half to three quarters of their work day. This could be due to changes in the workload or because of

problems created with control placement, repetitive motions or simply the need to climb up and down all day. Ergonomics is the science of looking at how humans interface with their environment. Moving a lever, turning a steering wheel or even monitoring vehicle status can make a huge difference in how an operator feels at the end of the shift. This can also reduce the incidence of repetitive stress injury while enhancing safety for the operators and those around them.

No matter the configuration, sitting on a seat, standing on the chassis or traveling on a platform mounted to the forks, space is limited and visibility can be problematic. More seat padding, improved control mounting and greater visibility all help. For example several vendors have tilted the slats on their overhead guards creating louvers instead of blocking the view without compromising the protection required under OSHA Section 1910.178. Certainly this makes sense for safety, but it also reduces neck pain and stretching

injuries.

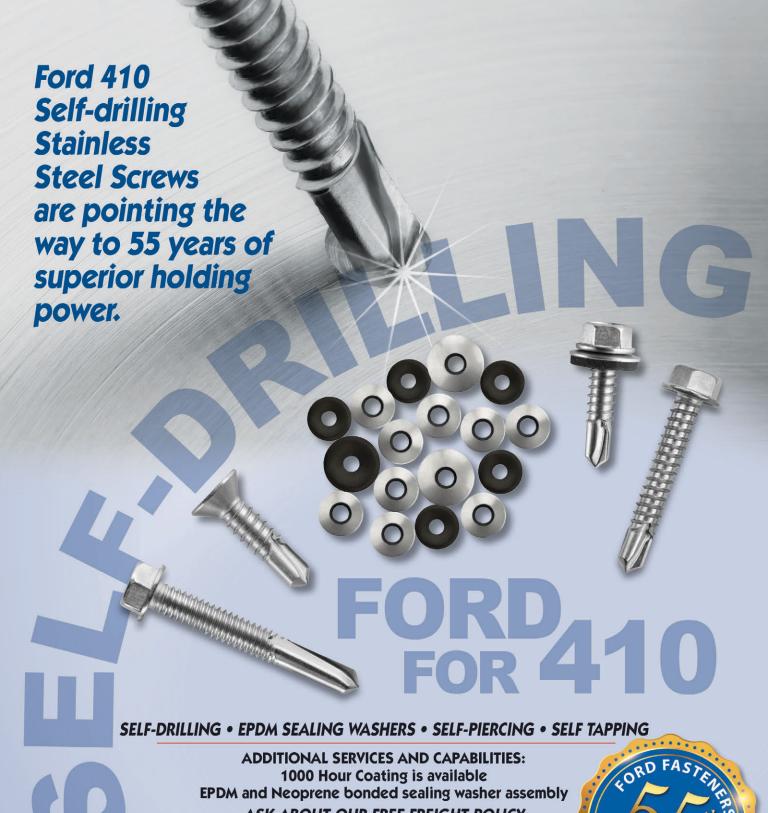
In the Fastener Industry upgrading forklifts has

frequently been based strictly on maintenance economic factors. When the vehicle is getting too expensive to repair (or for some when the parts are no longer available) a new forklift is purchased. Little or no regard

is being paid to operator comfort and productivity. This is changing with the realization that the equipment has improved to the point where there is an identifiable return on the investment. Simply stated a comfortable operator, who works consistently throughout their shift is safer and more productive.

Unlike a grocery warehouse or distribution center operators in this industry accumulate fewer vehicle hours daily and are climbing on and off the truck far more frequently. A little consideration for how this is done without contortions or hitting their head can make a big difference at the end of a long day.





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HISTORY OF INNOVATIVE COMPONENTS Innovating from 1992 to now

Innovative Components
Inc (ICI) established by Mike O'Connor

1993

Annual sales increased 500% in the first 3 years

Moves to Schaumburg, Illinois, doubling in size to 12,000 sq ft & added 5 new presses

CNC machining

992 First facility opens in Long Grove, IL

1995

Adds 'Soft-Touch' Over-molding

1998

Awarded first patent for a hex drive wing nut design

2005

Innovative Components Turns Nuisance into International Solution

Every summer brings dread to lawncare warriors, and Mike O'Connor is no different. In 1992, he was mowing his lawn when a knob fell off the mower. Not able to find it in the grass, O'Connor mowed over it, destroying the knob and damaging the mower's blade.

"It was utterly frustrating," he said. "What seems like an insignificant thing brought a complete halt to finishing my chore, which I didn't like to do anyway. I knew I could make something that would not loosen and fall off so I designed a better knob."

O'Connor, who grew up around manufacturing, graduated from Notre Dame with a business degree and the University of Chicago with a Master's in Business Administration, founded Innovative Components, Inc., designing knobs for a host of different uses. At first, he worked with subcontractors to bring his designs to fruition, but the need for secure, dependable knobs was great enough that O'Connor brought together all aspects of manufacturing under one roof.

Innovative Components quickly outgrew its first location in Long Grove, Illinois and moved to what is now its headquarters in Schaumburg, Illinois. The 30,000 sq. ft. facility allows Innovative Components to engineer, manufacture and sell a wide variety of

clamping knobs, quick release and spring loaded pins, wire lanyards, custom molded parts, nylon tipped fasteners, and Thread Detective® Thread Identifying Tools.

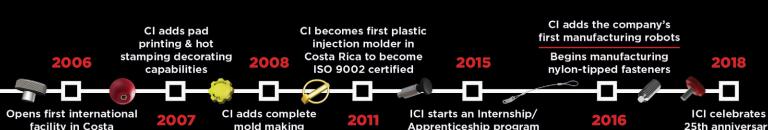
"We offer an extensive line of standard plastic clamping knobs suitable for most consumer and industrial uses," O'Connor said. "All of our knobs have been designed with the end user's needs in mind, and we stay informed on their needs, which are always changing and evolving. We are also capable of providing fully customized knobs with molded in logos, decals, pad printing, raised lettering, and specialty fasteners. In addition, we can build fully customized knobs from start to finish within our facility."

Another cornerstone of O'Connor's organization is sustainability. From its beginning 25 years ago, Innovative Components has used environmentallyfriendly products and production processes. According to O'Connor, Innovative Components has perfected techniques for utilizing recycled plastics with no compromise in mechanical or aesthetic values. The company also uses thermoplastic materials exclusively, and scrap from thermoplastic resins may be recovered and reprocessed. In fact, Innovative Component's use of recycled content in 2017 exceeded 82 percent; and this, coupled with its other sustainability policies, helped the company reach an exclusive agreement with one of the world's largest recyclers of e-waste. This ensures access to high-quality recycled resins well into the future.

ARTICLE CONTINUES ON PAGE 18

ICI begins the D211

transition program



Others Sell Parts. Innovative Components Sells Solutions.

American-owned and American-made seems like a legend instead of a fact. Not to O'Connor and Innovative Components. They are keeping the quality, delivery and customer service of that mission alive – and took it to Costa Rica.

"We were a tiny company, employing 100 people, and we knew we had to grow to remain competitive, especially against foreign suppliers," O'Connor said. "Companies operating in China, India and Mexico were doing so primarily with cheap labor and materials. We were looking for a location that could make us competitive on a world-wide basis, yet preserve our values and work within our standards. Costa Rica met all of our requirements."

Established in 2006, Innovative Components' Costa Rican facility makes their products in the same way using the same materials as the Illinois facility. Another reason Costa Rica was the right choice for Innovative Components' first international location was because it is in the same time zone as the company's domestic facility. This allows Innovative Components to import its products in just days instead of weeks, vastly reducing the time it takes to deliver products to customers. The labor costs in Costa Rica also are competitive with those in other low-cost countries. Plus, the availability of well-trained engineers and skilled machinists gives the company a competitive advantage when it comes to new product development and technological advances. The country hosts an overabundance of youthful yet highly educated manufacturing professionals, in a land limited by the number of actual manufacturing companies.

"The facility in Cartago has made us a worldwide competitor, and it is a huge factor in our overall success," O'Connor said.

Remaining true to its roots in efficiency and sustainability, Innovative Components invested in an Enterprise Resource Planning (ERP) system, which is software allowing the company to automate some of its procedures related to scheduling.

"Every one of our machine's is connected to the ERP, and the information it gives us allows us to make changes in real time to ensure that we deliver on time," O'Connor said. "Our annual on-time delivery rate is 98.5 percent, and that's because of the ERP and our dedicated

employees. Our quality rate is 99.6 percent. It has made us highly efficient and allows us to be in total control of all our manufacturing.



We are the only company in our industry that owns our own tooling manufacturing facilities making and maintaining our own molds and dies. This gives us a great advantage in product development and problem solving for our customers."

ARTICLE CONTINUES ON PAGE 20



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From High School to Highly-Skilled

"There is a huge deficit in skilled labor in the United States," O'Connor said. Innovative Components sees this shortage as an opportunity, and our approach is to put emphasis on recruiting and developing young manufacturing talent, all the while making make a positive difference in our communities."

There are three programs in which Innovative Components helps to train workers for their facilities: their own in-house apprentice program, the Transitional Program for Special Needs Young Adults, and ongoing personal and professional development and training through outsourced seminars and webinars.

ARTICLE CONTINUES ON PAGE 22

Our Programs

Apprentice Program

The company's apprenticeship program works with high school graduates to provide an all-expense-paid scholarship for an associate's degree in manufacturing technology. The selected candidates spend time in every department and summers in Innovative Components' Costa Rican facility while honing the skills they will use in their future careers. While working on their associate's degree, the candidates work part-time for Innovative Components.

"Of the high school graduates in our program, we take only the top two percent," O'Connor said. "Typically, this program is for underprivileged kids whose families do not have the financial means of sending them away to college, but they are overly-deserving of a college education due to their academic excellence. We are really proud of this program and think we can recruit young and bright stars right out of school and build a world-class team to assist in achieving our long-term growth goals."

Transitional Program

Another program for burgeoning high school seniors is the Transitional Program for Special Needs Young Adults, in which students who have completed their high school requirements and want to develop more skills can obtain job training, academics, independent living, and life skills while obtaining therapeutic services such as social work counseling, speech therapy and occupational therapy if needed. Innovative Components provides them with office and manufacturing plant jobs that have a lot of repetition while they are being coached by their teachers on how to adapt to the working world.









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Turning Toward the Future

Innovative Components is looking to its future by staying firmly rooted to its history: providing solutions in all types of machinery, manufacturing processes and information technology. In fact, Innovative Components is so focused on future opportunities that it reinvests in equipment and staff to remain a powerful competitor in the industry.

"We utilize the absolute best machinery in the industry,"
O'Connor says. "In fact, 65 percent of our injection molding equipment is two years old or less. We bought 14 brand new injection molding machines between 2015 and 2018. I have a very strong dedication to having the latest technology and equipment, which makes us a more efficient manufacturing company."

By continuously investing in the latest technology and equipment, Innovative Components is poised to expand its product lines and training its team members to be the best they can be in their industry. With consistent growth each year since the recession, the company plans to continue to grow organically, adding more staff. To enhance the technical capabilities of the company and enhance solutions available to customers, the company has added two materials engineers, two automation engineers, two industrial engineers and one environmental engineer.

"By upgrading our equipment and ERP, adding warehouse and office space, and broadening the number of team members both in the U.S. and Costa Rica, we are committed to growth in our future. We also are stocking more raw materials for quicker turn around as well as

more SKUs of plastic knobs and quick release pins for immediate orders."

To keep customers, vendors and employees apprised of their growth, Innovative Components is redesigning its website for a better experience, including a customer portal, parametric search and shopping cart. The new website is set to go live later this year.



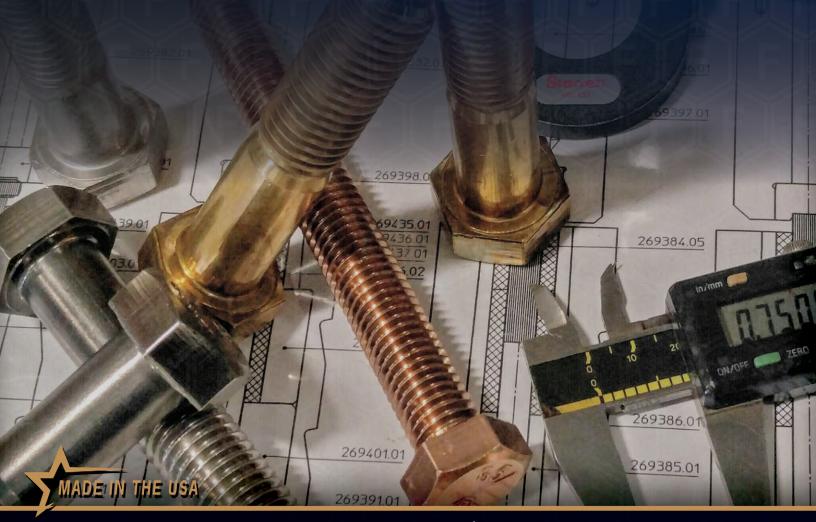


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Laurence Claus

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 offering technical and business training courses as well as technical consulting, expert witness and consultation work. He can be reached at 847-867-7363 or by email: Lclaus@NNiTraining.com. You can learn more about NNi at www.NNiTraining.com.

THREE THINGS THAT DISTRIBUTORS **MUST DO WELL - PART 1**

Not long ago I was reading a business management book. Amongst all of the things that the author was suggesting, he had a chapter on the twenty things that you should not be doing. It was an interesting concept and one very reminiscent of my training in competitive strategy, where one learns that strategy is as much about the things you say no to as it is the things you choose to do. Anyway, this idea struck a chord and led

me to set about putting together this three part series on three things that distributors must resist the urge to ignore, and, thus cannot do poorly. Although I am sure that there are a large number of topics we could place in this category, for this series we will focus on three big ones; Customer Service,

Quality, and Training. Doing the first two poorly is a sure equation to lose reputation and customers, while ignoring the third places you at risk of becoming outdated and irrelevant to customers.

I often teach on the subject of quality and will commonly engage participants in a discussion about what constitutes quality and why it is so important. Invariably the dialog boils down to two consequences of poor quality, lost profits and lost reputation. I often make the point that although lost profits are painful to experience, they have every possibility of only being short term. Loss of reputation, however, can, and often does, have long-lasting and permanent consequences. It is likely something programmed into the human psyche, but when we feel that we have been wronged or disabused,

we often do two things, 1. Vote with our feet by dropping the supplier or service provider, and, 2. Get memories like elephants that condition us to never go back to that supplier again. As the old adage goes, "Fool me once, shame on you, but fool me twice, shame on me."

Perhaps the only other activity next to quality that is so easy to entrap an organization and damage their reputation is providing poor customer service. In my

> experience it seems that the only organizations that can truly get away with abysmal customer service and not go out of business are the undertaker and the IRS because as the old saying goes, we can escape everything except dying and paying taxes. Ironically, providing



good, actually exceptional, customer service isn't that hard, but it must come from within the organization's culture. In other words, no amount of training or desire is going to all of a sudden make an organization excel at customer service. No, it must be a value that the entire organization, starting at the top, must possess.

There are many aspects and individual characteristics that can be utilized to gage whether an organization has good customer service or not. The remaining portion of this article is going to explore five of them. Although every organization is going to have its own unique situation which will define the customer service activities and values that it needs, these five are relatively universal and can be applied to pretty much any specific situation.



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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".

A GOOD JOB MARKET IS GREAT... **UNLESS YOU ARE HIRING!**

It's a great time to be looking for a job. For the first time in a long time people are finding that it is relatively easy to find work, especially if one has technical skills or is a truck driver. In a society where we have convinced all of our young people they should go to college and be a manager, we are finding a dearth of people who can handle tools and work with mechanical equipment.

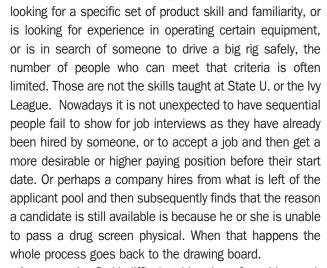
people with bachelor's degrees in the liberal arts are loath to put on a blue collar shirt and head to a construction site or drive a service truck to the next repair appointment. Even if they will make considerably more money and have greater opportunity with those jobs it is still something they are not mentally prepared to do. After all, their school guidance counselors

have been pointing them towards college and careers in "management" and professions all of their young lives.

With the recent rollbacks in government regulations and the tax law's opening up of rapid depreciation opportunities there is optimism in business and a readiness to expand operations and bring in more workers. But finding those workers quickly is difficult, and holding on to them is a further challenge. In February and March the National Federation of Independent Businesses released reports affirming that difficulty in finding and hiring qualified workers continues to the the single most important problem facing small business owners. In response to this some thirtyone per cent of small businesses responding to a survey said they were raising compensation levels to attract or retain employees. Some are using temporary workers to fill openings or are urging retirees to stay on a little longer or work part time to keep a stabilizing, skilled element in the workforce.

It is now much easier for companies to gather applicants and obtain resumes with all of the on-line hiring sites in the marketplace. Where once ads had to be placed in the weekend newspaper and then time passed while people mailed in replies and then interviews were set up, the whole process is collapsed into a shorter time frame. Within minutes of posting a job online resumes come to

> the hiring manager—and automated screening questions can be applied to do some of the initial sorting. But these new technological tools still cannot make up for a shortage of qualified and willing candidates. After all, the candidates themselves are able to market their skills more rapidly and effectively using the same technology. When a company is



As companies find it difficult to hire, they often either seek out workers from their competitors or engage recruiting consultants who start calling up those employed in the industry to see who might be open to a new opportunity.





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Albany Steel & Brass Corporation is a 100 year old company located in the heart of Chicago's west side industrial corridor. Founded in 1918 by Eugene "Jake" Lebovitz, a Hungarian-born immigrant who sought refuge in America to escape both religious persecution and a life of poverty, today Albany is one of Chicago's oldest family-owned businesses. Now in its fourth-generation, many of the qualities that made Albany successful 100 years ago, such as providing customers with high-quality products, competitive pricing, and extraordinary service,

remain guiding principles of the company at the present time. While originally a local

hardware store catering to residents of the Chicago's west side, Albany now serves customers across the United States, Canada, and Europe. Specifically, Albany serves the OEM, MRO, and construction sectors in addition to distributing a unique line of tapping screws, wing nuts, thumb

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After learning the construction trade in his native Hungary, Jake Lebovitz arrived in Chicago in 1913 as an 18 year old eager to own his own business and be his own boss. Before that would happen, Jake worked for several years in the Chicago Stockyards, working 12+ hours daily for very low wages. Five years later, for the sum of \$250 borrowed from the savings of his

wife Fanny, Jake purchased a small hardware store that would be known as Lebovitz Brothers Hardware. Following overseas service in WWII, Jake's son Alexander joined his father in the hardware business.

Al desired to gradually convert Lebovitz Brothers from purely a hardware store to an industrial mill supply house. Fortunately, this idea meshed well with the peaceful postwar economy that brought increased demand for industrial products associated with the housing, automobile, and durable goods markets.





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HYDROGEN EMBRITTLEMENT IN FASTENERS **CASE STUDIES - PART 3**

This is the third in our series of articles on case studies of hydrogen embrittlement in fasteners. If you are not familiar with hydrogen embrittlement I recommend that you read the previous issue's case studies and three other articles I have written on the subject for the Distributor's Link Magazine.

This case is about a fastener failure that occurred long ago, when I first came into the industry. It was my first, and one of the easiest and most straight forward hydrogen embrittlement failure investigations I have conducted. It involves one of the simplest and least expensive fasteners we know of, a roll pin – also formally known as a spring pin.

Before we get to the case, let's lay some groundwork on some of the other non-threaded fasteners that are susceptible to internal hydrogen embrittlement (IHE). One of the keys to knowing which non-threaded fasteners are of concern comes from the product description of the case at hand. The product is a "spring pin". When we think of steel and add the word "spring" invariably we are introducing high hardness into the equation. A fastener that has any kind of spring in its function will most likely be of a hardness well above that where hydrogen embrittlement can come into play.

The most common IHE susceptible non-threaded fasteners are lock washers, conical washers, spring pins, U-Nuts, retaining rings and spring clips. Before I came into the fastener industry I worked in an aerospace job shop where one of our products was coil springs, which were often electroplated. I knew about IHE susceptibility in these springs and we were required to bake and

test them. We had occasional failures, as coil springs are very hard and hardness is the primary factor in IHE susceptibility.

Fast forward a few years and I am now working for a fastener supplier where we regularly provided plating services to our customers. The practice at that time was to bake anything grade 8 or PC 10.9 and above, case hardened screws and lock washers. We plated. We baked. We tested. We did not run into any IHE issues. Until one day.

One of our customers was a manufacturer of large security safes. These were about the size of a refrigerator and we provided all of the fasteners needed for the safes. These included socket screws, machine screws, washers, shims, spring pins and dowel pins. Most of them were used in the safe locking mechanism. None of them were plated. They were a pretty good customer and we were an excellent vendor.

One day we got an angry call from the customer demanding a visit and complaining that our poor quality fasteners required them to cut the doors off of several safes when they could not get the lock mechanism to open the door. A few bad jokes about forgetting the safe combination did not help matters.

Upon entering the customer's shop floor I was shown the torched-off safe doors and a disassembled lock mechanism. On the table next to the lock mechanism was a broken zinc plated spring pin. I don't recall the exact size, but it was around 1/4" x 1". My first reaction was "that's not our pin", because I knew we did not provide them any plated product.



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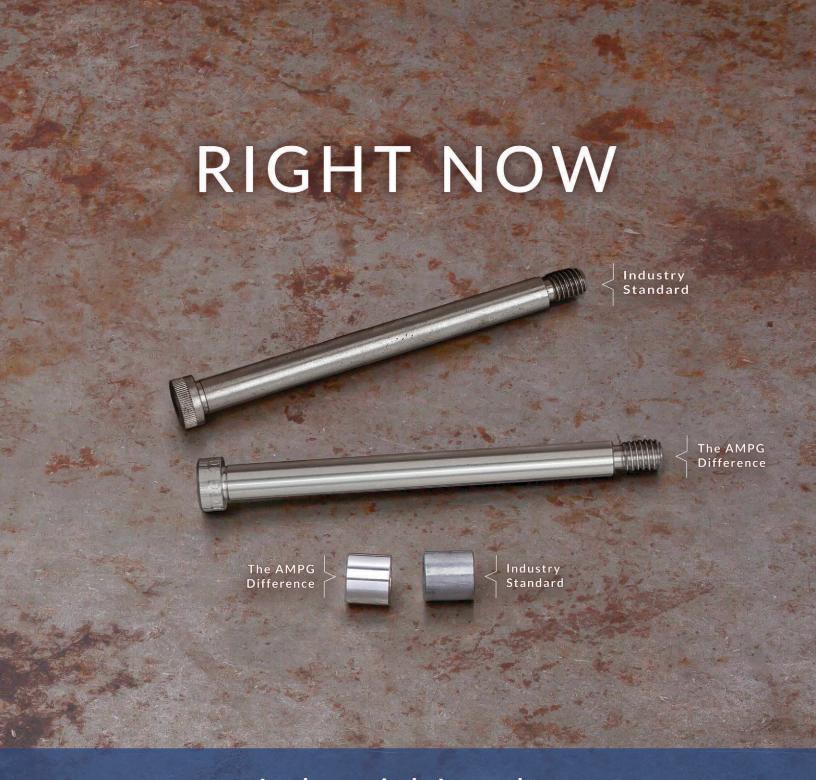
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HANDLING VENDOR DISCOUNTS

Handling PO Discounts

The fastener business is very competitive. Responding to the intensity of the price conscious distributors some vendors are offering discounts off their prices based on various criteria. It's great to get the discounts, but some distributors are struggling to figure out how to account for them. They usually want the Purchase Orders to show the original price and the discount. Most systems don't have a way of handling that.

Integrated Approach

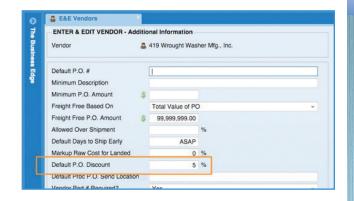
The Business Edge[™] has a feature that will allow the user to set a discount percentage by Vendor, Purchase Order, or by an individual detail line on a Purchase Order. Discounts may be offered by Vendors in the following ways:

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Default Discount By Vendor

A default PO discount can be added to each vendor's master file. Once that is done, the system will automatically reduce the landed cost of the line items that have a discount.

If there is a discount setup in the Vendor, it will automatically copy to the heading of the PO. This is convenient if you know you will always get a certain discount from a particular Vendor. This percentage will be



used as the default discount when creating new Purchase Orders for the vendor.

Discount Overrides

Whether there is a vendor default PO discount or one that has been entered in the heading of the Purchase Order, the discount can still be overridden in the detail line of the Purchase Order.





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Michael Mowins

Michael Mowins is the President-Global Licensing for Phillips Screw Company. He is the author of numerous articles on innovation, assembly, and quality. He has served as Associate Chairman for the National Fastener Distributors Association, Chairman for the Industrial Fastener Institute's Associate Supplier Division, and Chairman of the Aerospace Fastener Standards Advisory Committee. He serves on the SAE E-25 Engine Bolt, EG-1B Hand Tool, and G-21H Counterfeit Hardware Committees. He holds 4 U.S. Patents and is a graduate of the U.S. Naval Academy (BS) and University of Rhode Island (MBA).

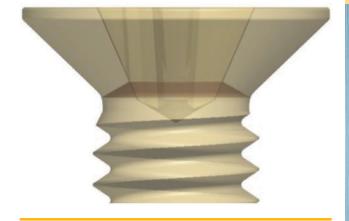
FASTENER HEAD STRENGTH WHITE PAPER

Fastener Head Strength - Defining a Common Metric and Why It is a Critical Characteristic

High strength threaded fasteners are critical components in the assembly of virtually every form of transportation and industrial machinery. Industry accepted standards for the measurement and performance of these critical parts have existed for decades, but recent failures of threaded fasteners in service and qualification testing are bringing new focus to the critical area between the head and shank of the fastener. This head-shank juncture has been highly analyzed in large diameter (≥ ½"/12mm) high strength externally wrenched bolts (Hex Head, 12 Point, etc.) used in automotive and aerospace applications, but less attention has been paid to the many bolts and screws below this threshold.

Recent qualification failures of M5 (0.197") diameter fasteners made to a European standard have brought new focus on this issue. The aerospace industry has always been concerned with the weight of the airframe structure and the thin materials used in airframe construction necessitated the use of 100° countersunk flush head fasteners. These thin profile heads as well as other low profile designs intended to reduce weight in aerospace, automotive and industrial applications present unique challenges for the design of an effective torque transfer mechanism (internal recess or external head shape) while still assuring head to shank integrity.

Fastener Standards Development Organizations



(SDO's) and company fastener standards engineers focus their attention on developing part standards that provide attributes (length, diameter, head diameter, head height, etc.) that can easily and accurately be measured to confirm conformance to form and fit requirements. Unfortunately, it is difficult to accurately measure the critical stress area between the top of the shank of the fastener and the bottom of the internal recess or lightening hole in an externally wrenched head without destroying the fastener to perform the measurement.

A consensus must be reached on how to calculate the Head Strength Ratio (HSR) to achieve the minimum acceptable tensile strength for the head to shank juncture and what method and measureable data should be used in the calculation. This white paper sets forth the current design limitations and a practical strategy to effectively assess the Head Strength Ratio (HSR) on current and future fastener designs.

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Jim Ruetz

Jim Ruetz is the Chief Executive Officer of AIS-All Integrated Solutions. He lives in Oak Creek, Wisconsin with his wife of 30 years. Jim was born with a cleft palate and understood firsthand the challenges of growing up with a disability. When he heard about CURE DUCHENNE, he decided to take care of two dreams...riding his motorcycle across the world and helping kids - which has always been important to him. "I encourage you to join me in my journey by helping to raise awareness and funds for CURE DUCHENNE," said Ruetz. For more information or to contribute see www.CureDuchenne.org.

AMERICAN FASTENER RIDER TOURS AUSTRALIA FOR DUCHENNE MUSCULAR DYSTROPHY

The Anatomy Of Planning A Motorcycle Trib to Oz!

Constructing a plan to bike around Oz (Australia) is unquestionably the most difficult motorcycle trip I've

planned to date. For starters, for every other trip I've planned in the past, I was familiar with the continent that I would be riding in- not so with Oz. Australia has long been on my bucket list but to date hadn't worked its way to the top of the list.

So how do you plan a trip in another hemisphere?

answers are: Research - Luck - and more Research!! A fair amount of late night internet work has been spent figuring out the best time of year to go. Taking snow and rain fall into consideration in the south and managing heat in the North and Outback is advisable. You must think in reverse of North America, where snow is a concern in the North and heat in the South.

I also had to figure out if I would rent a bike or ship mine. Fortunately for me, some of my research turned in to luck. The predominate bike rental company in Australia is a firm called Bike Round Oz, www.bikeroundoz.com. I was fortunate to get connected with one of their rental experts named Mark. After talking things over with Mark about which bikes are commonly available, I decided that

I would ship my bike instead of renting. In spite of not getting a rental sale, Mark became an invaluable resource and advisor to help me plan my trip. As with nearly every trip I've planned, the tendency is to be over ambitious

> with the initial route, Oz was no different. I had originally planned to do the entire continent in roughly 30 days. Mark's comments were "You can do it - but WHY would you want to?" Mark explained that people have taken 6 months to motorcycle through Oz and still missed a lot of terrific rides.

Every trip I've planned required



a balancing act between time available, distance to be covered, & sites to be visited. As it is, there are points that I'll be covering in two days, that ride magazines, recommend a week to thoroughly enjoy the vista's. Some of the advice Mark gave me you just don't find in research or the books. When he reviewed my route in the outback- Mark's advice was that on certain stretches of road "Don't start riding until an hour after the sunrise & stop riding an hour before sunset". I took special note of his comment, when he mentioned it for the third time putting a little more emphasis on the statement each time he mentioned it. Mark went on to explain that the outback critters have a tendency to gather on the warm pavement during the cooler night air!

distributor**news**

Innovative Components

Inc is pleased to welcome Alyssa Ovresat to our growing team! Alyssa has 6+ years experience as a marketing specialist and social media expert who graduated from the International Academy of Design & Technology.

Alyssawillinitiallybeputting her skills to use by amping up our social media presence, assisting with the design of our new website, trade show booth, catalog & magazine ads, as well as by giving the Innovative Components brand a refresh. Look for Alyssa at one of our many upcoming tradeshows! For 25 years, Innovative Components has been the leading manufacturer of Plastic Clamping Knobs, Quick Release Pins, Wire Rope Lanyards & Thread Detectives®.

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2018 IFI SOARING EAGLE AWARDS: RECIPIENTS ANNOUNCED IN KIAWAH ISLAND, SC

At an awards ceremony held during the 2018 Annual Meeting of the Industrial Fasteners Institute (IFI) in Kiawah Island, South Carolina, the IFI Soaring Eagle Service Award was presented to Robert J. Harris, retired from IFI; and the IFI Soaring Eagle Technology Award was presented to Michael Lawler, Continental Aero.

The 2018 Soaring Eagle Service Award Recipient Is Robert J. Harris



2018 IFI SOARING EAGLE SERVICE AWARD RECIPIENT ROBERT J. HARRIS AND WIFE, PAT

The IFI Soaring Eagle Service Award recognizes individuals who have contributed outstanding time and effort in the leadership of the Industrial Fasteners Institute and/or contributed to the health and well-being of the entire industrial fastener industry.

Rob Harris grew up in the Blue Grass State of Kentucky and graduated from the U.S. Merchant Marine Academy, Kings Point, NY. He completed a Master's in International Finance from College of William & Mary,

followed by an MBA from DePaul University. He was a gunboat Captain during the Vietnam War. His experiences include Port Captain with Amoco International Oil Co., Fleet Captain with SOHIO/BP, and corporate VP for an Aerospace company producing astronaut life support and propulsion systems for NASA shuttle and space station programs. He also oversaw the construction of all ships built for Amoco around the world.

Rob joined the Industrial Fasteners Institute (IFI) in 1995 as Managing Director. His first and most significant impact was to stabilize IFI's financial situation, which he did in part by directly overseeing industry trade shows in Cleveland and Chicago for six years, adding three quarters of a million dollars to reserves. Then, with Institute leadership, he reorganized IFI Divisions and rationalized dues resulting in reserves now being at the two years' operating cost level of \$2.1 million. He also relocated IFI headquarters from downtown Cleveland to co-location with PMA reducing annual operating and staffing costs by about \$400,000.

A major challenge facing the fastener industry in the 1990s was the Fastener Quality Act (FQA). With Rob's leadership and strong membership support, IFI reversed the industry's stance on the FQA and succeeded, with the assistance of representatives in Washington, in amending the FQA to the industry's benefit.

Rob mobilized membership participation through the successful publication of the 7th, 8th and 9th Inch Fastener Standards and 3rd Metric Fastener Standards editions. He changed the production of the books from conventional printing to desktop publishing, literally saving years of preparation and hundreds of thousands of dollars in production costs for each revision.

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INAUGURAL FASTENER FAIR USA DEEMED SUCCESSFUL BY ATTENDEES AND EXHIBITORS



Following two successful days, the inaugural Fastener Fair USA, the leading fastener and fixing exhibition in the U.S. for the full supply chain, came to a triumphant close at the Huntington Convention Center in Cleveland, OH on April 12, 2018.

In post-show attendance surveys, 87% indicated that they were satisfied with their experience at the show, 85% met their objectives, and 78% plan on attending the next Fastener Fair USA to be held in Detroit, MI on May 22-23, 2019.

More than 2,000 registrants attended the show, representing 27 different countries, exceeding the expectations of the show organizer, Mack Brook Exhibitions, Inc. Fastener Fair USA focused on creating a premier event to bring together manufacturers, distributors, suppliers and end users and it delivered on that goal. The types of visitors in attendance included:

- Fastener/Fixing Distributors or Suppliers
- Fastener/Fixing Manufacturers
- Fastener/Fixing Users
- Fastener/Fixing Wholesalers/ Suppliers to Resellers

255 exhibitors from 20 countries showcased their products, equipment, and solutions using 28,500 square feet of exhibit space. Exhibitors were able to connect with customers representing a variety of industries, the top being:

- Aerospace
- Agriculture/Off-Highway Machinery
- Automotive
- Construction
- Distribution
- Energy/Power Generation
- Maintenance/Repair

Many of the attendees came from Midwestern states like Ohio, Illinois, Indiana, and Michigan, but there were also many that traveled from California, Pennsylvania, and New York.

For exhibitors, Fastener Fair USA offered a unique platform for meeting with new and current customers, finding distributors, identifying engineering opportunities, and networking with fastener and fixing industry professionals throughout the entire supply chain.







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WAVE SPRINGS BEAT THE HEAT

by Jürgen Wenzel, Global Marketing Manager

Thermal expansion is a common problem in applications that are exposed to high temperatures or that use materials sensitive to temperature changes. The usual problem is that internal components become loose after external components expand due to an increase in operating temperatures causing unwanted movement, vibration, and noise within the application. Design engineers plan to avoid this situation by pre-loading components with spring elements that compensate for thermal expansion and fix the components tight in place, avoiding unwanted movement within the application.

However, not all spring elements are suited to easily compensate for a wider range of axial endplay caused by thermal expansion.

This was the recent case when Rotor Clip was asked to find a solution to preload a sensor used in an automotive exhaust gas system. During regular operation the exhaust system would heat up and cool down in different intervals. Some parts of the application would expand more than other components which results in a possible loose fit of the sensor in its housing.

In the original design the sensor case was preloaded by a conventional disc spring in order to prevent movement of the sensor and, ultimately, the unwanted noise and vibration described earlier along with the possibility of the unwanted movement leading to a defective sensor. After several tests it

was discovered that the disc spring could not offer the required levels of work height needed to keep the sensor seated tight in the application.

Rotor Clip solved this problem with a single-turn wave



PATENT FLAT END WAVESPRING

spring made from A286 stainless steel conform to DIN Material No. 1.4980. The wave spring solution Rotor Clip provided solves three application challenges at once:

[1] It offers sufficient travel to compensate for the maximum thermal expansion within the application.

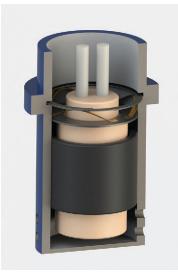
[2] Due to the material choice (A286 stainless steel)

the spring is less prone to fatigue due the application's operating temperatures and, therefore, prolongs total application life.

[3] It simplifies the assembly process by eliminating a secondary assembly step. (The original design required that the disc spring element be held in place before the sensor was seated inside the application housing. In contrast the wave spring "clings" to the inside of the housing in which the sensor sits, eliminating the necessity for this secondary step).

In summary, wave springs deliver a high degree of versatility to the designer seeking to solve a particular application problem, like the one described above. The flexibility afforded by the wave spring

regarding materials, configurations and styles, makes it a critical "go to" component for the engineer searching for viable alternatives to traditional ways of accomplishing effective component pre-load.



SINGLE TURN WAVE SPRING PRELOADS **EXHAUST SENSOR ASSEMBLY**

distributor news

Advance Components

now master stocking distributor of Heyco® Solar Power Components. Heyco® is a worldwide leading manufacturer of wire management products and components. The Heyco® solar line of SunRunner® Clips, SunBundler® and Nytye® Cable Ties, and Liquid Tight Cordgrips set the standard for excellence and high performance in the solar industry.

"Heyco is excited announce the recent addition of over 220,000 pieces of 28 different SKUs to Advance Components' offering," says Tom Marsden, Renewable Energies and Product Sales Manager.

"Advance's outstanding level of service and Heyco's superior quality in products makes it a no-brainer when choosing a partner for your next solar job."

Hevco® Solar Power Components are available in the Advance online store. and are ready for same-day shipping, low minimums, drop shipping, EDI planning and other value-added solutions that make Advance a trusted supply chain partner.

Advance Components is a master-stocking distributor located in Carrollton, (Dallas), Texas.

For more information contact Advance Components by Tel: 1-800-275-7772, email: sales@advancecomponents. com or online at www. advancecomponents.com.

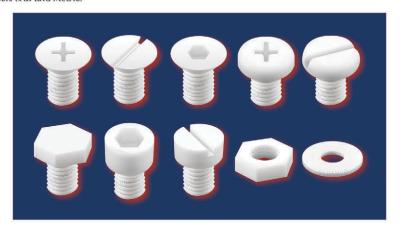
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Quality Assurance - Ceramco's solid ceramic fasteners are made in the USA, ISO 9001-2015 certified and ITAR approved.

Profitability - In addition to discounted pricing, stocking distributors are eligible for bonus commissions when annual sales goals are met. Drop-ship arrangements with discounted pricing also available.

Materials Comparison* Rating: 1 - 4 (4 being best)

Material	Maximum Service Temperature	Thermal Conductivity	Electrical Conductivity	Volume Resistivity	Coefficient of Thermal Expansion
		CERAMIC	S		
Alumina (99.8%)	4	4	4	4	3
Zirconia TZP‡	3	4	4	4	4
		OTHER MATE	ERIALS		
Molybdenum	4	1	3	2	4
Nylon 6,6	1	4	4	4	3
Stainless Steel	2	2	3	1	1
Titanium	3	3	2	1	2

^{*} These ratings are averages intended for quick comparison only. No guarantee should be assumed or is implied. ‡ Yttria Stabilized.

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IFE SECURES DATES FOR EXPO THROUGH 2020

by Linh Vu

The International Fastener Expo (IFE), first established in 1981 and holding consecutive events for more than three decades, has secured the Mandalay Bay Convention Center for its annual prestigious event, through 2020.

¤ IFE 2018: October 30 - November 1

¤ IFE 2019: September 17 - 19

¤ IFE 2020: September 28 - 30

Event organizer Emerald Expositions has leveraged decades of relationship-building to secure the Las Vegas dates for an unprecedented multi-year contract, allowing the Fastener industry to plan future travel and schedules around the event. "Securing the right venue at such an ideal time, multiple years ahead is very challenging in Las Vegas," said Karalynn Sprouse, Executive Vice President of Emerald Expositions. "We know how important commitment and planning is to the fastener industry and this move enables us to produce the largest marketplace gathering for the 38th and 39th year in a row, with room for continued growth!"

2019 and 2020 will continue with the two-and-a-half day schedule, allowing exhibitors a chance to set up their own booths and the extra time to attend a "Preview



INTERNATIONAL FASTENER EXPO



Day" with early, private access to connect with global source and machinery and tooling vendors.

The International Fastener Expo (IFE) is the largest and most diverse gathering of fastener and industrial professionals in North America. Founded in 1981 it serves all reaches of the supply chain, from manufacturer to distributor to end user, and features nearly 70 product categories. With over 850 suppliers and more than 2,500 buyers from 30+ nations, the International Fastener Expo delivers industry-leading content and facilitates vital industry connections at their annual three-day show in Las Vegas, Nevada, the entertainment and trade show capitol of North America. The 2018 Expo will be held October 30 - November 1 at the Mandalay Bay Convention Center in Las Vegas, NV. The 2019 and 2020 Expo will also be held at the Mandalay Bay Convention Center.

For information, or to book your participation at IFE 2018, visit www.fastenershows.com.



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STATE OF THE ART VMI HELPS PUT **ARNOLD SUPPLY ON THE MAP**

Arnold Supply is a one stop shop for supply chain management. They will take inventory, stock bins and replenish hardware and fasteners as customers need them. They also centralize inventory processing with purchasing departments, engineering staff and floor personnel to reduce costs and guarantee delivery.

How It Works

Arnold Supply's state-of-the-art VMI program utilizes the most up-to-date technology to take inventory their customers' hardware and fasteners.

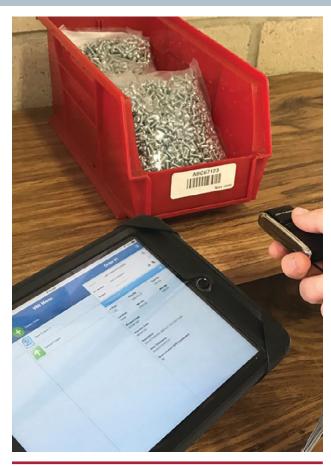
When they begin a VMI program, they usually ask for a forecast report or annual usages so that they can accurately price out the necessary quantities.

Based on that information, they provide pricing and a suggested minimum and maximum bin quantity to go with each part.



Then they create custom bar codes. The labels can be as simple as the one above or they can contain as much information as the customer desires.

A qualified Arnold Supply Salesman will arrive at the customer's facility with an iPad, a wireless scanner and the customized bar codes to place on each bin.



Long Record of Exceptional Service

During a recent interview, Bill Donahue, Sr., President, said, "Arnold Supply Inc. started in March 1976 on a wing and prayer. In 1978, we moved to a 2,000 square foot warehouse in Wallingford, CT. We now own the 35,000 square foot building and stock it to capacity. We have also expanded and now we have locations in Winston-Salem, North Carolina and Nogales, Arizona."



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INDUSTRIAL FASTENERS INSTITUTE



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INDUSTRIAL FASTENERS INSTITUTE ELECTS NEW **CHAIRMAN AND VICE-CHAIRMAN**

The Industrial Fasteners Institute (IFI), held its Annual Meeting in Kiawah Island, SC on March 3-6, 2018.

Newly elected Chairman for the period 2018-2019 is Mr. Phil Johnson of Agrati; newly elected Vice Chairman is Mr. Manny DeSantis of Valley Fastener Group, LLC.





PHIL JOHNSON

MANNY DESANTIS IFI VICE-CHAIRMAN

In addition to Mr. Johnson and Mr. DeSantis, the Board of Directors also includes:

Preston Boyd, TRAMEC Hill Fastener Jeff Liter, Wrought Washer Mfg., Inc. Michele Clarke, Valley Forge & Bolt Mfg. Co. Kevin Johnson, Birmingham Fastener, Inc. Larry Valeriano, California Screw Products Corp. Owe Carlsson, Arconic Fastening Systems & Rings Wayne Drysol, 3V Fastening Systems (CAM) Ed Lumm, Shannon Precision Fastener, LLC David Hebert, Freeway Corporation Chris Rink, Prestige Stamping, Inc. Brian Bonebrake, Johnstown Wire Technologies Inc.

Division Chairs for IFI are:

Div. I - Industrial Products:

Don Kubkowski, Sems and Specials, Inc.

Div. II – Aerospace Fastener Products:

Pat Wells, The Young Engineers, Inc.

Div. III – Automotive Industry Fastener Group:

Ryan Surber, ATF, Inc.

Associate Suppliers' Division:

Brian Bonebrake, Johnstown Wire Technologies Inc.

About IFI

Industrial Fasteners Institute, headquartered in Independence, Ohio, is an Association of the leading North American manufacturers of bolts, nuts, screws, rivets, pins, washers, and a myriad of custom formed parts. Suppliers of materials, machinery, equipment and engineered services, are Associate Members of the Institute. IFI membership currently stands at 73 Company Members and 61 Associate Members.

For over 80 years, IFI's fastener manufacturing member companies have combined their skills and knowledge to advance the technology and application engineering of fasteners and formed parts through planned programs of research and education. Users of fasteners and formed parts in all industries benefit from the continuing design, manufacturing, and application advances made by the Industrial Fasteners Institute membership.

For more information about the IFI visit them online at www.indfast.org.



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INTERNATIONAL FASTENERS IS ON THE MOVE!

International Fasteners, Inc. is on the move! Strong customer demand for Daggerz™ brand fasteners in color coded boxes designed to help ease material identification has dictated moving the Arizona location in Phoenix to the Los Angeles, California area and now calls Clark and Associates in Anaheim, California home to the west coast operations with more stock out west than ever before. Full time personnel are on hand to handle all of the growing needs on the west from late in the day phone calls and getting product shipped to pick-ups with little-to-no notice. Clark and Associates is located at 1640 S. Claudina Way, Anaheim, CA 92806.

Our Dallas warehouse is also on the move! C.R. Kinsman & Associates in Euless is the new home of Daggerz[™] brand products in the Texas area. With the increasing need to stock more product and provide more value, this new partnership is sure to meet customer needs

now more than ever. Product can be picked up at 1110 Pamela Drive, Euless, TX 76040.

Combined, International Fasteners, Inc. has six stocking locations throughout the United States offering convenient pick up, drop ship, overnight and Itl shipments. And, with over 900+ line items, there has never been an easier time to reach prepaid freight minimums out of each of the locations.

Did you know that IFI specializes in customizing programs to meet the specific needs of distributors? With custom private packaging programs from convenient shipping points, International Fasteners, Inc. is large enough to handle your business, yet small enough to care."

Make us your choice, call 888-241-0203 or email Joanne Bialas, Vice President of Sales and Marketing at joanne@daggerz.com for more information on getting set up as a Daggerz™ brand Distributor and start selling Quality Construction Fasteners today!

BUSINESS FOCUS ARTICLE

INTERNATIONAL FASTENERS. INC.



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A PREVIEW OF STAFDA'S UPCOMING 42nd ANNUAL CONVENTION & TRADE SHOW by Georgia H. Foley, CEO

The Specialty Tools & Fasteners Distributors Association (STAFDA) will bring together 4,500 member leaders, October 28-30, in Phoenix for its Annual meeting. All events will be held at the Phoenix Convention Center and STAFDA's host hotels are all walking distance to the Center.

Education is the name of the game on Sunday, October 28 and five workshop leaders will offer their expertise.

STAFDA's online media consultant, Bob DeStefano, will lead Social Selling: How Sales Reps can Leverage Social Media to Attract, Engage, and Close More Customers. He'll explain how social selling has changed the sales process as Millennials take over

the workforce and the buying process. Current statistics reveal that cold calling is dead - only 1% of cold calls result in appointments, but more than 75% of a buyer's journey is completed online before they talk to a salesperson, and 78% of those salespeople using social media outsell their peers. Bob will show how to harness social media to generate new business opportunities.

Leaders are not Born. They are **Built!** will be the subject from **Randy Disharoon.** He'll introduce the four phases of leadership development - Build Within, Build Around, Build Up, and Build Out -and how this

can help a person achieve their goals and develop their

personal brand. Randy will explain the three styles of leadership - Direction, Collaboration, and Delegation - and how being an effective leader is a way to recruit and retain the best talent. Attendees will

also discover the tools necessary to build a company "Dream Team" while employing the seven phases of people development.

> Selling Boldly by **Alex** Goldfayn will address the fear most salespeople have. Fear is the reason they don't like to pick up the phone or offer

customers additional products and services, even though they want to buy more from the company. Alex will explain how to overcome this destructive fear and replace it with confidence, optimism, gratitude, joy,



and proactive sales. These are the principles in the new field of positive psychology which is transforming how salespeople work and succeed.



Benchmarking expert, Greg Manns, will explain How to Improve **Distributor Profitability.** Profitability is the #1 concern of any business, but for distributors who fight daily with price increases, falling margins,

pressure from online sellers, in addition to high fixed costs, it can be difficult to grow. As Senior Vice President of Industry Insights, Greg will focus on critical and strategic issues for upper management and show how it's possible to use empirical information to determine what drives profit in distribution.

distributor news

American Ring. family owned and operated manufacturer and supplier of retaining rings, snap rings, and Belleville disc springs, is pleased to announce the acquisition of all tooling, dies, equipment, and intellectual property of S&M Retaining Ring.

Founded in 2001 by Michael O'Shea Sr, S&M Retaining Ring produced tapered section retaining rings, stamped out of carbon spring steel, stainless steel (PH 15-7 MO) and beryllium copper all to the ASME B18.27-1998 and MIL DTL 21248 specifications.

A gifted tool and die engineer, Mike O'Shea had over 40 years of experience in the retaining ring industry, having worked for Waldes Rotor Clip, Truarc. and Industrial Retaining Ring. Upon his death in May of 2017, the O'Shea family wished to see his legacy live on, and American Ring is pleased to fulfill their request.

With the acquisition of S&M Retaining Ring's tooling, dies, equipment and intellectual property, coupled American Ring's exceptional engineering and customer service, we are excited about the product offerings we will be able to bring to the marketplace.

information For more contact American Ring at 30450 Bruce Industrial Pkwy, Solon, OH 44139. Tel: 1-800-635-1133. email: sales@ americanring.com or online at www.americanring.com.



MID-WEST FASTENER ASSOCIATION

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MID-WEST MIXER - FUN CELEBRATION OF WARMER WEATHER IN CHICAGO by Nancy Rich

The MWFA hosted a spring Mid-West Mixer to get fastener industry personnel out enjoying the beginning of a warmer season for Chicago. Winters may be long in Chicago but the Midwest knows how to enjoy nice weather! The first Mixer of the year was held at Eaglewood Resort (host to MWFA's upcoming golf outing) where attendees had an opportunity to stay inside or enjoy the outside fire pit. The Mixer attracted over 60 attendees enjoying cocktails, appetizers, raffles and roulette, not to mention the fun of seeing fastener friends. The roulette table was a first for a MWFA event but only a preview of more to come!

Thank you to our raffle sponsors:

Kerr Lakeside Inc.

Central Wire

Star Stainless Screw

The event is free to attendees; however, MWFA is grateful to their many sponsors making this a great event:

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Silver Sponsors

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XL Screw Corporation

The next MWFA Mixer will be August 23rd at Real Time

Sports in Elk Grove, IL.





MWFA Welcomes New Members

All America Threaded Products, Inc., Denver, CO Components Company Inc., Brookfield, WI Jackson Manufacturing Inc., Maguoketa, IA

2018 MWFA Calendar

August 20-24 Certified Fasteners Specialist Class

Belvedere Banquets, Elk Grove, IL

August 23 MWFA Mixer

Real Time Sports/Elk Grove, IL

October 18 PPAP/Corrective Action Seminar

Elk Grove, IL









Jo Morris Marketing Director, Fastener Training Institutes

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NONPROFIT - A GROUP MAKING A DIFFERENCE IN THE COMMUNITY...NOW THAT'S FTI

When you think of "Nonprofits" what do you think of? Large organizations like the American Red Cross or Big Brothers Big Sisters? Public charities or associations formed to benefit the community by providing needed services to those who could not normally afford them. From the PTA to Make a Wish, nonprofits have positively impacted our communities and daily lives touching each of us whether we know it or not. The Fastener Training Institute, unbeknownst to many, is a 501(c)(6) nonprofit; created for the same reasons as any other nonprofit... to provide an affordable provision (training) to those who need it.

Realizing how prevalent nonprofits are in our communities, it is notable to mention a few misconceptions about why they exist and how they survive. Arguably, one of the most noteworthy fallacies regarding nonprofits is that they should be financially sustainable, self-sufficient through earned income sources. The reality is most nonprofits will never be financially self-supporting due to the nature of why they were created in the first place, to provide goods and services to those who can't afford them. The Fastener Training Institute's mission is to offer as many affordable, content-rich, fastener-related courses to as many people as possible. Our offering includes more than 27 classes, in 12 cities, plus monthly webinars. Positive revenue is absorbed into maintaining the existing array of classes we offer plus long-term growth.

Another misconception regarding nonprofits is that they are run without operating costs, managed (or instructed) by volunteers. One of the primary directives

of the Fastener Training Institute is to bring the fastener industry experts, and their topics of expertise, to the public. Funds are required for course development, instructor fees, textbooks, tours, marketing and general course production. These costs are essential to delivering superior training.

Continuing the topic of nonprofit misnomers is that we are large with countless funding resources. The reality is that many nonprofit organizations, including FTI, are small in budget and resources. We rely heavily on grants, private donations, sponsorships and class enrollments to sustain. Charitable giving offers numerous tax benefits to the donor and measurable value to the receiving sector. In 2014 The Fastener Education Foundation, 501(c) (3), was created as a tax-deductible way for companies and individuals to help develop and fund fastenerrelated education. FEF has helped FTI fund new course development, online training and live class productions. Without the assistance from the Fastener Education Foundation, FTI's programs of study would be greatly reduced.

The need for training has been established, distinguished personnel are retiring, businesses are booming, and development programs have proven to build productivity. It has also been established that training is costly and time consuming. The Fastener Training Institute is an essential program for the fastener industry to mobilize around; retooling skill sets to meet the economy's growth patterns in sectors where it's needed.



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PLASTIC MATERIALS

METAL MACHINED FASTENERS

E&T Fasteners takes pride in offering exceptional service, remarkable pricing and lead times that can't be beat. Our staff has extensive experience in the plastic fastener and component industry. Need technical assistance? We can help. We're committed to being on the cutting edge of what's new in the industry so you'll never deal with an inexperienced clerk.

With networked fastener operations in California and North Carolina to serve you, we're there when you need us regardless of where you placed your plastic fastener or plastic component order.

E&T Fasteners offers a complete line of engineered molded plastic fasteners and machined metal fasteners.

E&T can machine precision custom plastics fasteners and metal components to your specifications. Don't have a drawing? In most cases we can create a drawing from your sample. Every person on our engineering staff is committed to delivering you with the highest quality metal or plastic fastener and component product in record time.





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GLOBALFASTENERNEWS.COM

by JOHN WOLZ EDITOR editor@globalfastenernews.com



MATTEN: EUROPEAN FASTENER DEMAND STRONG

The European fastener industry is doing quite well thanks to a strong economy, the executive editor of Europe's fastener magazine told Fastener Fair USA. The biggest problem may be "significant pressure on capacity - whether productive people or supply chain."

Phil Matten points to several years of solid growth in manufacturing in the eurozone.

European fastener company ownership "is still strongly family particularly in Germany and Italy providing stability through long term commitment."

There are ownership changes, such as Nedschroef now being Chinese owned and Taiwan's Boltun and Sumeeko having bought into European fastener manufacturing.

Matten. executive editor Fastener+Fixing Magazine for two decades, followed marketing for fastener companies earlier in his career, and has visited hundreds of companies across the world.

- a About 20% of European fastener production is for aerospace, followed by automotive. Oil and gas fastener specialists "have had a torrid time but are hanging in there," Matten reported.
- The construction fastener market "is tough," Matten said. "The strongest manufacturer is Cooper & Turner, which has now set up manufacturing in the U.S."
- Sixty percent of UK fastener manufacturers turn over less than EUR 8.1 million (US\$10m) annually.

They are primarily hot forgers and NC machinists focusing on short runs, short lead times and niche demand.

"They're agile, quality oriented and highly responsive - necessities to prosper in today's market."

a Automotive is a major fastener demand driver in Europe.

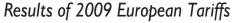
"You can see why Germany is the dominant fastener producing nation in Europe - and why export has long been really important to Italy," Matten observed.

- Distribution's strength is local supply and where "OEMs require intensive logistical support."
 - There is a high level of distribution family

ownership, providing "a key stability" in Europe, Matten noted. He cited Keller & Kalmbach, Berrang, Bossard, Dresselhaus, Reyher, Schafer & Peters, Bollhof and Würth Group.

"Yes, there is significant consolidation, particularly in the UK recently – and there will be more," Matten said. "However, most of the big family companies have clear succession provision."

Examples of corporate ownership are Optimas Solutions, TR Fastenings and Supply Technologies.



The results of the 2009 antidumping duties of 85% on carbon steel fasteners from China were mixed. There is "no question that China had achieved a massive share of the imported sector and it was hurting European manufacturers."

The duties may have stopped direct imports, but "triggered all kinds of circumvention through other countries - particularly Malaysia," Matten said.

"European producers certainly did benefit in 2009/2010, but a lot of that was because distributors had radically cut inventory and were living hand-tomouth," Matten observed. "Longer term, distributors swung back to Asia – particularly to Taiwan."

"The duties gave volition to fastener manufacturing in many other countries - notably Vietnam long range, and Turkey short range," Matten finds.







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COLD HEADED vs MACHINED SOLID PINS

by Jeff Greenwood, Product Sales Engineer

Solid Pins are common fasteners used for aligning, joining, and assembling multiple components. Solid Pins are most useful where the clamp load of a bolt is not needed.

They are also used for specific functions such as locating components, hinges, tamper-resistant designs, etc. Two common manufacturing methods used to produce Solid Pins are cold heading and machining. Cold heading and machining both produce high quality, consistent parts. interestingly, many outside diameter (OD) ground dowels are not actually machined. It is common to pass cold headed blanks through a secondary grinding operation in order to produce the OD ground dowels.

It's important to understand the differences between cold heading and machining when designing a Solid Pin for an assembly as the manufacturing method directly impacts the design specifications (tolerances, geometry, & material) that can be assigned to the Solid Pin.

The objective of this paper is to educate designers about the differences between cold heading and machining so that they understand how to design a Solid Pin that optimizes performance and reduces total manufactured cost of the assembly.

Machining Overview

Machining is the process of cutting raw material (rod) into a desired geometry using cutting tools. This operation is typically performed on a lathe. Machining produces scrap in the form of chips.

Cold Headed Overview

Cold heading is the process of forming material into a desired geometry by upsetting the



material (wire) in one or more dies. The most common method of cold heading fasteners uses one die and two blows as this is sufficient for forming chamfers and heads.

MANUFACTURING COMPARISON					
	Cold Heading	Machining			
Quality of parts	V	√			
Yield & tensile strength	V .	_			
Tight tolerances	√ ,	√ ,			
Retention features	1	1			
Scrap during manufacturing		X			
Complex part geometry					
Large length / diameter pin	√				
Minimal tooling costs		√ ,			
Short setup time		√			
Fast cycle time	√				
Lowest overall Solid Pin cost	√ .				
Lowest hole preparation costs					

TABLE 1

distributor**news**

AFIXX Alliance®, division of Pacific Warehouse Sales, is pleased to announce that we are adding the Sherex Fastening Solutions® TEC Series™ wedge locking washer to our product line.

AFIXX will provide sales and service to distributors on a national level through our E-Commerce site, afixx. com. TEC Series™ products will be stocked in both of our distribution facilities in Chino. California and Noblesville, Indiana to provide short lead times to customers throughout the country.

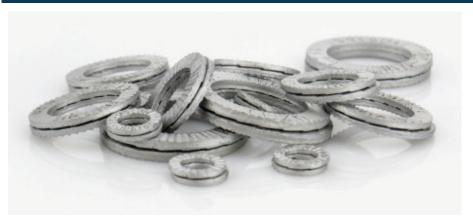
"We are excited to add the TEC Series™ to our growing product offerings," says VP/ GM Larry Kanne, "adding great products from a highly respected company like Sherex, let's our customers know they can continue to expect the best-in-class performance, availability and value from our team."

TEC Series™ washers maintain clamp load in high vibration and load applications, protecting fastened joints from vibrational loosening using proven wedge lock technology. TEC washers secure joints using tension, rather than friction, as other traditional methods use.

Sherex launched the TEC Series™ product line in June 2017, leveraging 35 years of success in the fastener industry, world-class engineering and development expertise, and global manufacturing capabilities.



distributor**news**



TEC Series[™] washers are available in standard and large and stainless steel, in sizes from M3(#5) through M72(3"). Sherex's engineering and technical sales team is available to custom design products with special dimensions, materials and coatings.

AFIXX Alliance® sells to distributors only on a national level,

with a focus on our innovative E-Commerce platform, afixx.com. outer diameter styles in carbon steel As a division of Pacific Warehouse Sales, AFIXX is able to offer a vast inventory of products for the industrial and fastener markets with the service to match.

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ASPHALT ANCHORS KEEP MODULAR BUILDINGS GROUNDED

'Modular construction' is a method of using prefabricated large-volume components to assemble a building on the final construction site. This efficient method has gained followers as early as the mid 1850's after a carpenter built and then disassembled a small house in London in preparation for his son's emigration to Australia in 1837.

Today modular construction is used for temporary or permanent offices, schools, hospitals and even in Disney's Polynesian resort. Because modules need to be transported from the factory to the construction sites, they are engineered to be rugged and rigid. For this reason, many of the installations do not require an elaborate foundation to hold the building structure together. The buildings still need to be tied securely to the ground, however, to resist winds and ground movement.

The most common method of installing modular buildings is to place the buildings on cement blocks



MODULAR OFFICE AND STRAP

and to secure them to the ground using auger-style earth anchors with straps. The straps are placed all around the building, and pull the undercarriage at a 45 degree angle in a manner similar to the tie-downs used on tents - except that these straps are short and are placed under the building where they are out of harm's way.

A leading manufacturer of precast building, Anchor Modular Buildings based in Williamsburg VA, was tasked with installing a 3,000 square foot modular building on 12" thick asphalt. "This kind of asphalt is unusually thick and we had to find



a work around," said Anchor Modular's President, Jack Dooley. Using the traditional earth auger anchors was not practical for asphalt. "We needed something that would easily bolt into the asphalt, but still be able to meet our requirements of resisting 1,800 pounds of pull at a 45-degree angle." With a need for 68 anchors to meet code requirements, it was also essential that the solution be simple and inexpensive to install.

An onsite engineer was able to help. Having successfully used these in the past, the engineer recommended BoltHold™ asphalt anchors as a solution. These anchors, manufactured by Asphalt Anchors Corp. (AAC) of NJ, are specially designed to bond with asphalt using a special grout. Of unusual design and length, when compared with concrete anchors, these anchors turned out to be the perfect solution.



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BBI's ROSA E. HEARN ANNOUNCED AS **WOMEN OF THE YEAR**

The Woman of the Year event was founded in 1987 by Assemblywoman Bev Hansen (R) and Assemblywoman Sally Tanner (D), who noticed that the California Legislature had no events planned for the month of March, Women's History Month. In celebration of the contributions to society made by remarkable women

throughout California, Hansen and Tanner arranged to invite one woman from each Senate and Assembly district to come to the Capitol and be honored for their accomplishments. The women were to be recognized as Woman of the Year in a formal ceremony on the floors of the Senate and Assembly. This yearly event, sponsored and organized by the Women's Caucus, is greatly anticipated by all Legislators today. The Senate did not hold a Capitol celebration, but many Senators celebrated in their district.

On March 22nd, 2018 the 29th Senate district ceremony,

where Senator Josh Newman was the keynote speaker, honored women and gathered legislators to award the 2018 Women of the year awards to women who have shown exemplary leadership, as part of a long and distinguished record of advocacy for the professional advancement of women through the promotion of education and professional development.

One of the those honorees was Rosa E. Hearn from Brighton-Best International. Rosa was awarded the 2018 Women of the Year in the business category. Through BBI, Ms. Hearn works with the Rancho Santiago Center for International Trade Development for the Global Trade & Logistics in Orange County, where she teaches and speaks to High School and College Students about the fastener market. Ms. Hearn also provides

> Externships to teachers and counselors providing a business view on importing, exporting and global trade. As Chairwoman and immediate past president of Women in the Fastener Industry, Rosa helps provide opportunities for women in the fastener industry at all levels of experience. Her passion to advancing women in the fastener industry has helped WIFI become a respected national not-for-profit organization.

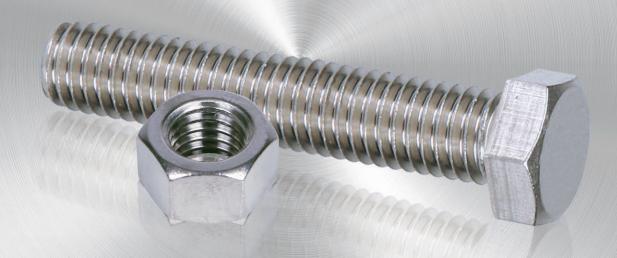
> "I wanted to inspire people" says, Rosa Hearn "Ever since becoming Rosa the Proferred Riveter, I wanted to embody what Rosie the Riveter stood for." "I

knew taking on the name was a huge responsibility, but BBI has been so supportive that training college/ high school students about the role of fasteners, tools, safety in today world has been so easy thanks to Proferred". "I'm also grateful for being part of WIFI, working with different types of strong women helps me become a better person and gives me new direction. I couldn't believe I was recognized for this effort. I am so honored."





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FASTENER MANUFACTURERS IMPROVE 'DRIVABILITY' WITH UNIQUE COATINGS

Specialty coatings can provide fastener manufacturers with new products and a competitive edge

Since cordless tool battery life is a serious concern for pros and DIYs, a growing number of fastener manufacturers are addressing the issue with unique coatings that dramatically increases the "drivability" of nails and screws.

This, in turn, minimizes the amount of power used by cordless tools, extends the battery life and increases productivity since fasteners can be fixed faster and in higher volume before the battery must be changed out or recharged.

Drivability can also impact gas-actuated fastening systems that utilize fuel cells, coupled with batteries, to drive framing nails, finishing brads or screws without having to connect to an air compressor or power cord.

The fuel cells, which can cost as much as \$15 at big box stores depending on the brand, are typically advertised as being able to driving 1,200 nails. By improving drivability of framing nails, a more economical and efficient 2,000 nails could be achieved per fuel cell, for example.

According to Dan Chin, President of Universal Chemicals & Coatings (Unichem), this was the specific goal of one fastener manufacturer that sought his company's help in creating a specialty coating that would dramatically improve the drivability of nails.

Unichem is a custom coating and adhesives formulator that has worked with fastener manufacturers on these types of issues.

The manufacturer's goal, says Chin, was to be able to market the gas-actuated framing nail gun's ability to drive a higher number of nails per fuel cell to differentiate



it from the competition.

"The goal was to improve what the company called 'ease of drive' by 25%, which is a huge number," says Chin. "In doing so, more framing nails could be driven flush with one fuel cell."

To shoot a nail, fuel cell-powered nail guns inject a small amount of fuel along with compressed air into a chamber. A battery-supplied spark then causes a tiny explosion, which drives home the nail.

Manufacturers of cordless framing and finishing guns often market unit-specific nails or screws. These consumables generate significant ongoing revenue. Given the competition in the space, offering a product with a promotable differentiator is even more critical.

The challenge facing Unichem was to create a custom coating for the nails that improved drivability without allowing it to be easily removed.

"You can create a coating that increases the lubricity or 'slipperiness' of the nail so it goes in easily, but then it must act like an adhesive once in so it cannot be easily taken out," says Chin.

Unichem's chemists successfully figured out a coating formulation that improved nail drivability by 25%, while meeting required anti-withdrawal properties.

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distributor news

Earnest Machine has added new equipment at its Rocky River, OH, facility that enables the company to do high-volume production and specialty drilling of holes from 3/64" to 13/32".

"Earnest has always offered low-volume drilling of parts," said Al Shannon, manufacturing manager at Earnest Machine. "This new equipment opens up additional opportunities. enabling us to bring more drilling services in-house and allows us to take on higher volume runs of up to one million pieces."

Shannon noted that adding high-volume drilling capabilities equips Earnest Machine to offer one-stop shopping for customers who need specialty work, making custom jobs quick and easy. In addition to the ability to drill small diameter holes in small parts in large volumes, Earnest continues to offer hex head and socket head drilling up to 1-1/4" diameter; thread drilling up to 2" diameter; core drilling up to 2-3/4" deep and tapping up to 2-1/2" deep.

"One of the common complaints in our industry is that machine shop work is rarely on time," added Shannon. "At Earnest Machine, we track our shop metrics and our on-time delivery rate is 97.4%. That's because everything we do is wrapped in the Earnest customer service experience, including the custom work in our shop. If it's not a quality part, the job's not complete."

Earnest Machine was founded in 1948 and is a global importer, distributor, and manufacturer of large diameter and hard-to-find fasteners for the agriculture, construction equipment, heavy transportation, mining, structural construction and wind industries. Earnest maintains warehouses, sales offices, and manufacturing centers in Cleveland, OH, and Wolverhampton, England, as well as warehouses in Atlanta, GA. and Indianapolis, IN.

For more information contact Earnest Machine Products at 1250 Linda Street, Suite 301, Rocky River, OH 44116. Tel: 1-800-327-6378 or visit them online at www.earnestmachine.com.

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by JOHN WOLZ EDITOR editor@globalfastenernews.com



SFA PANEL: U.S. TARIFFS HIKING STEEL PRICES

BTM Manufacturing received two loads of steel over a three-week period with price increases of \$0.04 per pound on each load.

Southwestern Fastener Association panelists agreed steel tariffs are not creating jobs – just price increases. The panel on "Past, Present & Future" featured SFA members representing different age groups.

"The steel industry is taking advantage of it," BTM president Jake Davis opined.

Supporting the domestic steel industry does not create many jobs, panelist John Longyear of Metric & Multistandard observed. The steel industry is heavily automated, Longyear explained. Where there used to be 100 working in a steel mill, today there can be 30 or fewer.

Tricia Dyer of All America Threaded Products agreed that domestic steel mills are upping prices "because they can."

Panelists doubted steel tariffs will change the fastener industry.

"Nuts aren't made here and they are not going to be," Longyear observed. The exception would be special production runs.

Longyear, a 46-year veteran of the fastener industry described doing business in the 2018 economy: "If you can run fast, you can make the sale."

"There was no 'online,'" Longyear recalled of his start in the industry in 1972 with Metric & Multistandard. It was long before faxing too, he added.

"Nobody had computers. You ran back and forth in warehouse and physically looked at shelves for inventory."

Longyear recalled there were only three companies selling metric fasteners when he started: Zelenda, Veteran Tool & Supply and Metric & Multistandard. All three were New York based. Metric was a niche industry with 80% of sales to end users.

"Distributors didn't want to touch metrics," Longyear explained. Today distributors "can't not sell metrics."

Nor was there an Amazon.com not-so-many years ago. "Everybody is affected," declared Davis, who is with manufacturer BTM and distributor ISSCO Inc. It makes traditional fastener distributors a "niche business." It is increasingly easy for commodity buyers to just go online and click to buy, Davis said.

However, Dyer finds that contractors have not moved en masse to Amazon and remain buyers from distributors.

Tips to attract millennials include offering more than a job. "People want growth," Dyer said.

"Does your company have a plan for the future?"

Longyear asked. "This is not a glamour industry even though it holds the world together."

"It is easy to get stagnant," Davis warned.

Each generation is new, Davis observed. There were Baby Boomers (1945-1964), GenXers (1965-1980) and now Millennials (1981-1996) in the workforce.

"Everyone was a new generation," Davis noted.

Millennials are so computer data oriented, Dyer observed. Today customers can see what time thread is being cut on what machine, she pointed out.

That customers can look at inventory online "makes you a better salesperson," Longyear suggested.

It means companies need to keep up with their websites. Longyear, noting he may be the oldest manager in the room, said he pushed for an upcoming Metric & Multistandard website.

Your position on a Google search is vital, Longyear said. Customers "will never get down to twentieth."

distributor **news**

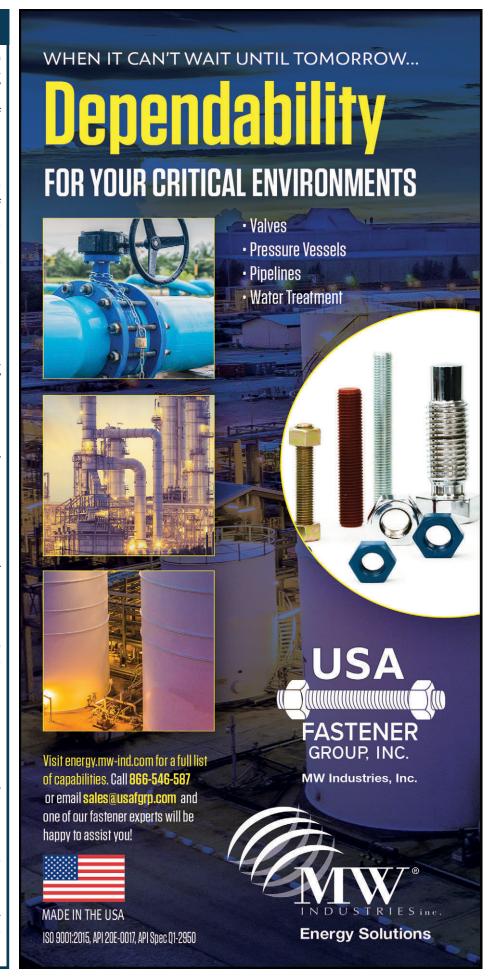
On June 7, 2018, **SWD** Inc. held a groundbreaking ceremony to celebrate a 26,000sq.ft. expansion of their existing 160,000sq.ft. facility. In attendance were Village of Addison Officials, representatives from BMO Harris Bank, and members of Laub Construction. With this addition, SWD projects growth of 15% in year-over-year sales and expects that anywhere from 12-15 new positions will be created.

The extra 26,000sq.ft. will help with process flow in this state-of-the-art coating production facility. It has been designed to allow for more warehousing with an automated racking system for part storage along with new office space for centralized shipping, receiving, and order entry processing.

The \$3million addition follows a series of investments. This expansion is aligned with SWD's mission to "Bring our customers the highest level of quality and service in the metal finishing industry". SWD Inc. specializes in Black Oxide, Passivation of Stainless Steel, Phosphate coatings (Zinc, Manganese & Iron), Fastener Sorting and licensed application of High Corrosion Magni, Dörken and Yuken coating systems. Last year, SWD introduced a state-of-theart robotic organic coating line with unprecedented production capabilities.

This project is expected to complete in November 2018.

more information. contact SWD Inc. by Tel: 630-543-3003, or visit them online at www.swdinc.com.



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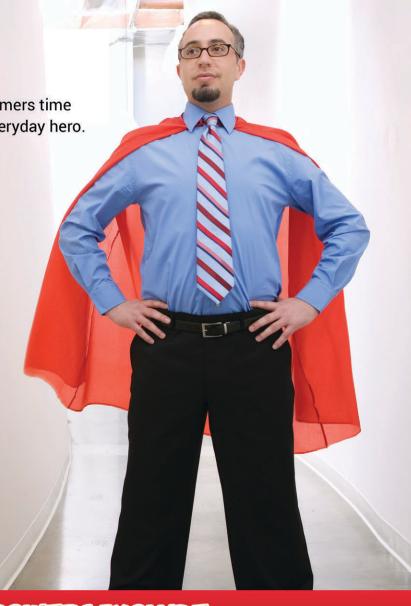
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EXHIBIT SALES FOR FASTENER FAIR USA STRONG AGAIN



Less than two months after the successful inaugural exhibition in Cleveland, Fastener Fair USA, the leading fastener and fixing exhibition in the U.S. for the full supply chain, is showing strong growth in exhibit sales.

"We left Cleveland with nearly 30% of 2018 exhibitors rebooked for Detroit," said Jessica Boweak, Exhibition Manager for Fastener Fair USA. "Exhibitors are increasing their space requests and new companies are coming in. We are already tracking ahead in sales compared to last year and are set to exceed 2018 both in square footage and number of exhibiting companies."

Fastener Fair USA 2018 attracted over 2,000 registrants and included the types of decision makers exhibitors wanted to see. Primary job titles/ responsibilities were:

- ¤ Buyer
- Department Head/Senior Manager
- Engineer/Technical Specialist
- Managing Director
- Purchaser/Procurer

Exhibitors were able to connect with customers representing a variety of industries, the top being:

- Aerospace
- Agriculture/Off-Highway Machinery
- Automotive
- Construction
- Distribution
- Energy/Power Generation
- Maintenance/Repair

"I was very excited to be a part of Fastener Fair USA, especially for its first year, and experienced one of the busiest shows I have been to in years," said Lori Coar, President of Aluminum Fastener Supply Co., Inc. "I'm definitely looking forward to Detroit in 2019 and again exceeding my sales goals at the show."

The next Fastener Fair USA will take place in Detroit, MI at the Cobo Center on May 22-23, 2019.

Fastener Fair USA is organized by Mack Brooks Inc., a subsidiary of the Mack Brooks Exhibition Group based in St. Albans, UK, which has branches and partner companies in France, Greece, Italy, Poland, Russia, India, China and the USA. The Mack Brooks Exhibitions Group has been organizing industrial trade fairs around the world for almost 50 years. As a privately-owned, independent and professional show organizer, the company organizes a program of highly specialized trade exhibitions throughout Europe, Asia and the Americas, in the fields of engineering, transport, metalworking, information technology, textiles, food and beverages, railways, construction, tunneling, printing, converting, airport management, and aviation. The Group also publishes related directories, magazines, sector reports and Internet sites. Visit Mack Brooks Exhibitions at www. mackbrooks.com.

For information about Fastener Fair USA 2019 or to exhibit, visit the website http://fastenerfair.com/ usa/, or contact Show Management at fastenerfairusa@ mackbrooks.com or 866-899-4728.





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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.

USING THE CORRECT SIZE BLIND RIVET

The following questions I have been asked many times, "I am using a blind rivet and they are not setting correctly."

Then I ask the following questions, for the purpose of finding out what is really wrong and what does the user mean by "not setting correctly".

- [Q] What is the size of the blind rivet you are using? [A] 48
- [Q] What material are you riveting together? [A] Aluminum
- [Q] What is the total work thickness you are riveting together?

[A] 3/8

- [Q] Do you have a long projection on the blind side of the blind rivet after you set the blind rivet?
 - [A] Yes, and this is what I do not like about the set blind rivet, it has a bad appearance.

Conclusion - the problem is that you are using an incorrect length blind rivet, for a 3/8 work thickness. For a total work thickness of 3/8, you should be using a 46 size blind rivet, the 48 is too long.

When a blind rivet user is setting the correct length blind rivet, the upset side of the blind rivet will look like this:

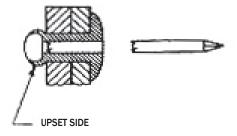


FIGURE 1 - PROPERLY SET RIVET

When the blind rivet is too short, the upset side will look like this:

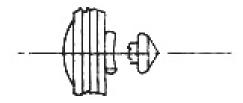


FIGURE 2 - BARREL LENGTH TOO SHORT

If the barrel length is too short, there will not be enough barrel length to capture and retain the mandrel head after setting.

When the blind rivet is too long for the application, the upset side will look like this:

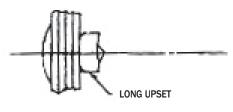


FIGURE 3

If the barrel length is too long, you will have a long upset on the blind side of the set blind rivet.

The above blind rivet is the OPEN-END TYPE. Below is the same situation when using a CLOSED-END blind rivet.



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Since 1971, Unicorp has been a socially and environmentally responsible leading manufacturer of American standard and metric precision electronic hardware, fasteners and handles. We pride ourselves on our dedication to customer satisfaction and our commitment to support the needs of our distributors. Unicorp offers top quality products, fast delivery, excellent pricing, technical assistance, and manufacturer to customer print

specifications. We are known throughout the industry as the "oddball king" because we offer the widest variety of diameters, lengths, and finishes in our numerous product lines. The best way to view our products is on our website, www.unicorpinc.com, complete with all products, sales information, specifications, engineering, and tolerances.

The Unicorp product lines consist of: Standoffs & Spacers, Male to Female Standoffs, Male to Male Standoffs, Jackscrews, Swage Standoffs, Captive Screws and Retainers, Insulating Shoulder & Flat Washers, NAS/ MS Hardware, Shoulder Screws, Plastic Circuit Board Supports, Nylon Fasteners, Dowel Pins, Thumbscrews & Thumbnuts, Self-Clinching Fasteners, Cable Ties, 24 styles of Handles, Fixed, Folding, Rack- Panel & Ferrules. Unicorp Electronic Hardware is used by leading companies in nearly every industry including electronics, telecommunications, aerospace, military, medical, computer, automotive, energy, robotics, marine, PCB mounting, circuit board assembly.

BUSINESS FOCUS ARTICLE

UNICORP ELECTRONIC HARDWARE







distributor**news**

Wrought Washer, the leader in the domestic washer industry, is pleased to announce the introduction of Spring Pins - manufactured and in stock.



Wrought Washer was able to acquire the complete line of manufacturing equipment from ITW Shakeproof for Spring Pins.

Our initial offering will be diameters ranging from 3/32"-3/8" in both high carbon steel and stainless.

The acquisition is a result of continuously looking for ways to add value and convenience to our customer base. Product will be shipped from inventory out of our Wisconsin warehouse.

Headquartered in Milwaukee, Wisconsin with 225,000 square foot of manufacturing and multiple regional stocking warehouses, Wrought Washer is the leader in standard and specialty washers. For more than a century, Wrought has been supplying high-quality washers and flat stampings for a broad range of markets including automotive, agricultural, truck, electrical, appliance, construction and industrial equipment.

For more information contact Wrought Washer Mfg., Inc. by Tel: 414-744-0771. Fax: 414 744 2105 or visit them online at www.wroughtwasher.com.

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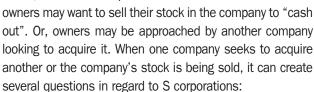
Roman Basi

Roman Basi is the President of The Center for Financial, Legal & Tax Planning, Inc. Roman graduated from Milliken University obtaining a Bachelor's of Science Degree with a minor in Psychology. He earned an MBA from Southern Illinois University with an emphasis in Accounting and recevied his JD degree from Southern Illinois University. Roman is a licensed attorney in Illinois, Missouri and Florida and is in high demand for his expertise in financial, legal and tax matters. His areas of expertise include mergers and acquisitions, contracts, real estate law, tax and estate planning.

CLOSING OF THE BOOKS

Corporations are part of the American way of life, but unbeknownst to many is the existence of the S corporation. The S corporation is an entity typically used by small businesses for its pass-through form of taxation different from C corporations (Walmart, Apple, Microsoft, etc.) that many are familiar with. However, C and S corporations

do share some similarities, primarily in the form of ownership stock and control that dictate the company model. Simply put, if you own stock in a corporation you are an owner, and at some point



- [1] what happens if the shares are sold mid-tax year
- [2] what happens if the company holds an election to "close the books"
- [3] how do you break up the income on taxes if a shareholder is bought out?

We'll take a closer look at each of these individually then all together.

As we all know, there are 365 days in the calendar year and the likelihood of a shareholder being bought out or the company being bought mid-tax year as opposed to the end of year is high. One might ask how you allocate funds in a mid-year buyout or acquisition. Well, the general rule requires the funds to be split among shareholders pro-rata on a per-share, per day basis. For instance, a 50% owner of an S-corporation bought out March 31st (end of first quarter) would be entitled to 12.5% of the yearly funds. The funds always follow whether a profit or a loss exists. This method is standard when the company chooses to forego change in its corporate structure at the time it's acquired. Instead, the company chooses to close the books and make changes at the end of the tax year; however, there may be a better way.



the profits or losses on a specific date to provide the subsequent income to new shareholders in accordance with their ownership. Take the previous example, owner of 50% of an S-corporation is bought out March 31st, and the company holds an election to close the books. All new owners vote a unanimous yes to close the books (mandatory that all vote yes), wherein the company's accounting method ends the first quarter, then continues the second through fourth quarters separately for the new owners. The 50% previous owner would take his share of profit or loss for January 1st through March 31st, then take nothing from the following three quarters. The departed partner would not retain any subsequent taxation after the closing date.

However, depending on the company's margins at the time of the vote, the closing of the books method could create a benefit or detriment to the previous owner and new owners. Closing of the books is an important method for S corporation shareholders to take note of because of the pass through nature of their corporations. Due to the pass through ability of the S corporation, owners may wind up paying substantially different amounts in personal income taxes depending on when they decide to close the books.

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- · Standard OD threads...install without special tools

Coil

- Unified: 2-56 to 1-1/2-6; Metric: M2 to M39
- · Extensive inventory of STI taps, drills & installation tools
- · Prepackaged kits and assortments

For Plastic & Wood:

Press Inserts

- · Flush, flanged & reverse slot designs
- Unified: 0-80 to 3/8-16; Metric: M3 to M6

Ultrasonic

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- · Straight design in flush and flanged

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LEADERSHIP ACADEMY RETURNS IN SEPTEMBER

by Vickie Lester

To thrive in the future, the fastener industry needs to develop and support the next generation of leaders. Therefore, the National Fastener Distributors Association (NFDA) and Young Fastener Professionals (YFP) are partnering to foster the industry's future leaders.

We are pleased to bring back Shelly Alcorn, a futurist and thought-leader, who will facilitate a collaborative and highly interactive experience for Leadership Academy participants, which is scheduled for September 10-11, 2018 at the Holiday Inn in La Mirada, California.

Leadership Academy Discussion topics may include:

- What are the most pressing issues that young professionals face in their careers?
- What will the workplace of the future look like and what skills will I need to thrive?
- How do I obtain these skills?
- What career development programs, products, and resources can associations like NFDA and YFP provide that would be most valuable to young professionals?
- What are the communication challenges in the workplace and what positive strategies can be used?
- What emotional intelligence is required to persuade others effectively and to participate in decision making?

The biggest opportunities for younger professionals are to establish relationships early in their career, to continue learning (post-formal education), and to be involved in advancing their industry. The NFDA and YFP Leadership Academy will engage professionals from all generations, to ensure a pipeline of future leaders.

Registration to this program is very limited. You are encouraged to sign up early. First priority will be given to members of NFDA and YFP.

Looking Ahead to 2019

Save these dates for future NFDA events.

March 13-16, 2019

Joint Meeting with NFDA, Pacific-West Fastener Association, and Mid-West Fastener Association

The Omni Hotel, San Diego, CA

June 10-11, 2019

Annual Meeting sponsored by the North Coast Fastener Association The Hilton Netherland Plaza, Cincinnati, OH

For more information about NFDA and its activities, visit www.nfda-fastener.org.



PAST PRESIDENTS AND PAST ASSOCIATE CHAIRS FROM LEFT TO RIGHT: ED MCILHON, BILL DERRY, JIM DERRY, JAY QUEENIN, KAMERON DORSEY, MARK SHANNON, SKIP GALLO, JIM RUETZ, JIMMY REITTINGER, ADAM PRATT, KEVIN MILLER, CASEY MCILHON, TIM O'KEEFFE

NFDA 50th ANNIVERSARY MEETING & CELEBRATION GUANACASTE, COSTA RICA - MARCH 14-16, 2018 PHOTOS COURTESY OF GREG CHRISTENSEN





distributor**news**

The New England Fastener Distributors Association (NEFDA) is looking forward to two more major events coming up this year, NEFDA hopes you'll plan to attend. Both the Fall Fling and Holiday Party are fun yet great networking events for the industry.

NEFDA 2018 Calendar

Join NEFDA for Their 2018 Events

September 27th Fall Fling

Golf and Dinner Meeting

Jupiter Golf Course Northborough, MA

December 5th Holiday Party

High Rollers Bowling Alley

Foxwoods Resort Mashantucket, CT

For more information contact the NEFDA, PO Box 151, Lake Zurich, IL 60047. Tel: 847-370-9022. Fax: 847-516-6728. Email: nancy@nefda. com or visit them online at www.nefda.com.

distributor**news**

The Fastener Training Institute® is pleased to announce the appointment of Officers following the recent elections held at their most recent Board of Directors meeting. We're pleased to announce the following:

President: Tim Roberto, Jr. Star Stainless Screw Vice President: Gene Simpson, Semblex Corp. Secretary/Treasurer: Dallas Puckett, Valley Nut & Bolt Managing Director: John Wachman, Desert Distribution Sales, LLC

We also welcomed our new BOD member Chris McCaffrey, R & D Fasteners. He will join Andy Cohn, Duncan Bolt, to fill our BOD.

Jennifer Sturm, Empire Bolt, leaves our BOD with our deepest thanks and appreciation for her years of service to FTI. Jennifer was instrumental in the creation of FTI and served on our inaugural BOD until this year.

The Fastener Training Institute is a registered 501(c)6 non-profit. We rely on the support of the fastener community to continue to operate and grow. Please support us by attending our classes and webinars or by sponsoring an event. Tax deductible donations are accepted through the Fastener Education Foundation, www.FastenerEducationFoundation.com.

Please visit www.FastenerTraining.org for a complete listing of our events.

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

The objective of the Fastener Training Institute® is to elevate the level of technical understanding and expertise of individuals in the fastener industry by providing a variety of training programs presented by recognized industry experts. FTI provides beginning and advanced training on fastener products, standards and specifications.

For more information about FTI and to view the complete training schedule, please visit their website at www.fastenertraining.org.







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Bryce Austin

Bryce Austin is the CEO of TCE Strategy, an internationally-recognized speaker on emerging technology and cybersecurity issues, and author of Secure Enough? 20 Questions on Cybersecurity for Business Owners and Executives. With over 10 years of experience as a Chief Information Officer and Chief Information Security Officer, Bryce actively advises companies across a wide variety of industries on effective methods to mitigate cyber threats. For more information on Bryce Austin, please visit www.BryceAustin.com.

WHAT IS MY PLAYBOOK IF I HAVE A CYBERSECURITY INCIDENT?

"I have been investigating a large number of failed logins on your server. Due to the volume of failed attempts, it does appear that the attempts are coming from an outside source. My company recommends that you reach out to a Security Firm to have your network investigated for a possible breach."

He couldn't believe what he was reading. A local cybersecurity professional was forwarded the email above from his new client's outsourced computer management company.

The owner of the business was concerned, and for good reason. They had only brought him onboard as their part-time cybersecurity advisor the month before, and the vendor that manages their network had

kicked this ball squarely into his court. He had to figure out what to do-fast.

The priorities were simple:

- [1] Alert his client's executive team about the situation.
- [2] Determine if this is or is not a real hacking attempt.
- [3] If it is a real hacking attempt, determine how it is occurring.
- [4] Assess if the hack was successful in any way. Was any damage done? Was any data accessed?
- [5] If the hack was unsuccessful, terminate the hacker's access immediately.
- [6] If the hack was successful, start making

calls to his client's CEO, their cybersecurity insurance carrier, a third-party company that specializes in breach remediation, and my client's attorney.

[7] Follow-up with root-cause analysis and recommend preventive measures.

> It took over 10 hours to determine the extent of the issue. Cybercriminals had breached a single server, and a malicious program was running on that server. It was trying various dictionary words as passwords against common "administrator" level accounts. He breathed a tiny sigh of relief to see that it had only started several hours earlier and appeared to be moving

ahead at full steam, which meant that the bad guys had most likely not yet been successful at cracking an administrator-level password.

The cybercriminals gained access into that server via a combination of a phishing email and a bad firewall configuration. Thankfully, forensics found no evidence of further intrusion.

His blood pressure began to return to a more reasonable level.

The example above is real, and while it represents the best possible outcome of a cybersecurity incident, it was used here to make a number of points. This client didn't have a playbook on what to do when a cybersecurity incident is suspected, so they had to make it up as they went.







FAR SRL

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NEW ENTRIES IN FAR CATALOGUE

FAR new catalogue has just been released with some very interesting novelties showing that the Italian company is always unrest ...

Let's have a look at the new entries of FAR Catalogue:

Among the wide selection of blind rivets, FAR introduces the new Ø 6,4 TAMP AP INOX, a stainless steel high performance blind rivet which combines an excellent corrosion performance together with high shear and tensile strength. Mainly designed for applications in the automotive, domestic, heating and ventilation

sectors, TAMP AP INOX is also greatly applied for solar panels, commercial refrigeration and where vibrations resistance is highly required.

For application that need to avoid liquid or vapour leakages, FAR now presents its Aluminium sealed blind rivet family. In several sizes, lengths, for applications requiring excellent resistance to corrosion.

And what about the tools section? FAR answer to this question is the new release of the RAC 181 riveting

> tool, now available in the US as well, with the "air suction regulation knob" as a standard feature. The new device enables the users to rationalize air consumption by setting the adjustment knob according to the different rivet materials and sizes, thus avoiding excessive air consumption, if not required.

Furthermore, the regulation knob permits a significant reduction in the sound power and therefore greater comfort for the user during the work cycle.

Stay tuned on FAR web site, www.far.bo.it, the Italian fastening company never stops moving forward!





distributor**news**

The Metropolitan Fastener Distributors Association (MFDA) will host their 23rd Annual Golf Outing at Wild Turkey Golf Course in Hardyston, NJ.

Plan to attend this premier event where you'll have the opportunity to meet new fastener friends and enjoy time with current fastener friends!!

The MFDA recently awarded their 2018 scholarships. Watch the next issue for the announcement of this year's winners.

MFDA 2018 Calendar Join MFDA for our 2018 **Events**

September 15th Pre Golf Reception

September 16th 23rd Annual Golf Outing Wild Turkey Golf Course Hardyston, NJ

September 17th Table Top and Hall of Fame

December 6th Toys for Tots Holiday Party Al Di La Ristorante

The MFDA is dedicated to representing all segments of the fastener industry including Manufacturers, Distributors, Importers. Manufacturer's Representatives and Suppliers to the Industry

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 visit them online at www.mfda.us.

ABBOTT-INTERFAST CORP.

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EMAIL sales@aicfast.com WEB www.aicfast.com

ABBOTT-INTERFAST: 70 YEARS... AND BY THE WAY...DID YOU KNOW?

Most of us were not around in September of 1948 when Martin (Marty) R. Binder incorporated and opened the doors of Abbott-Interfast Corp. (Abbott Screw & Mfg. & Co. back then) to the fastener & OEM community. This year we are celebrating our 70th year of providing solutions for not only fasteners but a variety of products second to none. Over the years, Abbott has secured over

25 patents. Best known to distributors for yellow nylon insert locknuts, in 2017 Abbott began a marketing campaign to market other available products and services. In 2018, we revamped our website, www.aicfast.com to highlight all the solutions we provide.

Our many years of experience is the foundation of our diversity. Over the last 70 years, Abbott has provided innovation, global sourcing, screw machine specials, plastic knobs, inventory management, assemblies, and many more products where we have partners or alliances

both domestically and overseas. One such example, The Nationwide Fastener Directory ™, was born 46 years ago, a byproduct of the fastener industry, it quickly became the "go to" source for hard to find items. The Nationwide Fastener Directory still thrives today, has recently re-invented itself and is now available online at www.nwfast.com. Our newest improvements include innovative search tools and a "virtual book" for those traditionalists who still like to use the 2-volume directory.

Made in the USA - Martin Binder strongly believed in manufacturing and it is still a big part of our business. Within our 100,000 square foot family owned facility, we manufacture daily and recently we have begun to add modern day machining with the addition of CNC machines.

Abbott is a valuable source who can not only procure product at the most competitive pricing, but one that can back it up by making it in house when something unseen happens.

The screw that works like a Tool!™ SplitStop™ fasteners is another groundbreaking product created by Abbott. We secured 4 patents on high performance screws which were

> originally designed to solve OEM issues encountered while driving screws into wood, composite or engineered decking products. Today SplitStop provides the best screw fastening system available and is sold online at www.SplitStop.com , in specialty lumber yards and packaged as private labeled product for some of the top composite manufacturers in the world.

> Our involvement in the industry is extensive as well. Marty Binder was one of the few originators of the Chicago Bolt, Nut and Screw Association now known as the Mid-West Fastener Association and served as one of the early Presidents.

Abbott is one of the very few members to have exhibited at every MWFA trade show ever held and Abbott has had 3 employees serve as President for the MWFA, as well as having staff serving on the Fastener Industry Coalition.

As we begin our next 70 years, Abbott continues to re-invent itself with additions like the latest optical inspection systems, additional CNC machines, an upgraded website, a new computer system, along with planned enhancements such as wireless warehousing, bar coding, and of course we will continue our marketing campaign so that we no longer need to say "Did you know?"...because now you do!

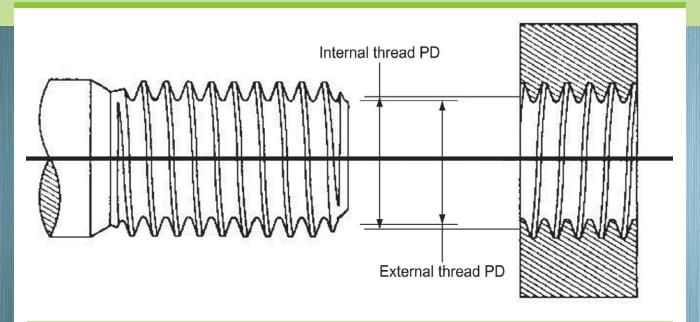




Larry Borowski President **GREENSLADE & COMPANY INC.**

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6e AND 6E PITCH DIAMETER ALLOWANCES PROVIDE SPACE FOR HEAVY COATINGS



Many of the newer, high-performance corrosionresistant finishes are thicker than older standard fastener finishes such as commercial electroplated zinc with clear or yellow chromate. To achieve equal corrosion resistance, the new finishes containing trivalent chrome are applied thicker than the hexavalent chromium finishes they are replacing.

The heavier application of finishes on threaded fasteners results in more problems related to thread interference in assembly. Thread fit cannot be ignored when high performance finishes are required. The manufacturing design solutions to this dilemma are to either make the internal thread pitch diameter larger, the external thread pitch diameter smaller, or to revise both the internal and external thread pitch diameters to provide the extra room needed to accommodate the heavier finish build-up between the mating threads.

Several suppliers of threaded fasteners have addressed the heavy coating-thread interference problem by making the internal threads to the thread class "6E" instead of "6H" and the external threads to the thread class "6e" instead of "6g". The use of the combination of "6E" and "6e" class threads instead of the most common combination of "6H" with "6g" thread classes provides approximately four times the space to accommodate plating and/or coating build-up.





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We are a specialized provider of dimensional calibration services to manufacturers and distributors throughout the world. Our calibration laboratory has state-of-the-art precision equipment. To ensure the greatest degree of accuracy, all certifications are generated using automated input methods and a registered calibration software program.

We also provide consultation services in matters related to quality issues, gage usage, calibration issues and special gage design.





















GREENSLADE & COMPANY, Inc.

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NORTH COAST FASTENER ASSOCIATION

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NCFA ANNUAL DISTRIBUTOR SOCIAL CELEBRATES ITS 10th YEAR!! by Marty Nolan, NCFA Trustee

For the tenth straight year, the sun shined bright on the NCFA Distributor Social. Over 200 Distributors and Suppliers gathered in Northeast Ohio for this premier networking event. If you don't know about the NCFA Distributor Social, you need to! The NCFA Distributor Social is a networking event where suppliers and distributor get to spend time together networking in a casual atmosphere.

The day started out with Midwest Fastener Association hosting a Basic Print Reading Class instructed by Mike Henry. We thank MWFA for offering this class to our members and Distributor Social attendees.

Later in the afternoon, Kirk Zehnder from Earnest Machine hosted a presentation on "Maximizing the Benefits of the Changing Business Culture." also supplied ice cold beer and pop to presentation attendees. To top it off, Earnest Machine graciously donated \$1,000 to the NCFA Scholarship Fund. A huge "thank you " to Earnest for all of their support!



Directly after the Earnest presentation, it was time for the Distributor Social to begin.

Guests headed downstairs to enjoy free drinks, appetizers and industry friends.

We were so fortunate again this year to have beautiful weather for this event. Cleveland weather in May can The nice be very unpredictable. weather gave guests the opportunity to enjoy the attached outdoor patio and some delicious ice cream donated by

Ventura Industrial Products. They offered a fully stocked ice cream cart for guests to enjoy.

Visitors from multiple states come to Cleveland for the NCFA Distributor Social and it continues to attract people from every level of management and a diverse mix of other positions. Not only is it a great place for suppliers to visit with distributor personnel from every level, its offers a much more affordable option than a table-top show. The supplier sponsorship cost gives the opportunity to distributors to attend the NCFA Distributor Social for free!! It truly is a win-win for everyone.

The NCFA recognized this event would not be possible without the support of our supplier sponsors. Many of the suppliers also pay an additional sponsorship cost to cover a portion of the bar tab for the evening! Thank you to our suppliers for continuing to support the event year after year! Thank you to everyone who attended and supported this year's NCFA Distributor Social!

Mark your calendars for a few of our upcoming events:

July 12th Night at the Ballpark

Cleveland Indians vs. New York Yankees

September 6th NCFA Screw Open Golf Outing



NCFA 10th ANNUAL DISTRIBUTOR SOCIAL INDEPENDENCE, OH - MAY 17, 2018



BENGT BLENDULF FASTENER FRICTION – FRIEND OR FOE? from page 8

This is the general formula for the k-factor:

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

FIGURE 1

where:

P = Thread pitch (mm or inch)

d2 = Thread pitch diameter (mm or inch

dw = Effective diameter under head/nut (mm or inch)

d = nominal thread diameter (mm or inch)

ut = coefficient of friction, thread

μb = coefficient of friction, bearing area

We need to do some home work to get the k-factor and ultimately also the torque value. Some of our older text books (still used a lot in the academics!!!) will summarize the k-factor to 0.2. Many of my engineering students are using the 0.2 until they participate in my Fastening Technology classes and get it straightened out. In this article I will use the so called "Short formula for torque", which is quite sufficient for this type of calculations.

$$T = k \times d \times Fp$$

FIGURE 2

where:

T= torque (moment of force) in Nm or lbfft or lbfin

d = nominal diameter of fastener

Fp = preload force

Since the friction coefficients, μt and μb , are very vital to the calculation on the k-factor, let us do a couple of experiments to show what influence they may have on the tightening torque values.

Let us assume that we are using a dry, zinc plated Hex Cap Screw M10 class 8.8 threaded into a tapped hole in steel. First we need to look at the load values for the fastener. Some older text books will refer to the yield strength (Rp0.2) as the starting point for calculations. Routinely, standard fasteners are not tested to the Rp0.2 level which is very expensive to do. Today we should rather be using the proof load, Sp, a test load applied to all manufactured fastener lots. The proof load is about 72 % of the ultimate tensile strength and about 90 % of the Rp0.2. So if we are still using the older approach of using 75 % of Rp0.2 we should instead be going for about 83% of proof load as a start.

Looking at an M10 8.8 we find that the proof load is listed as 33.7 kN, 83 % of that is 28 kN. From a safety point of view 28 kN would then be the maximum load we put on the fastener if we follow the same design methodology. But we also need a tightening tool to produce this preloading. A very good, calibrated torque wrench will produce a tension scatter of +/- 22 % (hand tightening will be +/- 60 % !!!). So if the maximum load will be 28 kN, and not more, we need to find a tightening method that will not over shoot the 28 kN. On the other hand, at the low end of the tension scatter we still need to keep the minimum preload to prevent joint from failing due to too low preload. If +22 % is 28 kN, then -22 % will be 17.5 kN and the mean value about 22.7 kN. That would then be the real starting point for our joint calculations, unless we prefer to play "Russian roulette" with the joint design.

By using the short torque formula we first need a reliable k-factor determined. Our M10 fastener is used in a threaded blind hole where some residual oil from the tapping operation is present. The book value from the IFI book is listing the friction coefficient for that condition as 0.15. If the fastener is zinc plated and the bearing area against the part is also zinc plated, the listed friction coefficient would be 0.26 if no lubrication is present.

$$k = \frac{0.16 \times 1.5 + 0.58 \times 9.03 \times 0.15 + 0.5(16 \times 0.26)}{10} = 0.31$$

FIGURE 3

If we instead are using a coated fastener like Magni 590, Geomet 321 L, Dacromet L, or similar with a listed friction coefficient of 0.11 where the coating will supply the dry lubricant to all connected surfaces, we get a quite different k-factor.



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GUY AVELLON WHAT FASTENER DISTRIBUTORS NEED TO KNOW ABOUT SUBSTITUTIONS from page 10

Heavy Hex Nut: This nut provides a wider contact surface area with a slight increase in thickness. Using the 1/2" nut as an example; the WAF is 7/8" (0.875") and the thickness is 31/64" (0.484375").

Nut dimension formula:

1/4" - 1 1/8": WAF = 1.50

D + 0.125", H = 1.00 D - 0.016"

Hex Thick Nut: as the name implies, this nut will be thicker or higher than the others. The width is similar to the finished hex nut but is taller to add a few extra threads which provides the extra strength to the nut. The 1/2" nut has a WAF of 3/4" (0.750") and a thickness (height) of 9/16" (0.5625").

Nut dimension formula:

1/4" WAF = 1.50 D + 0.062.

For H, consult the tables in the IFI (Industrial Fasteners Institute) standards book or the ANSI B18.2.2.

Bolts

Bolts also come in a variety of dimensions, from the SAE to the ASTM structural and non-structural fasteners. That is to say, the ASTM A449 and A354 BD are equivalent to SAE Grade 5 and Grade 8 respectively in strength and dimensions.

Finished Hex Bolt: this is what many would call a standard dimensioned fastener. It is available in SAE Grades 2, 5 and 8 and ASTM A449 and A354 BD. The 1/2" bolt would have a WAF of 3/4" (0.750") and an H = 5/16" (0.3125").

Heavy Hex Screw: this product dimension is also made for the SAE Grades 2, 5 and 8 as well as the ASTM A449 and A354 BD. The 1/2" WAF is increased to 7/8" (0.875") and the height remains the same at 5/16"(0.3215").

Heavy Hex Bolt: here things become confusing as we now have a terminology and dimensional difference between a screw and a bolt. The IFI dimensions for a 1/2" WAF equal that of the screw at 7/8" but the head is slightly higher at 11/32" (0.34375").

Hex Bolt: still maintaining the 'bolt' terminology, the head height is the same at 11/32" but the WAF is at 3/4".

Both the heavy hex bolt and hex bolt dimensions were primarily for use with the ASTM A307 Grade A. The Grade A cannot be substituted for the A307 Grade B, as this is used for flanged joints and piping. Otherwise, the finished hex and heavy hex screws can be substituted for the hex and heavy hex bolts.

Therefore, if an order comes in for 'hex bolts', make sure the customer knows the difference and confirm what the fastener's application is.

The Caveats

Finishes: There are a myriad of coatings and finishes for fasteners where mixing them could cause problems. However, if all of the supplied substitutions were of the same finish and all going into the same application new, without any of the previous fasteners' finish being used, there would be no problems if attention is paid to any differences that may affect the installation torque. Problems will occur when mixing different finishes in the same connection.

Example: a fastener failure occurred on a multiple bolt assembly when some fasteners suffered metal fatigue causing the others to fail in tension, due to the loading condition of the application. Maintenance had been performed to the part where the fasteners were assembled and some of the nuts had been replaced. The replacement nuts caused the failure.

The equipment was manufactured in the 1990's and used high strength proprietary bolts with a metal lock nut. The maintenance was performed within the past two years. When the mechanic bought the replacement parts at a parts store, the parts were not like the originals. For one, the supply store did not have the special high strength fasteners. But of most importance, the lock nut coatings had changed.

It seems strange to ask "what color are your lock nuts" but the OEM nuts were gold and the replacement nuts were silver. What the mechanic did not know was the torque values in the manufacturer's manual were invalid for the silver colored lock nuts.



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SOLUTION INDUSTRIES IS EVOLVING...

At one time Solution Industries was known as the supplier that could find the "hard to find" stuff. The parts "you could not google". While our business model still includes these capabilities, we have grown from a supplier of Zinc Plated Sockets to a diverse company that handles a multitude of secondary operations in order to supply our distributor customers with finished parts, no handling required! We supply parts with a wide variety of platings, patches, cut offs, reworks, all delivered to your warehouse door...complete! Additionally, through our evolution, we now have the ability to supply PPAP'd parts, made to print specials, and mill shipments direct from many of our long standing,

Internally, our company has also evolved and developed. We have added additional warehouse space and bolstered our workforce to accommodate our stock and release programs. We have added sales, sourcing, and purchasing personnel to handle the growth with which will only strengthen our stellar customer service. And we have added bagging equipment - because you, our customers, have requested it. What has not changed is our continuous dedication to providing our customers the quality, on-time parts that they require to keep their customers satisfied. On a daily basis, we listen to you to hear what YOU need, regardless of the challenge.

That, will never change!

SOLUTION INDUSTRIES

BUSINESS FOCUS ARTICLE

overseas suppliers.



JOE DYSART WEB SITE NOT ENCRYPTED? GOOGLE WILL TURN BUSINESS AWAY FROM FASTENER DISTRIBUTOR SITES from page 12

Such sites run on the Hypertext Transfer Protocol Secure standard - or https - and often feature a green lock or other green emblem in your browser address bar, indicating that the Web site is encrypted and operates at a much higher level of security than other Web sites.

Amazon.com, for example, features the emblem of a green lock when its Web address is called up in most browsers – clearing indicating that its site is encrypted.

Standard Web sites that run on the older Hypertext Transfer Protocol – or http – are not encrypted and feature no such emblem.

Compounding the anticipated pandemonium over

'Not Secure' branding is a related decision by Google to 'remove trust' in any Web site certified as encrypted by Symantec prior to June 1, 2016.

The reason: Google has repeatedly expressed skepticism regarding the veracity Symantec's certification process prior to that date, and has simply decided to invalidate such certifications for users of its Chrome browser.

The decision - which goes into effect no later than July - will be a major blow to Web site operators in its own right, given that Symantec is one of the largest purveyors of encryption certifications on the Web.

Hardest hit by the dual decisions will be operators of non-ecommerce Web sites, which require no passwords for entry

and do not accept credit cards or other forms of digital payment.

For years, such sites were not favorites of hackers, given that no monetary tractions took place there and consequently, many non-ecommerce sites did not worry about getting encrypted.

But more recently, hackers have been plundering these unencrypted sites by inserting code in their Web pages that enables them to download malware to someone visiting that Web site, or code that directs a visitor to a phony Web page asking for credit card or other personal information from the site visitor.

The good news for fastener distributors looking for encryption is that many Web hosting companies have

decided to offer basic encryption as a free, value-added service.

"Today, HTTPS is fast, simple to deploy, and costeffective if not free—and there's no longer an excuse for not using" it, says Cloudflare's Donahue.

Many of the Web hosting companies offering free encryption work with Let's Encrypt (https://letsencrypt.org), a non-profit organization whose mission is to offer free, basic encryption to any Web site owner that needs it.

Let's Encrypt also provides the certificate fastener distributors need to prove to Web site visitors - and to Google - that your Web site is encrypted.

> If you're looking to go the free route with Let's Encrypt, the best move is to talk with your Web hosting company and verify that they have a tool on your Web site control panel that enables you to easily add a Let's Encrypt certification to your Web site.

> Many Web hosts without such a tool also enable you to install Let's Encrypt certification. that manual process is tedious and it's often easier under such a circumstance to simply switch to a Web host that features a Let's Encrypt tool.

> Either way, you'll need your Web designer, or someone very Web savvy, to verify your fastener distributor Web site's transformation to encrypted status and to ensure that all the coding on your Web site reflects that

Eventual treatment of all HTTP pages in Chrome: A Not secure example.com

ABOVE: UNENCRYPTED WEB SITES WILL BE BRANDED WITH THIS WARNING IN THE GOOGLE CHROME BROWSER **COME JULY.**

BELOW: LET'S ENCRYPT IS A NONPROFIT THAT OFFERS TO ENCRYPT WEB SITES FOR FREE.



change.

An easy alternative - if you have a very small site with just a few pages - is to simply purge you old site, re-establish it as an encrypted Web site from the get-go and then simply rebuild the few pages you have from scratch.

Of course, there are also any number of Web hosts and security providers more than happy to encrypt your Web site for a fee.

But the bottom line is that fastener distributors need to get their encryption done before July. That will ensure your Web site is not branded as a 'Not Secure' and ensure that you're not forced to approach encryption-fora-fee providers as someone incredibly desperate for their service.



WORDSEARCH PUZZLE

В	Υ	G	M	Υ	M	M	U	R	Ν	I	G
Α	Ε	F	R	Ε	С	С	0	S	Н	J	С
s	K	Т	0	G	0	L	F	С	Α	Α	K
Е	С	Е	G	0	D	G	Υ	R	Ν	С	Е
В	0	Ν	Н	M	Т	L	G	Α	D	K	R
Α	Н	Ν	Α	R	0	В	Н	В	В	S	1
L	D	1	С	Р	Ε	S	Α	В	Α	Т	Α
L	D	S	0	D	G	K	С	L	L	R	Т
G	S	Ν	С	L	U	Ε	0	Ε	L	Α	1
Н	0	B	R	1	D	G	E	P	S	D	L
М	Χ	G	S	R	Е	K	С	Е	Н	С	0
Х	Α	Т	S	Α	Ν	Α	С	Н	Ε	S	S

GAMES

In the grid opposite there are twenty answers that fit the category named above. Circle each answer that you find and list it in the space provided below. An example is given to get you started.

1. BRIDGE	11
2.	12.
3.	13
4.	14.
5	15
6.	16
7.	17.
8.	18.
9.	19.
10.	20.

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SOLUTION ON PAGE 165

ROBERT FOOTLIK EVALUATING YOUR FORKLIFTS AND OPERATORS from page 14

For this reason involving the operators in the decision process is very important. Taking the users to vehicle demonstrations or bringing the proposed vehicle to their context will help insure that the human-machine interface is comfortable...for the operators. They, not the engineers, the vendor sales representative or the purchasing department are in the best position to evaluate the equipment.

Increasing Use of Telematics

Telematics is the current jargon for providing real time and historic information to the operators and management. Up until recently only gages for temperature, oil pressure and sometimes fuel availability were deemed sufficient when supplemented with a few warning lights. As the operator compartment has become more of a mobile office onboard electronics and displays have become more common. The sensors connected to these panels can control horizontal travel speed, lifting conditions, braking and balance with or without operator intervention.

The same sensors and computers can also track average and peak speed, maintenance issues, impacts, productivity by movement and weight, along with a host of other information. Displaying all this for the operator has proven to be distracting and often superfluous. Information overload also can reinforce the wrong message by emphasizing productivity instead of safety and common sense. In recognition of this many displays are configurable and all offer downloading capabilities for historical comparisons and evaluations. This has led to some interesting discoveries.

It might seem counterintuitive that slowing down the vehicle can lead to greater productivity, but telematic information has shown that in a fast moving, narrow aisle operation where the vehicle is used for order picking the average distance per movement is less than 50', hardly enough for the vehicle to reach full speed before braking. With man up, order picking vehicles horizontal

travel stability constraints on speed are even changing the criteria for how materials are stored. If it is faster to go up than travel "C" and even "D" movement inventory should be above the related "A" item, not at the rear of the warehouse.

Training Your Intuition

As a manager or owner your use of the data, supplemented with astute observations can help identify problems before they become expensive catastrophes. Knowing that one vehicle has a history of impacts primarily in the afternoon might point to a specific operator with a very specific problem, if you know where and how to observe.

No matter how much time and effort is but into design and data any 10,000+ pound vehicle and load moving in a confined space occupied by storage and personnel is still going to be dangerous. Enhancements in maneuverability are of little consequence if the operators are untrained or working while physically or mentally impaired. Back up alarms and strobe lights that are ignored by pedestrians and coworkers who are distracted or oblivious become useless. Banning cell phone usage in the warehouse is a simple rule that potentially can save a life...but how many operations do this?

Your role, regardless of your title or position with the company is to act as an observer and supplement to the data that is being generated. Anyone who enters the operation should always be watching for potential accidents before they happen. This is obvious. Taking things to the next higher level requires knowing what to look for beyond the physical environment.

For example, what's the most dangerous creature in the warehouse? An operator who is using alcohol or recreational pharmaceuticals. Incident reports of impacts, flat out speeding, excessive lateral forces due to high speed turns, etc. tracked against the time of day might point to an individual with a problem.

WOMEN IN THE FASTENER INDUSTRY

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WIFI JUST HEARD THE NEWS!

Fastener Woman 2017 Ann Bisgyer Wolz Scholarship winner Linda Grohowski from Brighton-Best has just passed the final exam and has become a Certified Fastener Specialist from the Fastener Training Institute. This could be you! Sign up for the scholarship today and become a CFS! Deadline for our scholarship is August 10th, 2018 WIFI will be announcing an additional two scholarships this year. Our current two scholarships The Ann Bisgyer Wolz

Scholarship which provides tuition for the Fastener Training Institute (FTI) and the Edith Cameron Scholarship which provides funds to attend the National Industrial Fastener & Mill Supply Expo in Las Vegas has been very successful and we are proud to bring you two more. Stay tuned as we will be announcing this by mid of summer of 2018.

Now Open! WIFI will be awarding the 2nd Annual Women of the Year award and two other exceptional awards at the Industrial Fastener Expo this year.

[1] Woman of the Year - In recognition of exemplary leadership and successful member of the fastener industry, as part of a long and distinguished record of advocacy for the professional advancement of women

through the promotion of education and professional development

[2] Women in Business - A champion/advocate who contributes and supports to their own organization

THE FASTENER MOUSE by sharing their knowledge, ideas, insights and strength. A women who is dedicated to empowering more women to achieve full

participation in all aspect of life.

[3] Man Up Award - For an individual male and/or company and awarded for a commitment to supporting women and the WIFI organization through programs and partnerships. A partner that brings tools and resources that will empower the WIFI Sisters in their life goals and

improvement. Also as a Thank you for playing an important role as a WIFI Brother and supporting the fastener woman vision.

Please send your nomination to Carrie Ann Whitworth at president@ fastenerwomen.com with a 200-300 word essay on why they should be receiving one of these prestigious awards. Deadline is August 10th, 2018.

Also, new at WIFI! Fastener Women is adding a new section of the newsletter WIFI4Hire. If you are laid off, fired or needed a change and are looking for a home in the fastener industry, we want you! Send us a brief summary of your resume with a headshot and we will let everyone know you are available for hire.

For more information about our new

section please contact Rosa E. Hearn at chairwoman@ fastenerwomen.com.

Already have something to submit? Then send it directly to newsletter@fastenerwomen.com.





LAURENCE CLAUS THREE THINGS THAT DISTRIBUTORS MUST DO WELL - PART I from page 24

Entrepreneurial

It is usually pretty easy to tell when you are dealing with the owner of a store or a company that provides a service you want. They are energized to make the sale and usually bend over backwards to consummate a deal with you. This is in sharp contrast with the individual who feels their only vested interest in the business is to receive a paycheck every other Friday. You know this person, any hint of an abnormal transaction and this individual finds all sorts of "reasons" why they can't make the sale to you. I guarantee that it is the rare occasion that the owner of any business willingly lets an individual intent to give them their money walk away over small or trivial barriers.

I recall a recent experience that illustrates this point. In recent years I have taken up sporting clays, a shotgun shooting sport that is sort of a mix between golf and trap shooting. As difficult as it may be to hold a conversation while actually shooting, I view this as a social opportunity and rarely ever shoot alone. My wife caught onto this and expressed an interest in joining me, but only if we could find her a gun that wasn't too heavy or had so much recoil that it quickly fatigued her. I, therefore, started searching for a shotgun that would meet her requirements and soon came across one at a big box sports chain that I felt would do the trick. The nearest store is only a few minutes from my home, so I went down to see if I could take a look. Unfortunately they did not have one in stock but told me another location in the area that did and that I could look at it there, and, if interested, they could order one for me. I drove the 45 minutes to the other store, took a look, and decided to go ahead and purchase it. On that particular evening the state's background check registration site was inoperable and I could not complete the sale at this store. I wasn't upset, as I had now seen the gun and decided it would work, so that I would just go back to my local store and have them order it. Now this is where the story gets complicated, and in the interest of time, let's just fast forward and say that placing an order proved impossible. At this point I inquired whether it was possible to transfer the gun I had viewed from their other store. I was told that it was not possible. Apparently every time they transferred a firearm, it seemingly got poached somewhere along the way and all they ended up with was

an empty box. Although this regrettably sounded all too plausible in today's day and age, I could think of multiple ways to reduce the possibility of this happening. My story would probably have ended there, with no purchase made, and me extremely frustrated, save for the store manager. He happened to be walking by as the sales clerk and I were discussing this dilemma. He went in the back, presumably made a phone call, and returned to tell me that the manager of the other store would be coming up to this store in a couple of days and would bring it with them. Simple solution and problem solved. However, it took someone thinking like an owner and not wanting to lose a customer to enact a simple, elegant, and acceptable solution.

The lesson that one can take away from this is to train and encourage your team to think like owners. If someone is willing to pay you for your product or services, you find a way to make it happen.

Empowerment

Going along with entrepreneurial spirit is empowerment. Individuals must be empowered to make a difference. In fact, you will never get your team thinking like owners if they are not empowered. This means that they don't have to ask the boss on every decision they make. It also means that the organization must allow them some freedom to make decisions to spend money to solve problems. This doesn't mean that the organization should not enact spending limits and boundaries of what an individual can and cannot do. To provide good customer service and resolve customer problems, those working with the customer must be empowered and have the authority to make decisions, often that have costs associated with them. For fastener distributors, this is likely going to include the ability to approve returns and authorize expedited shipping of replacement parts.

One of my most frustrating and worst personal stories of poor customer service has to do with this point. A couple of years ago, I added satellite TV service to our home internet and phone service, during a special advertised "bundle" opportunity. Our phone and internet provider did not own the satellite TV service they were offering to bundle. This service was provided by a nonowned but affiliated company.

distributor news

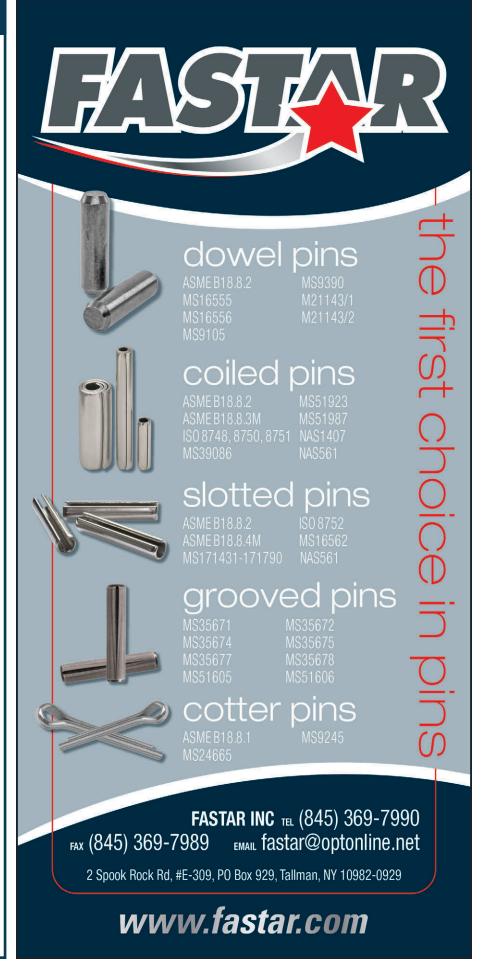
J.W. Winco, Inc., A Ganter Company, a leading supplier of standard industrial machine components, announced the availability of a New Stainless Steel Product Overview Catalog.

Corrosion resistance has become an ever more important requirement in a variety of different areas that include the food sector, packaging, pharmaceutical, medical, and marine industries. JW Winco's Stainless Steel Product Overview Catalog gives customers an easy solution to find the ideal machine part needed for any corrosion resistance application.

JW Winco offers an extensive selection of inch and metric size adjustable levers, cabinet U-handles, 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.

JW Winco, which is ISO 9001:2008 certified, is located in New Berlin, WI, with locations in Canada and Mexico.

For more information, contact J.W. Winco at 1-800-877-8351, by fax at 1-800-472-0670 or via e-mail at sales@iwwinco.com or online at www.jwwinco.com.



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SEFA SPRING CONFERENCE SUCCESS!

by Nancy Rich

April 24-26, 2018 was a great couple of days for SEFA members gathering at Ross Bridge Resort in Birmingham, AL. Ross Bridge's picturesque location created a very comfortable relaxing atmosphere for attendees. Attendees arrived on the 24th for an opening reception where they met with old friends, some whom they may not have seen since last year's event, as well as meeting new members who joined the group. Between he camaraderie and the food, drinks, casino night, there was plenty of activity for the evening. Those who managed not to lose all their "free gambling money" had the opportunity to win prizes, including free golf at Ross Bridge, at the end of the night.

The next day began with lunch and a golf outing at the famous, on sight, Robert Trent Jones Ross Bridge Golf Course. With this being the longest course in the world, golfers enjoyed the challenges, luckily with perfect weather. After golf, dinner with awards and recognitions proved to be a great finish to a nice day. SEFA took the opportunity to recognize and thank past Chairwoman Carrie King (we missed her last year as she decided to give birth the day before the event) and outgoing Chairman Terry Windham. Both have proven to be great





leaders for SEFA and continue to be involved with Terry rejoining the Board for another term. Hayden Gaston, the youngest SEFA President, was recognized for his past year of leading SEFA and being instrumental in assisting with new ideas at the conference. A silent auction and a 50/50 raffle brought in funds for the scholarship fund thanks to the generosity of the conference participants.

Congratulations To Our Golf Winners

First Place Team

Ted Nieman - Stelfast

Fran O'Guin & Mike Jones - Ameribolt

Mickey Matheny - Northstar Sales & Marketing

Second Place Team

Hayden Gaston & Tony Strein - International Fasteners

Michael Robinson - Dyson Corp.

Lee Parker - Vulcan Threaded Products

Longest Drive

Josh Ballard - Sems and Specials

Closest to the Pin

Mickey Matheny - Northstar Sales & Marketing

SEFA SPRING CONFERENCE BIRMINGHAM, AL - APRIL 24-26, 2018



MSC INDUSTRIAL SUPPLY CO.



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MSC ACQUIRES ALL INTEGRATED SOLUTIONS (AIS)

MSC Industrial Supply Co., a premier distributor of Metalworking and Maintenance, Repair and Operations (MRO) products and services to industrial customers throughout North America, has acquired All Integrated Solutions (AIS) from New York-based private equity firm High Road Capital Partners.

AIS is a leading value-added distributor of industrial fasteners and components, MRO supplies and assembly tools based in Franksville, WI. AIS delivers production fasteners and custom tool and fastener solutions for use in the assembly of manufactured commercial and consumer products. The company's 135-plus associates serve customers in a region that includes WI, MN, MI, IA, IN and ND. AIS's revenue in 2017 was approx \$66 million.

MSC plans to maintain AIS's operations, providing the company's customer base access to MSC's 1.5 millionplus product portfolio to support their full metalworking and MRO needs. Similarly, MSC will extend AlS's production fastener and vendor-managed inventory (VMI) solutions to MSC's manufacturing customers.

"AIS represents an exciting opportunity to advance MSC's growth plan. Its assembly and fastener products and specialists extend our expertise in delivering solutions to help customers solve their mission-critical challenges on the plant floor," said MSC President & CEO Erik Gershwind." In addition, AIS also complements our robust Class C fastener offering and VMI solutions."

Rustom Jilla, MSC's executive vice president and chief financial officer, said, "This acquisition of AIS aligns very well with our strategy and our capital allocation philosophy, representing an exciting opportunity for MSC.

Jim Ruetz, chief executive officer of AIS, added, "MSC shares our passion for delivering high-touch, custom solutions that go well beyond ordering MRO and production products online. Both organizations make sure the right fasteners and supplies are available when our customers need them without fail. We are looking forward to providing even more turn-key solutions to our customers by leveraging MSC's vast MRO and metalworking product and solutions portfolio, expanding our reach in the Midwest."

BUSINESS FOCUS ARTICLE

MSC INDUSTRIAL SUPPLY CO.

JIM TRUESDELL A GOOD JOB MARKET IS GREAT...UNLESS YOU ARE HIRING! from page 26

This means that a company has to be in a defensive posture with its current employee base, making sure they are in tune with the current market for wages, benefits (including the all important cost and quality of health care coverage) and a friendly workplace environment. Today's worker is not so leery of leaving a job as was his or her predecessor of vesteryear any way. So, just as companies are accused of showing no loyalty to their workers in a "what have you done for us lately" mode, so then do employees expect their employers to be concerned with employee job satisfaction. This goes beyond wages and benefits to encompass career growth opportunities, quality of workplace environment, social consciousness of the enterprise, and consistency of message and purpose. As author Brett Cenkus headlined in his article in a November issue of The Startup, "Millenials Will Work Hard, Just Not for Your Crappy Job!".

During the many long years of job shortages, large segments of the workforce began to drop out of the labor force due to feelings of helplessness in gaining meaningful work. Whether victims of age discrimination, prejudice, poor matches of skills to available work or just losing out to more qualified candidates for the small number of jobs available, some people have simply given up the fight and found ways of subsisting on unemployment compensation, personal savings, earnings of a family member, disability, or other forms of government assistance. Now perhaps we can lure them back into the game. Employers will need to search beyond the "ideal candidate profile" which they could hold out for when there were multiple applicants for each job. Maybe qualified candidates were unfairly passed over for reasons that were based on stereotypes or not based in fact. Maybe it's time to take a second look, and maybe it's time for those applicants to revisit the job market. Perhaps management needs to broaden its perspective on the kind of person they envision filling important slots. Maybe training programs will have to be beefed up to provide the skills we have been trying to find in a pre-packaged new hire. It might be time to think about the culture we are asking new employees to be a part of and how that looks to someone joining us from the outside.

The answers are there to the worker shortage, but it may not be as easy or as simple as managers hope. But those who adapt to the new circumstances will be the ones who are able to staff their companies adequately in this new age of worker shortage.





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Machine Screws
Wood Screws
Sheet Metal Screws
Thumb Screws
Hex Self-Drill (Tek) Screws
Binding Post & Screws
Hex Head Bolts (plain and anodized)
Hex Head Cap Screws (plain and anodized)

Stadium Seat Bolts
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ALUMINUM FASTENER SUPPLY COMPANY





CARMEN VERTULLO HYDROGEN EMBRITTLEMENT IN FASTENERS CASE STUDIES - PART 3 from page 30

Then they showed me the plastic bag – with our label and the remaining zinc plated spring pins in it. It turned out that we did not have enough plain pins in stock on the previous order and the zinc plated pins were substituted. This was done with the permission of the customer, but no record of the permission was found. The customer had no knowledge of IHE and said if they had known about IHE they would certainly not have used the zinc plated spring pins. The pins were very old stock and there was no traceability for the source of the parts or for the zinc plating process. This fact was not germane to this investigation, but certainly could have been in a more serious fastener failure situation.

A very important factor in the investigation was the hardness of the product. Inch spring pins are governed by ASME B18.8.2. This specification calls out the hardness requirement and the requirement for baking of electroplated spring pins. Hardness is HRC 46-53 for high carbon steel spring pins and HRC 43-51 for alloy steel spring pins. Both hardness levels are well into the IHE susceptibility range.

ASME B18.8.2 says this regarding plated spring pins: 2.8 Finishes Unless otherwise specified, spring pins shall be furnished with a natural (as processed) finish, unplated or uncoated. Where corrosion preventative treatment is required, steel pins may be cadmium or zinc plated or phosphate coated as agreed upon between the manufacturer and the purchaser. However, where a corrosion preventative finish applied to carbon steel or alloy steel spring pins is such that it might produce hydrogen embrittlement, the pins shall be baked for a suitable time at a temperature

that will obviate such embrittlement.

After a short conversation we assured the customer we would find out what happened and make it right. In the meanwhile, plain spring pins were provided and the three cut open safes were repaired. Some number of other safes were reworked to replace the zinc plated spring pins with plain spring pins. Fortunately, no safes with the affected spring pins were shipped to any customers. We examined our inventory for other zinc plated spring pins and none were found.

I returned to our warehouse with the zinc plated pins and immediately conducted an IHE test on them. There is no standardized test for IHE in commercial spring pins.

The easiest way to test them is to simply install them in a properly sized hole that will stress the pin. Wait for a few days. Remove them and check for cracks. Even easier just clamp the pin lengthwise in bench vise and put enough pressure to slightly close the gap, but not so much as to fully close it. I used the bench vise method. In about an hour I heard the characteristic "tink" sound of an IHE test failure. The pin cracked lengthwise exactly like those installed in the application.

As HE failure investigations go this one was quick, straightforward and without serious repercussions. All of the elements of a classic IHE failure were in play here:

- [1] The material hardness was HRC 46 -53, which is well into the IHE susceptibility range of above HRC 39. In a formal investigation the hardness would have been confirmed by a laboratory test, but in this case it was reasonable to assume the hardness was as specified.
- [1] There was an obvious source of hydrogen the zinc electroplating process.
- [2] There was high load on the steel. Spring pins must flex significantly to be effective. This flexing would impart high stress – not easily measured in a spring pin, but certainly high enough to induce IHE failure in a susceptible product.
- [3] The failure was delayed in nature –always a prime clue in the IHE investigation.
- [4] There was no obvious process control to mitigate the IHE risk, such as baking and testing.
- [5] The fracture surface was brittle in nature. In this case, the fracture surface could appear brittle even if the cause of failure was not IHE – e.g.: excessive hardness.
- [6] The IHE failure was easily replicated in subsequent testing of samples from the same lot of product.
- [7] No understanding or awareness for the risk associated with electroplating high hardness fasteners was evident on the part of the end user or executed upon on the part of the supplier.

Fortunately, the repercussions of this IHE failure were not significant. The customer asked for a few thousand dollars for their repair and rework costs, which I was readily willing to pay. Our company owner, a more savvy business person than I, offered half of what they asked for as a credit against future business. The customer accepted that offer.

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ALBANY STEEL CELEBRATING 100 YEARS OF SUPERIOR PRODUCTS AND SERVICE from page 28

In the 1950's, Al recognized the increasing demand for threaded fasteners. At the time, although the market for domestic fasteners was showing tremendous growth,

many fastener manufacturers went to market through selective, or even exclusive, distributorships.

In 1952. Lebovitz Bros. purchased the assets and liabilities of one such distributor, Albany Steel & Brass Corporation. Albany was Parker-Kalon's chief representative in the Chicago area, but had fallen upon hard times due to poor cash flow. In the days when Parker-Kalon manufactured a large variety of domestic fasteners,

such as socket screws, thumbscrews, wing nuts, wing screws and screwnails, Albany was known to stock "every size in the book."

Albany's current inventory consists of over 25,000 sizes of fasteners ranging from 00 through 2" diameter in various

> materials. All items are lot traceable, and all products are sold in quantities as requested by the customer. entire inventory is maintained in two 30,000 square foot warehouses located on Grand Ave. in Chicago.

> With fourth generation leadership and a management team with over 200 years of experience, Albany Steel & Brass is positioned and prepared to carry on the tradition of furnishing High Quality products and

services to the OEM and Construction Trades as it has done for the past 100 years.



ALBANY STEEL & BRASS CORP

NCFA 10th ANNUAL DISTRIBUTOR SOCIAL INDEPENDENCE, OH - MAY 17, 2018













FASTENER FAIR USA CLEVELAND, OH - APRIL 11-12, 2018











































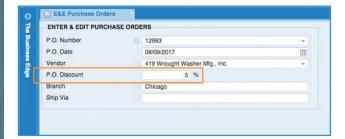






One-Time Discounts

If there is no discount in the Vendor master file, it can be typed in on the heading of the PO and over-ridden on each line item.

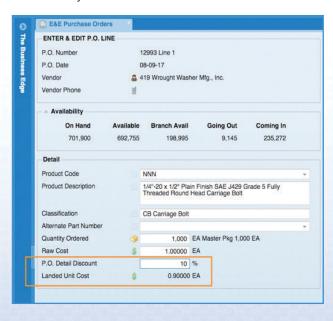


Dollar Amount Restrictions

If you only receive a discount when the Purchase Order is over a set dollar amount you can add the discount percentage on the heading screen of Enter & Edit Purchase Orders. If the discount is only applicable to a single line you can add a discount on that particular detail line.

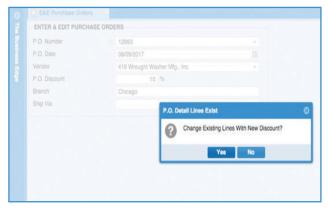
Purchase Order Discount Is The Default

If you add new detail lines the discount will default to the Purchase Order Discount but can be overridden on a line by line basis with the Purchase Order Detail Discount field as shown below. In this case the raw cost was entered as 1.00, but with a five percent Purchase Order Detail Discount the landed unit cost is adjusted automatically to .95.

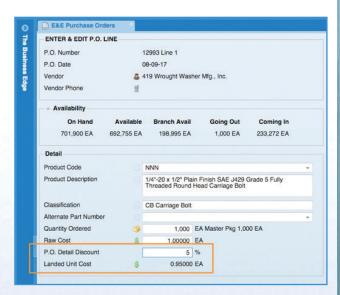


Changes Based On Value, Weight Or A One-Time Deal

If the discount percentage changes after you have completed your Purchase Order you can change the discount for all line items simply by changing the Purchase Order Discount in the heading screen of Enter & Edit Purchase Orders. If line items already exist you will be asked if you want to change their values when changing the Purchase Order Discount as seen by the pop-up message below:



If you answer Yes to Change Existing Lines with New Discount The Business Edge automatically changes all existing lines to the new discount percentage and calculates the new cost as shown below:



The PO will print the Raw Cost and the Default Po Cost will update with the Raw Cost. The Landed Cost will be the value posted to Inventory.

distributor news

Lindstrom LLC, a master distributor of specialty metric and inch fasteners, is pleased to announce following promotions:

Bernie Longen to the position of Regional Vice President, Sales. Bernie's responsibilities include Midwest and West operations - Blaine, MN inside sales and warehouse operations, Elgin, IL inside sales and warehouse operations, Dallas, TX warehouse operations and Manage direct outside sales employees and independent sales reps in the region.

Bernie has over 26 years of experience with Lindstrom and we wish him the best in this position.

Rick English to the position of Regional Vice President, Sales. Rick's responsibilities include Southeast, East, and Canadian operations: Greer, SC inside sales and Lindstrom warehouse operations, New York warehouse operations, Toronto inside sales and warehouse operations, and Manage direct outside sales employees and independent sales reps in the region.

Rick has over 23 years of experience with Lindstrom and we wish him the best in this position.

Jon Newman to the position of Vice President, Purchasing and Quality, Randy Hrdlicka, Purchasing Manager, and Tony Reid, Quality Manager, will report directly to Jon Newman. Additionally, Jon will manage the Mega Shop and the Cleveland distribution center.

Jon has over 18 years of experience with Lindstrom and we wish Jon the best in this new position.

Randy Hrdlicka to the position of Purchasing Manager. All sourcing, purchasing, expediting, and plating personnel will report to Randy. Randy has over 19 years of experience with Lindstrom and we wish Randy the best in this position.

Lindstrom, LLC is a leading domestic supplier of fasteners and related value-added services to distributors.

For more information, contact Lindstrom's Corporate Headquarters at 2950 100th Court NE. Blaine, MN 55449. Tel: 1-800-328-2430, Fax: 763-780-0554, Email: sales@lindfastgrp.com or visit them online at www.lindstromfasteners.com.



Toll Free: 800-223-1316 or 631-567-2900 Fax: 631-567-3057 Email: sales@screwsupply.com Web: www.screwsupply.com

The Problem

During recent reviews of qualification test data for Aerospace series - Screws, 100° countersunk head, six lobe recess, threaded to head, in titanium alloy TI-P64001, anodized, MoS2 coated - Classification: 900 MPa at ambient temperature)/ 350° C it was found that a batch of M5 diameter parts failed to meet the required tensile test limits with lower than required failure levels in the head to shank juncture. Through investigation it was found that the prior approval parts had previously been qualified by analogy with a different standard, Aerospace series - Screws, pan head, six lobe recess, coarse tolerance normal shank, medium length thread, in titanium alloy, anodized, MoS2 lubricated - 1100 MPa at ambient temperature)/315 °C which has a different head style (pan head), a different shank configuration (coarse tolerance normal shank) and higher material strength (1100 MPa).

Additionally, because of the different head style and shank configuration the pan head part has a much different Head to Shank Juncture geometry than the 100° countersunk head that is threaded to the head. Given the differences between these designs and materials what method or data should be used to qualify similar or dis-similar parts by analogy or to evaluate the potential tensile strength capability of a given head to shank geometry?

A poorly designed head and recess configuration can result in fasteners prematurely failing to meet tensile strength requirements with lower than required failure levels in the head to shank juncture. This white paper discusses what method or data should be used to ensure that the strength around this area is maintained such that the fastener is capable of meeting the design tensile strength requirements.

Defining The Variables

For the purpose of this exercise we will assume a basic level of understanding of the tensile strength of various materials and how it affects the mechanical properties that a specific design can achieve. The variables in the head to shank juncture area of a fastener

that influence tensile strength capability can then be limited to the effective geometry of the head to shank interface while the tensile strength of the threaded portion of the fastener can be based on the effective tensile stress area of the thread itself. We must define the diameter to be used to calculate the effective tensile stress area of the portion of the fastener as it transitions from a threaded area to an unthreaded area. That "effective diameter" is different for a given thread geometry (a 10-32UNJF for example) as it transitions to an unthreaded shank (a bolt with a grip length defined by an unthreaded portion) as opposed to when it transitions from a fully threaded part (a screw that is threaded to the head) to the underside of the head of the fastener. In a bolt, the thread transitions to a full body diameter (0.190" for our 10-32 UNJF example) and the result is that the weakest tensile stress area occurs at the thread pitch diameter one or two threads below the thread to full body transition. The thread pitch diameter is often equivalent to the blank diameter (the diameter of the unthreaded fastener before the thread profile is rolled onto the base material) that the fastener manufacturer uses during the production process.

In the case of a fastener that is threaded to the head the minimum tensile stress area often occurs in the area between the last full thread and the bottom of the head or the thread to head transition zone. Here the effective tensile stress diameter may be the same as the thread pitch diameter (0.1658"min for our 10-32UNJF example) or it may be slightly smaller if this area is fillet rolled to relieve stress built up during the manufacturing process.

This is significant because the difference in the effective tensile stress area in the head to shank transition will be different for a full body bolt than for a threaded to the head screw due to this dimensional difference at the bottom of the head between 0.190" for the bolt and the smaller 0.1658" for the screw. The stress cone, or the effective cross sectional area between the shank to head transition and the bottom to the internal recess, is calculated using either the larger diameter of the bolt transition or the smaller diameter of the fully threaded transition.

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JIM RUETZ AMERICAN FASTENER RIDER TOURS AUSTRALIA FOR DUCHENNE MUSCULAR DYSTROPHY from page 38

I told Mark I heard him loud and clear and this would not be problem for me. I've usually got the bike tucked away for the evening, and am at the local pub looking for that perfect pint of Guinness long before the critters are making their way to the pavement. Mark was also able to tell me if the route I choose had paved roads the entire way

and whether there were enough gas stations along the route. Mark and I are planning to meet up during my stay, Lord knows I owe him a big steak and bunch of pints for his help.

The map shows the general route I'm considering with the stops along the way noted with slash marks. Many of the stops are one-night stops

a few are two night stops, and the start (Sydney) as well as, Cairns are three nights. I will be diving the Great Barrier Reef out of Cairns so I need an extra rest day for that and Sydney, so I can collect my bike and recover from any jet lag. I'm building some flexibility into my route, I will book hotels along the Eastern Seaboard cities where I'm likely to find nicer hotels. After that I'll have a hotel designated but not confirmed, that way if I want to change the second half of my route I can. About 50% of the time, I end up modifying something on my itinerary during the trip, often it will just be an extra night or one location change. When I did the "Forgotten East Ride" through the Northeast US and Canada (2011), I hadn't planned on biking up to the top of Mt. Washington in New Hampshire, but was told while enjoying a pint in Stowe, VT the night before that I should add it to my itinerary. Flexibility is a good thing and easy to do when the discussion only has to occur between me, myself, and I.

This trip has an additional planning element. My wife will often fly in and meet me at the farthest way-point on my trips. Normally, Karen spends 3 or 4 days at the furthest point on my trip with me then fly's back home. However, Australia isn't exactly a weekend side trip from Wisconsin! I may change my route yet again depending on how long Karen comes over for.

Karen has always been supportive of the trips-even though like most spouses, she worries about me being on my bike for such a long time. If she decides to come over for a longer stay, I will shorten the bike part of the trip and lengthen the time I spend off the bike with Karen. She enjoys riding on the back for short trips but draws the

> line on spending the day riding. Watch for further updates on "Jim's Aussie ride-about Oz 18" via my blog.

> I don't know how many US and around the world

> rides I've got left in me but I've enjoyed every one of them. I would like to take this opportunity to thank my friends in the Fastener Industry both here in the

for their generous financial support of Cureduchenne and the moral support I've received. The fastener industry has some of the biggest hearts in US industry! Thanks goes out to the AIS team (which now includes MSC) for their support over the years. Thank you Leo Coar for both supporting the rides via Link Magazine and the kind notes about how he lives vicariously through my rides. Thanks to the Debra Miller and the entire cureduchenne team for their help over the years. Finally, thanks to my wife -Karen- without her love and support these rides are not possible.

If you would like to be included on my blog or read about last years "Gaelic Tura's Ride" through Ireland and Scotland, go to www.travelblog.org/Bloggers/JimBMW/. Please consider a donation to cureduchenne you can go to www.cureduchenne.org and look for "Jim's Aussie rideabout 0z 18". Every one donating over \$100 will receive a much coveted Cureduchenne "Jim ride-about Oz 18" t-shirt. I'm also looking for some corporate sponsors who will be listed on the t-shirt and/or on the Blog site & cureduchenne site. Send me and email if you are interested in being one of the business sponsors for this very worthwhile event (jruetz@allintegrated.com). 100% of the money raised goes directly to cureduchenne to help find a cure.

FASTENER FAIR USA CLEVELAND, OH - APRIL 11-12, 2018

















































IFI 2018 IFI SOARING EAGLE AWARDS: RECIPIENTS ANNOUNCED IN KIAWAH ISLAND, SC from page 40

Rob's most enduring legacy is his efforts to reorganize staff and to hire widely recognized industry leaders into key technical and divisional leadership positions. Rob's philosophy has been to hire best available personnel, get everyone on the same page, then get out of their way to let them succeed!

Rob formally retired from his position at the Institute on December 31, 2017. IFI and the fastener industry at large are grateful to have benefitted from his leadership and significant contributions.

The 2018 Soaring Eagle Technology Award Recipient is Michael J. Lawler



2018 IFI SOARING EAGLE TECHNOLOGY AWARD RECIPIENT **MICHAEL J. LAWLER**

The IFI Soaring Eagle Technology Award recognizes individuals who have extensive experience in the industrial fastener industry and who have made significant contributions to the technological advancement of the industry. Contributions may be through extensive work on fastener standards committees; the publication of widely acclaimed principles or documents; and/or through the development of fastener-related equipment, products or processes which have been widely acknowledged as advancements in fastener technology.

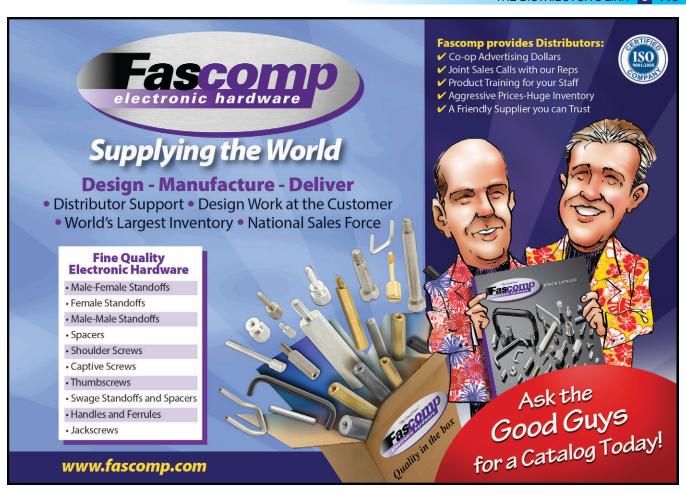
Mike Lawler was born in Bethlehem, PA and graduated from Lafayette College with a B.S. in Metallurgical Engineering and is a U.S. Army veteran.

During his career, Mike was Senior Product Engineer and Manager of Fastener Product Development at SPS Technologies, Aerospace Development Manager at Penn Engineering & Manufacturing Corp. and Consolidated Aerospace Manufacturing (CAM). Mike has been a longtime member and contributor to many material, product, and process standardization committees, including the Government Industry Fastener Working Group (GIFWG), National Aerospace Standards Committee (NASC), SAE E-25 General Standards for Aerospace and Propulsion Systems, Aerospace Material Specifications (AMS), Aircraft Locknut Manufacturer's Association (ALMA), and the Industrial Fasteners Institute (IFI). Mike has also co-authored several technical publications related to new materials. At IFI, he has been part of Division II (Aerospace Fastener Division) and served for many years as the division's Technical Committee Chairman before serving as Chairman of Division II multiple times and has also represented the division on IFI's Board of Directors. Mike is a dedicated spokesman and representative of the aerospace fastener industry. He is relentless in aiming for clarity and common sense and is always willing to speak up on subjects for the benefit of the industry. He is a forceful advocate for doing things correctly while adhering to the highest standard of ethical conduct. When voting or commenting on project ballots, his opinions and reasoning command respect from his peers and colleagues. Mike is both a teacher and mentor who is always willing to share his expertise and knowledge.

We are honored to recognize Mike Lawler as recipient of the 2018 IFI Soaring Eagle Technology Award.

Submit a Nomination

Visit our website at www.indfast.org/info/award to submit a nomination for the 2019 Soaring Eagle Awards program.





FASTENER FAIR INAUGURAL FASTENER FAIR USA DEEMED SUCCESSFUL BY ATTENDEES AND EXHIBITORS from page 42



t's a model that was new to the U.S. market, but one that has been successful around the world for many years for the show's organizers. Mack Brooks Exhibitions was pleased that the format worked so well in the U.S., as well.

Fastener Fair USA attracted the types of buyers and decision makers that exhibitors were hoping to see. With 71% of those surveyed saying they were the company's decision makers, the primary job titles/responsibilities of the attendees were:

- ¤ Buyer
- Department Head/Senior Manager
- Engineer/Technical Specialist
- Managing Director
- Purchaser/Procurer

For these attendees, the show offered a firsthand look at the latest fastener/fixing solutions and technology available in the marketplace, networking events to facilitate relationships with peers, and top-notch educational programs developed and delivered by industry experts.

The top reasons people said they attended the inaugural show, in order of importance, included:

- Making new contacts
- Networking with industry peers
- Finding new products or business
- Finding a supplier

The welcome networking event at the Rock and Roll Hall of Fame, was extremely well received and successfully delivered on the first two reasons that people wanted to attend the show.

"The feedback we received from exhibitors and attendees was overwhelmingly positive," said Jessica Boweak, Exhibition Manager for Fastener Fair USA. "The exhibitors were connecting with the people they wanted to meet and the education sessions offered unique value not seen at other fastener events. Many exhibitors are already planning their participation in 2019, with nearly 50% of the floor already reserved."

Fastener Fair USA offered fastener professionals unique access the latest industry information, forecasts, and technical education with keynote sessions and breakouts. Show management put together a strong line-up of educational sessions so that no matter where professionals fit in the fastener supply chain or their experience level, they found an educational session or workshop with insights to take back and implement immediately in the workplace.

One of the highlights of the educational sessions included the keynote presentation "The Future of the Fastener Industry," which attracted nearly 100 attendees and featured an impressive line-up of some of the most recognized names in the fastener industry:

- Dr. Andrew Gyekenyesi, Associate Chief Scientist and Research Team Manager of the Ohio Aerospace Institute:
- Phil Matten, Editor of Fastener + Fixing Magazine;
- Graham Immerman, Director of Marketing at MachineMetrics:
- Greg Terrell, Director of Business Development at Coventya;
- Kirk Zehnder, President of Earnest Machine Products: and
- Stuart Southall, Manager of Earnest Machine Products UK.





FASTENER FAIR INAUGURAL FASTENER FAIR USA DEEMED SUCCESSFUL BY ATTENDEES AND EXHIBITORS from page 120

The panel was moderated by Howard Thompson, Sr. Program Manager at the Ohio Aerospace Institute and sponsored by Earnest Machine Products.

Other highlights included:

- Management, marketing, and sales technique workshops sponsored by Young Fastener Professionals, Women in the Fastener Industry, and Earnest Machine Products:
- Technical training sessions; and
- The speed networking event sponsored by Young Fastener Professionals.

Many of the educational session presentations are available for download on the Fastener Fair USA website.

75% of survey responders said that Fastener Fair USA was important to their business and 78% would recommend Fastener Fair USA to a colleague. With that positive feedback, Mack Brooks Exhibitions looks forward to an even bigger and better Fastener Fair USA in Detroit, MI at the Cobo Center on May 22-23, 2019.

Exhibit space sales have already started.

Fastener Fair USA is organized by Mack Brooks Inc., a subsidiary of the Mack Brooks Exhibition Group based in St. Albans, UK, which has branches and partner companies in France, Greece, Italy, Poland, Russia, India, China and the USA. The Mack Brooks Exhibitions Group has been organizing industrial trade fairs around the world for almost 50 years. As a privately-owned, independent and professional show organizer, the company organizes a program of highly specialized trade exhibitions throughout Europe, Asia and the Americas, in the fields of engineering, transport, metalworking, information technology, textiles, food and beverages, railways, construction, tunneling, printing, converting, airport management, and aviation. The Group also publishes related directories, magazines, sector reports and Internet sites.

For information about Fastener Fair USA 2019, visit the website http://fastenerfair.com/usa/, or contact Show Management at fastenerfairusa@mackbrooks.com or 866-899-4728. 🔿

ARNOLD SUPPLY STATE OF THE ART VMI HELPS PUT ARNOLD SUPPLY ON THE MAP from page 48

Family Owned

Like so many fastener companies, Arnold Supply Inc. is a family owned and operated fastener distributor. The President is Bill Donahue, Sr. and the Vice Presiden is Bill Donahue, Jr. They now have three generations actively working at Arnold Supply. The depth of experience gained by everyone growing up in the fastener business is a huge advantage that they have.



BILL DONAHUE JR, VICE PRESIDENT AND BILL DONAHUE, SR., PRESIDENT

Substantial Operation

Arnold Supply is ISO 9001:2015 certified, they have over 15,000 Inventory SKUs, 35 employees a full-service kitting department and in-house Quality Control.

They work several industries including:

- Information Technology
- ¤ Electronics
- **¤** Automotive
- ¤ Fabrication
- Medical Industry

Variety of Customers

Their customers range in size from small manufacturers to multi-location manufacturers. No matter the size or industry, Arnold Supply guarantees the quality of their work and on-time delivery. The size of their business allows them to share volume discounts with even the smallest of their customer accounts. They've integrated state-of-the-art technology to enhance inventory tracking and product delivery. Their customers consistently choose Arnold Supply Inc. for exceptional customer service, quality and pricing. More than 75% of their customers have been with them for over 25 years.

Significant Growth

They have enjoyed consistent growth. Bill Jr., Vice President, said "A Major factor enabling and supporting our growth is the fact that we realized and took advantage of the evolution of technology in the fastener industry. What was a once a manual cardex system has transformed into present day use of The Business Edge[™] by Computer Insights, With The Business Edge[™], we have been able to setup a Vendor Managed Inventory program on an international level."

The Business Edge™

Bill went on to say, "Computer Insights helped us create custom bar codes for our customers and they made it easy to integrate mobile technology to use at our customer's facility. The Business Edge[™] gives us and our customer's real time information about inventory, accounting, usage, tracking and traceability. Over the years of being associated with Computer Insights, many questions have arisen as our needs have changed. We have yet to have a situation where Computer Insights has not been able to help us, 100% of the time. They have the same philosophy that we do, deep knowledge and intense commitment to customer service. What could be better?"

More Information

Arnold Supply, Inc. can be reached at 67 South Turnpike Road, Wallingford, CT 06492. Contact Bill Donahue, Sr. by telephone at 203-265-7168, eMail: bill@arnoldsupplyinc.com or visit them online at www.arnoldsupplyinc.com

Computer Insights, Inc. can be reached at 108 3rd Street, Unit 4, Bloomingdale, IL 60108. Contact Denny Cowhey by telephone at 1-800-539-1233, eMail sales@ ci-inc.com or visit them online at www.ci-inc.com.

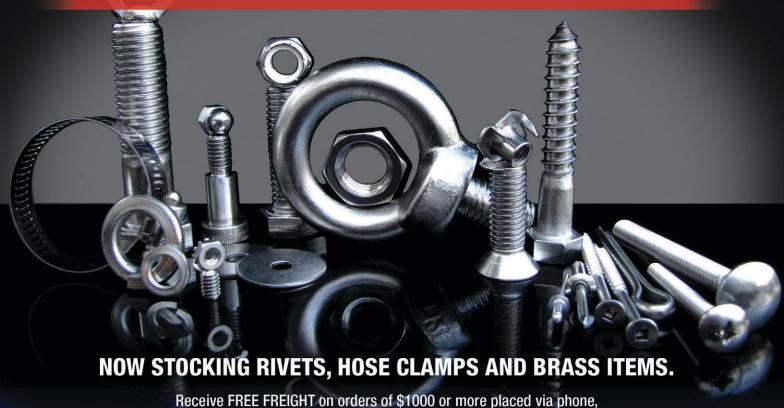


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BBI STARTS EDUCATION INITIATIVE

Great day of inspiration at the first OC GPS Your Future career exploration event for high school students that took place on April 27th, 2018. Nearly 200 students got to hear from and network with business leaders such as Brighton Best International. BBI had students install Proferred drywall screws and Proferred rivets into sheet metal and drywall samples, to show them how to use tools and install fasteners. Plus, Rosa E. Hearn gave an hour presentation of the fastener industry and career path, to bring awareness and youth into the fastener industry. If you would like Brighton-Best/Proferred be part of your educational initiative, please contact a rep today!







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FINAL THOUGHTS	OVERALL SCORE
There's a lot to like about this little wrench - lots of capacity and the ability to get into	4.6
spaces other adjustable wrenches can only dream about!	PRO REVIEW



Brighton-Best would like to congratulate Mario Castellanos from BBI-Chicago for his promotion to Assistant Warehouse Manager.

It's racing season for BBI Proferred driver Alan Englen who is finally seeing more than a year's worth of work in action. Brighton-Best is proud to sponsor this year's drag racing team lead by Alan Englen of BBI.



distributor**news**

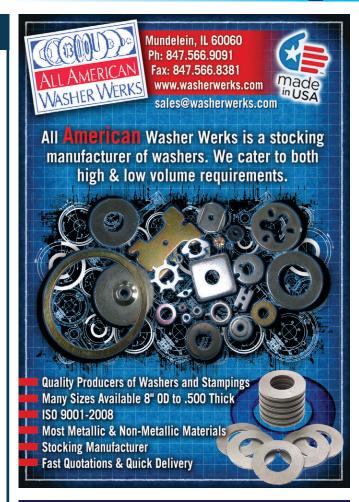
Suncor Stainless is looking towards growth to increase production and service to customers. Continuing to move forward after their recent opening of their new facility in Las Vegas, NV in May of 2017, Suncor is adding new machines, a box truck, new personnel and 35,000 square feet of production space in their facility in Plymouth, MA. They have already begun by adding positions to customer service, sales and their warehouse to keep up with the ever-expanding demand. The completion of this project in 2019 will allow Suncor to increase production of domestic products, boost inventory levels, offer faster delivery times, and reduce backorders.

"We started our expansion a few years ago when we reconfigured the warehouse in Plymouth to accommodate more stock and last year when we opened the Las Vegas warehouse" says David Morgan, Vice President of Sales and Marketing for Suncor Stainless. "We're now taking additional steps to grow Suncor by bringing in more people and machines to increase our domestic manufacturing, which in turn, will require more space, leading to our decision to add 35,000 square feet to our warehouse."

Most recently, 2 new machines have joined Suncor's line-up of both Manual and CNC Machine Tools. They've added a Track Model #TRL 1630SX CNC Lathe and a Trak model #DPM3 CNC Bed Mill. Both machines offer conversational controls which allow more flexibility and programming options than some traditional machines, making them well suited for prototyping and for short-run production of milled and turned parts.

Suncor Stainless, Inc. is a leading manufacturer for stainless steel hardware in the industrial, marine, government, architectural, OEM and commercial industries. Suncor's modern facilities manufacture the highest quality stainless steel chain, wire rope assemblies and custom parts. The in-house capabilities include a product development staff whose tireless efforts, along with valuable input from clients, work to continuously improve and perfect their ever-expanding product line.

For more information contact Suncor Stainless at 70 Armstrong Road, Plymouth, MA 02360. Tel: 1-800-218-7702, Fax: 508-732-9798, Email: info@suncorstainless.com or visit them online at www.suncorstainless.com.



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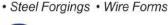
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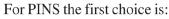


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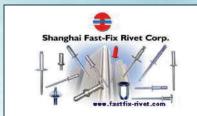






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distributor news

Endries International is pleased to announce that we have acquired Branam Fastening Systems Inc.

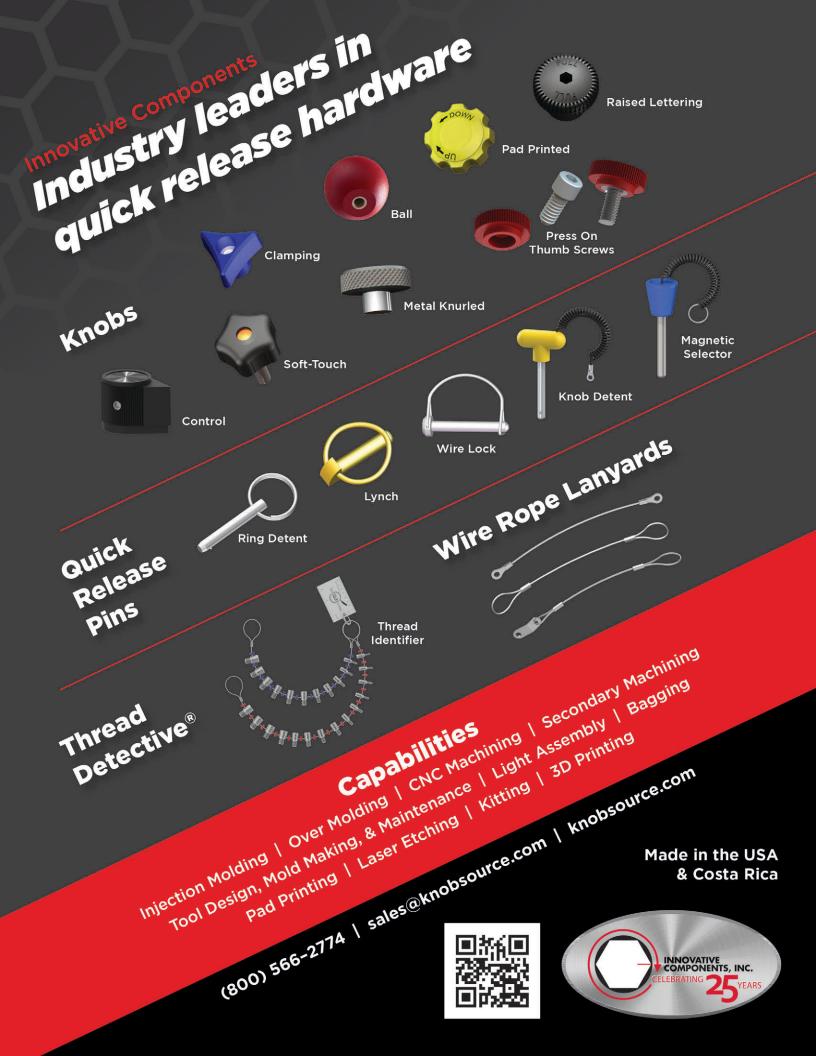
Branam Fastening Systems, which was founded in 1986 by Terry Delia in Cleveland. Ohio, is a provider of fasteners to the original equipment manufacturing and distribution markets. In addition to stocking over 10,000 unique general fastener items, Branam has a market expertise in the stud welding product category. Operating under ISO9001 accreditation Branam currently products provides quality and services to customers throughout the United States.

Endriesisaleadingdistributor of fasteners and Class-C parts serving industrial Original Equipment Manufacturers (OEM's) worldwide. From its headquarters in Brillion, WI and eight U.S. and international distribution centers, Endries provides over 500,000 SKUs to its customer base.

Branam Fastening Systems we found a philosophy and approach that is aligned with what is core to Endries. In addition, we are thrilled with the team of associates that Branam has assembled. Together, we look forward to building upon the foundation that has been established." said Steve Endries, President of Endries.

For more information contact Endries International at 714 West Ryan Street, PO Box 69, Brillion, Wisconsin USA 54110. Tel: 920-756-5381, Fax: 920-756-3772 or visit them online at www.endries.com





NFDA 50th ANNIVERSARY MEETING & CELEBRATION GUANACASTE, COSTA RICA - MARCH 14-16, 2018 PHOTOS COURTESY OF GREG CHRISTENSEN



STAFDA A PREVIEW OF STAFDA'S UPCOMING 42ND ANNUAL CONVENTION & TRADE SHOW from page 52



On Sunday afternoon, **Putting** the Success Back in Succession is a hot topic that will be covered by STAFDA consultants, Ryan Barradas and Tim Young, of WealthPoint. Business owners often become 'stuck' when working

through the challenges of transitioning their company. As

owners procrastinate, opportunities are often lost. Ryan and Tim will address how entrepreneurs can navigate the issues they face by identifying the best practices of a succession planning process, how to get started, who should be involved,



and the necessary steps for a successful transition. There will be an overview of the various methods to exit, such as transferring the business to the next generation, selling to key employees, or monetizing via a third party.

STAFDA is again inviting college students with industrial distribution or construction majors to attend the Convention and participate in its programs as well as the 'Speed Interviewing' session with members Sunday afternoon.

The Opening Party Sunday night in downtown Phoenix will be at CityScape, walking distance from STAFDA's host hotels. This popular enclave of restaurants, a comedy club, bowling alley, is in a horseshoe fashion surrounding an open courtyard. STAFDA rented out the entire venue for the evening and the restaurants/bars will each be offering different cuisine; the center courtyard will also be used for additional dining and seating. The street in front of CityScape will be closed to house the stage for a popular local band, the Walkens. It'll be a three-hour party with something for everyone!



Business expert, Jon Gordon, one of the most sought-after speakers in the country, will bring his expertise to STAFDA attendees during his keynote presentation, Monday morning, October 29, at STAFDA's General Session.

Gordon is the author of The Wall Street Journal bestseller, The Energy Bus, and has been featured on The Today Show, CNN, Fox and Friends, and in numerous magazines and newspapers. His clients include Southwest Airlines, Campbell Soup, Wells Fargo, the PGA Tour, Ritz Carlton Hotels, Dell, Northwestern Mutual, and several professional sports teams: the Atlanta Falcons, the Los Angeles Dodgers, LA Clippers, Miami Heat, and Pittsburgh Pirates.

He'll focus on leadership, teamwork, positive change, culture, sales and service by blending his three most popular books into his STAFDA keynote. From Training Camp, he'll draw on the qualities of what makes someone great in their field. From Benefits of Being Positive, Gordon will share proven principles, strategies, and real world applications to show how positivity can boost creativity and productivity. Lastly, overcoming fear, failure, busyness, and stress in order to stand out and excel in life are the ideals he'll pull from The Greatest Success Strategies of All.

The Trade Show follows STAFDA's General Session and feature 700+ exhibitors showing the latest and greatest in construction and industrial products. It's a buying show so distributors come prepared to take advantage of show-only specials, terms, and discounts. Manufacturers like to end the year on a high note and are motivated to offer incentives as well as debut their following year's new products. Rep agents use the show to see their principals, visit with their distributors, and source new vendors. It's a relationship show and there is a powerful synergy to advance our industry's supply chain.

On Tuesday morning, October 30. STAFDA's economic consultant, Alan Beaulieu, will cover the nuts and bolts of today's business conditions in an entertaining, down to earth, and easy to understand manner. He'll review short-term and



long-term economic forecasts for the U.S., Canada, and globally before explaining how they'll directly impact STAFDA members. Alan will identify business cycle phases and what this means to member companies.

Following another full day of the Trade Show, Tuesday will end with a 90 minute closing party at the Sheraton Phoenix, one of STAFDA's host hotels.

The STAFDA Convention & Trade Show is for members only. Please visit www.stafda.org for membership information, learn more about the Phoenix meeting, or to contact the STAFDA office.

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JO MORRIS NONPROFIT - A GROUP MAKING A DIFFERENCE IN THE COMMUNITY ... NOW THAT'S FTI from page 56

New classes have been introduced in Detroit, Cleveland and California. Our long-term goals include online fastener courses, specialized trade training and sales development seminars.

Research indicates that nearly half of nonprofits are set up to fail. The Fastener Training Institute needs the input, guidance and financial support of the industry we serve to survive and flourish.

Please visit our website or contact Jo Morris at JoM@ Fastenertraining.com to find out more information and how you can help!

Sponsoring one of our upcoming events is a great way to help FTI and promote your company or products.

Upcoming Summer Events Why Fasteners Fail

Denver, CO July 12, 2018

WEBINAR: The Least You Should Know About **Hydrogen Embrittlement**

July 13, 2018

Understanding the Bolted Joint

Costa Mesa, CA July 17, 2018

Product Training Part 3

Costa Mesa, CA July 24

WEBINAR: Platings, Coatings and Finishes for **Fasteners**

August 3, 2018

Fastener Training Week

Chicago, IL August 20-24, 2018

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

JO MORRIS | FASTENER TRAINING INSTITUTE

ASPHALT ANCHORS ASPHALT ANCHORS KEEP MODULAR BUILDINGS GROUNDED from page 62

BoltHold anchors securely hold down equipment to asphalt without damage to the asphalt surface. A

number of models are available to meet pull force and shear resistance requirements. To hold down the modular structure, Anchor Modular selected the SP12, rated at 2,000 lb. pull resistance.

Installation was quick — drilling one-inch diameter holes in the asphalt, filling the holes with the special grout provided by AAC, then pushing the anchors all the way until flush with the asphalt. After 15 minutes each anchor was ready for use. The provided bolt is removed from the installed anchor, and the strap is bolted to the anchor.

The asphalt anchors' unique properties and installation made it easy for Dooley's team to install them without cracking or ruining the surrounding asphalt. After the installation was completed, a conformity pull test was performed on a sampling of the anchors to ensure that they would remain secure in compliance with local building codes. The BoltHold anchors

had beaten the goal of 1,800 pounds of resistance per anchor, by resisting 5,400 pounds.

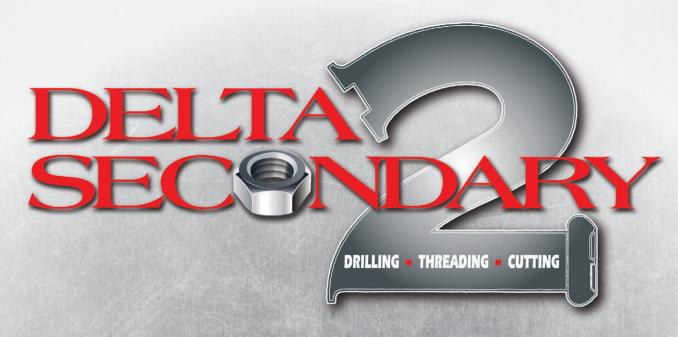
"We certainly were very impressed," Dooley said. "Not only with how well it performed, but also with how easy it was to install. When we have such an application again, you can bet we'll use Asphalt Anchors."

Anchor Modular Buildings is a one-stop shop for such structures. Since 2002 Anchor Modular has been constructing commercial structures to meet needs of industrial, military,

transportation, education, petrochemical, manufacturing and other organizations. With factories throughout the country, Anchor Modular provides quality, reliable and cost-effective modular installations.



PULL TEST USING FORKLIFT



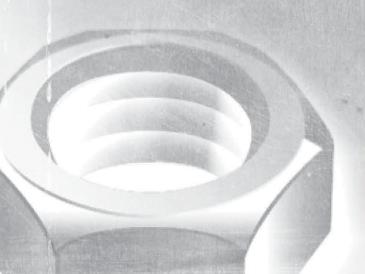
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COME TO MONTANA AUGUST 8-11, 2018 FOR THE PAC-WEST FALL CONFERENCE by Vickie Lester

If you've never visited Montana, then you need to attend this meeting! To be held at the Grouse Mountain Lodge in Whitefish, the meeting is minutes away from the awe-inspiring beauty of Glacier National Park.

But the location is not the only reason to attend: we have put together a compelling and timely program that will be important for all fastener industry representatives.

- m How to Attract, Develop, and Retain Young Workers for Jobs They Don't Consider Sexy
- Cyber Security Made Easy
- Business Owners Roundtables and Business **Executives Roundtables**
- A Conversation with Marc Racicot (Former Governor of Montana)
- The Impact of Trump's Tariffs

Registration details can be found at www.pac-west.org. You don't have to be a member of Pac-West to attend!

Celebrating Our 50th Anniversary

In 1968, some fastener professionals in Southern California decided to get together and form the Los Angeles Fastener Association. About 25 years after that, the Western Association of Fastener Distributors was born. In 2009 LAFA and WAFD unified into what we now know as the Pacific-West Fastener Association.

We celebrated 1968-style during the recent Spring Conference in Scottsdale, Arizona with tie dye, lava lamps, a groovy playlist of songs from 50 years ago, and a costume contest. Honorable mention goes to Suzy and Gary Cravens (Advance Components), Jennifer and Frank Hand (Fall River Manufacturing), and Joe and Jennifer Truckey (Cal-Fasteners), with first place honors going to David and Jennifer Palmquist (ND Industries).

Looking Ahead

Save these dates on your calendar for future Pac-West events.

July 12, 2018

After Hours

The Crafty Fox Brewery in Denver, CO

August 8-11, 2018

Fall Conference

The Gouse Mountain Lodge, Whitefish, MT

September 11, 2018

Dinner Meeting

Featuring an industry update with

Tim Roberto Jr. and Simmi Sakhuja

Holiday Inn, La Mirada CA

September 13, 2018

After Hours

The Portland Brewing Taproom, Portland OR

December 6, 2018

Holiday Party

Holiday Inn, La Mirada CA

March 13-16, 2019

Joint Conference with National Fastener Distributors Association and Mid-West Fastener Association

The Omni Hotel in San Diego, CA

October 24-26, 2019

Fall Conference

The DoubleTree by Hilton Sonoma Wine Country,

Rohnert Park, CA

Check our website at www.pac-west.org for the most up-todate information on our event schedule.

PAC-WEST 50TH ANNIVERSARY MEETING & CELEBRATION SCOTTSDALE, ARIZONA - APRIL 19-21, 2018 PHOTOS COURTESY OF GREG CHRISTENSEN



UNICHEM FASTENER MANUFACTURERS IMPROVE 'DRIVABILITY' WITH UNIQUE COATINGS from page 66



"The specialty coating allowed the customer to re-launch the product and market it as incorporating new, improved technology," explains Chin. "They were able to increase their revenue and were very successful with it."

The coating also potentially increases the number of nails that could be driven on a single, full battery charge, a high priority for cordless tool manufacturers and users.

Whether a pro wields a framing nailer at a

construction site or a DIYer uses a finish nailer to install moldings or baseboard, no one wants to interrupt the job to change out, or recharge, a dead battery. The same is true for anyone using a cordless screwdriver, drill driver, or impact driver.

To address this issue, various strategies have been employed to extend battery life. Some include moving to more powerful, longer-lasting lithium batteries along with techniques to avoid overcharging.

Instead, Chin suggests forward thinking fastener manufacturers consider custom coatings that help to speed jobs and maximize cordless power tool life in the field.

"In a competitive market like fasteners, coatings can be used to create innovative new products with a clearcut differentiation from the competition," says Chin.

ROMAN BASI CLOSING OF THE BOOKS from page 80

Thus, it's wise to speak to a tax or accounting specialist to determine which is better.

The final method that can be used is called the "Reasonable Method". Federal tax regulations will allow a partnership to allocate the taxes pro rata for departing partners, while also allowing the partnership to collect some profit for the rest of the year on income they may have contributed to. For instance, a partner departs from its law firm, but contributed to a case that will be settled 6 months later; the firm can opt to pay them from that profit and still have the new partnership structure remain the same.

All of these methods and terms are controlled by 26 USC 1377, which provides definitions and structure to all the methods mentioned above. Furthermore, there are a number of steps that can help a corporation and shareholders proceed cleanly should a situation arise where they might want to close the books. The first, is to enter into a shareholder agreement at the beginning of the corporation, the agreement can have the structure in writing and the proceedings should someone be bought out. Another potential step, is to troubleshoot conflicts that may arise prior to formation of the conflict, such as

conflicting schedules with other work, make sure to work this into the agreement. Troubleshooting before formation of the corporation can help when the agreements are drawn up, and assist in creating a fair contract for termination of shareholder's interests. An example of a shareholder agreement may look something like, "Company X will have a closing date of Y, unless during the taxable year shareholders hold a special election pursuant 26 USC 1377 and with a unanimous vote elect to close the books early."

To conclude, the "closing of the books" method is a good way for S-corporations to change shareholders or officers without complicating company books/financials over change of ownership. However, depending on the variations between each company it may or may not be beneficial to close the books accordingly. Other factors must also be analyzed to adequately determine the best path forward for your business. Some of the other factors may include type of shareholder termination, purchase agreements, and shareholder agreements. The corporate structure can be complicated to navigate in times of buyouts and shareholder disagreement, but it doesn't have to be.

CROSSWORD PUZZLE

NOTICE TO ALL EMPLOYEES

ACROSS

- 1. Light source
- 5. Give a nickname to
- 9. Refreshing spot
- 12. "See ya!"
- 16. Celebes ox 17. "Für __"; popular Beethoven work
- 19. Ladd or Alda
- 20. Hung tapestry 21. Start of the
 - boss's NOTICE TO ALL EMPLOYEES
- 24. Scoops water out of a boat
- 25. Lighthearted
- 26. Subject: topic
- 27. Enigma
- TV's "Science Guy" and others Maine __; long-
- haired cats
- 30. See 49 Down "__ Through the Tulips"
- 34. Offended
- 35. Store event "Sesame Street"
- network
- 39. More of NOTICE
- 43. Pass out 52
- 44. Young salmon
- 45. Nothing
- Ending for organ or balloon
- 47. Numerical prefix
- 48. Small bills
- 49. More of NOTICE 54. 6-pointers: abbr.
- 55. Pasture sounds
- 56. Old and gray
- 57. Lifts
- 58. Cuzco's location
- 59. Pours
- 60. Sagan or Reiner
- 61. Large scissors
 64. Start of a counting rhyme
- 65. Circle portions
- 66. So. state
- 69. More of NOTICE
- 72. Foreboding sign
- 73. Loan shark's crime
- 74. Luau dish
- 75. Spanish article
- 76. Fasteners
- 77. Cots and cribs
- 78. More of NOTICE
- 84. 90° from ENE
- 85. Cautious
- The School of the Art Institute of Chicago: abbr.
- 87. Start of a U.S. state capital
- Breathe heavily
- Wed in haste
- 90. Ms. McEntire
- 91. Student's paper

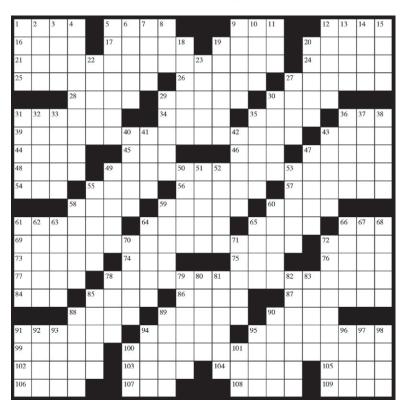
- 94. Aromatherapy essential oil
- 95. Destroy deliberately
- 99. Rub away
- 100. End of NOTICE
- 102. Gives off
- 103. Talking animal
- 104 Garbo
- 105. Designer Cassini
- 106. Groupies
- 107. Asian nation: abbr.
- 108. Home of twigs
- 109. Not decent

DOWN

- 1. Secular
- 2. Actress Faris
- Tract of wasteland
- Those to whom inventors apply
- Ordered
- Gold"; 1997 Peter Fonda film
- Chomp
- "Be quiet!"
- Closes noisily
- 10. Part of a window
- 11. Word with way or body
- 12. Swap
- 13. Very dry
- 14. Like a giraffe 15. South African fox
- 18. Go to restaurants
- that!"; words of agreement

- 20. Can't ; won't tolerate
- "Catch Me __ Can"; 2002 Tom Hanks film
- 23. Rose bush prickle
- 27. Movie part 29. Gall or bile: pref.
- 30. Desert plants
- 31. Go __; deteriorate
- when; assuming that 33. Funeral fires
- 35. Actress Spacek
- 36. Sampras and Rose
- 37.
- Wilkes-__ 38. Kills
- "Shame _
- Writer Anaïs & others
- Bleacher levels
- 43. Pitchfork carrier
- Basil III & Nicholas II
- 49. With 30 Across. telegraphic transmitting system
- 50. Scottish clan chief
- 51 5055 and 5056
- 52. Beat 53. Scripture pamphlet
- Clemency Scissors & pants 58.
- Rekindled
- Eastern European
- Ignores
- Auto engine parts 63. Piano piece
- 64. Dark wood 65. Caesar's year

- 66. Wrong
- 67. Slowly, in music 68. Actor Williams
- 70. Take ; undo
- 71. Small weight 72. Appendicitis cure
- 78. Desire
- 79. As heavy
- 80. Singer Judd High-pitched
- barking: var. 82. Winter
- conveyance 83. Lodge's middle
- name
- 85. Merchandise 88. Mails
- 89. Fudd or Gantry
- 90. Angry speeches
- 91. Ridge of rock 92. Columnist
- Bombeck
- 93. Arthritis symptom
- 94. Uncanny: var.
- 95. Large knife
- 96. Controversial defense org.
- 97. Turned to the
- right 98. Do a lawn chore
- 100. Kitchen, bath,
- etc. 101. Espresso container



Did The Tariffs Work?

"There is little evidence that EU fastener makers switched back to production of standard fasteners," Matten observed. "Most investment has been targeted at higher added-value special parts."

"The reality is most of the business switched to other Asian sources," Matten commented.

And China of 2018 "is not the China of 2007," he added. China's fastener production costs are higher. Beijing's "tightening grip on air and water pollution" ismaking wire rod prices volatile and closing plating facilities – at least temporarily."

"Taiwan and China are both committed to the higher added-value path."

Looming Problems

European wire rod prices surged in early 2018, along with utilities.

"There are real concerns about how the barriers are going up around the world – more so now, as a global trade war appears to loom," Matten observed.

- Low cost imports from China "have long been a concern – especially in Italy," Matten noted.
- "There is a sustained challenge for attracting young talent" into fastener manufacturing to succeed the aging skilled work force, Matten said.
- "How far can the distributor pass on price increases before the customer goes out of the market?"

Automotive Market

The European car demand has grown for four consecutive years, Matten noted. Commercial vehicle demand rose 3.3% in 2017.

The several years of strong automotive market has resulted in "strong investment in the technologies and systems vital to sustaining future profit growth."

Europe produced 16.9 million cars in 2017 – adding Turkey and Russia increases it to 19.6 million.

"It's worth noting how significant car production now is in Turkey and how that is transforming the fastener manufacturing sector there," Matten noted.

A decline in diesel car sales and acceleration of Alternative Fuel Vehicle demand affects automotive

suppliers.

"For all European markets, now, diesel has become the headache," Matten finds. The diesel share of new car sales plunged to 31% in Germany during March "as cities readied to ban at least older diesel cars," Matten commented.

Car makers must achieve fleetwide CO2 targets via improved technology and incentives.

Thus far, alternative fuel vehicle market share has grown to 5.8%.

EVs need two to three times more fasteners – though most fasteners are small, lower grade and lower complexity, Matten noted.

That is not good for European fastener manufacturers "that need high valued added product."

Matten noted that China, "with its massive air pollution problem, has the greatest incentive to get Alternative Fuel Vehicles right."

UK Market

Even Great Britain's 'Brexit' has not dampened manufacturing, Matten finds.

"We've shaken off the immediate plunge of concern after the 2016 referendum and benefited substantially from the short term fall in sterling," Matten explained.

"Manufacturers have won export business, although ironically most of it is coming from the EU market, we're apparently trying to get away from."

The UK construction market has been "rattled by the uncertainties that still surround Brexit."

"Civil engineering new business is weak – major projects are being held back," Matten told the inaugural U.S. Fastener Fair.

Matten said a fastener distributor told him "there's next to no demand for holding down bolts or for anything above M24 diameter. The small stuff is flowing reasonably, but we can feel the freeze on big projects."

Matten finds the best UK construction sector is housing.

Consumer confidence fell, "but the UK has an underlying housing shortage that continues to drive demand."

distributor news

ZaGO Manufacturing's sealing hardware protects data centers from environmental threats - high tech companies in the US and overseas are discovering that ordinary fasteners are not sufficient to protect high value assets.



Data centers house servers that are part of our critical infrastructure and cannot be left vulnerable to the contaminants that can seep through unprotected fastener openings and clearance holes. Environmental contaminants, moisture and humidity are a constant challenge to the security and safety of our economy's most valuable assets. ZaGO self-sealing fasteners and components are designed with a groove and o-ring to seal out both internal and external environmental contaminants.

ZaGO hardware limits the incursion of internal hazards including gases, electrostatic dust and cleaning chemicals and external threats such as pollution particulate, pollen, sea salt, construction dust and exhaust. In addition, ZaGO's sealing fasteners are the best possible method to seal out moisture and humidity which are two of the top threats to valuable servers housed in data centers.

Additionally, ZaGO sealing hardware and components protects the environment from potential contaminants leaking electronic equipment. ZaGO fasteners comply with all national and international standards for the restriction of hazardous substances including REACH, ROHS and California's Prop 65 and so are the best choice for protecting our environment and protecting data centers and other high value assets from environmental threats.

For more information contact ZaGo Manufacturing by Tel: 973-643-6700, Fax: 973-643-4433, Email: info@ZaGO.com or online at www.ZaGO.com.





SPIROL COLD HEADED VS MACHINED SOLID PINS from page 60

Dies provide cavities used to form the desired geometry, while a blow describes the physical process of upsetting material with a machine stroke. Additional dies and blows are needed as geometry becomes more complex. There are limitations to the amount of material that can be displaced per blow.

Cold heading sometimes includes a wire drawing process that work hardens the material, increasing both the yield and tensile strength. Machined pins produced with the same base material will have lower yield and tensile values because the material grain structure has been interrupted.

Solid Pin Design Specifications & Manufacturing Capabilities

The first step in designing a joint is to establish the functional requirements of both host components and fasteners. Performance requirements should be achieved without over specifying the design. An ideal joint satisfies performance and quality requirements at the lowest

possible cost. The information below will help designers understand the differences in capabilities between cold heading and machining as it pertains to design specifications for Solid Pins and host component holes.

It's also important to recognize that free fit hinges
do not require press fit holes and should not require pin
diameter tolerances tighter than \pm 0.025mm (\pm .001").

Tolerance

Typically, the outside diameter (OD) is the most critical Solid Pin dimension. Both cold heading and machining can achieve the tolerance specifications needed for the majority of Solid Pin applications. In fact, cold heading produces Solid Pins with OD total tolerances of 0.05mm (.002") (less than the thickness of a human hair). Machining can achieve tighter OD tolerances than cold heading, but this generally requires special ground OD rod. This should be avoided (if possible) as ground OD rod can be more than three times the cost of standard rod.

For Solid Pin length tolerances, machining and cold heading can achieve the same tolerance levels of approximately \pm 0.25mm (\pm .010"). This varies by pin length.

	TOLERANCE CAPABILITIES Solid Pin OD					
Manufacturing Method	Raw Material	Raw Material Cost	Metric			
Cold Heading	Wire	\$	± 0.025mm	± .001"		
Machining	Standard rod	\$	± 0.0125mm	± .0005"		
	Ground OD rod	\$\$\$	± 0.0025mm	± .0001"		

TABLE 2

Press Fit Pin Overview

Press fit dowels and straight

pins are typically retained in the assembly by being pressed into holes that are smaller than the pin diameter. In most applications, interference must be limited to keep insertion forces within practical limits. The acceptable press fit for most metals (steel, brass, and aluminum) is 0.0125mm to 0.025mm (.0005" – .001") of material displacement. Since this tolerance threshold includes the sum of the tolerances of both the pin and hole diameter, pins must be precision machined and holes must be reamed and/or honed. This increases cycle time and manufacturing costs associated with hole preparation.

SIDE VIEW: COLD HEADED PIN VS MACHINED PIN



COLD HEADED PIN



MACHINED PIN

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GLOBALFASTENERNEWS.COM SFA PANEL: U.S. TARIFFS HIKING STEEL PRICES from page 70

- Baron Yarborough of Spring Bolt & Nut Manufacturing mentioned the fast growth of online ordering. It wasn't many years ago when his predecessor, Tim Malone, told him he doesn't need emails because orders come in over the fax machine.
- Acquisitions will continue to be a part of fastener life. Davis said the "easiest way to beat the competition may be to buy them."

Recalling the 'Mom & Pop' history of the industry, Davis advised distributors "we just have to pivot" to stay in business. An advantage of consolidation is that "the fear of consolidation should make us better."

Dyer noted that some smaller companies that are not doing well may be improved by acquisition.

Longyear noted not just companies have been changed by acquisitions. Associations feel the difference too. Longyear, a longtime SFA board leader, recalled there were more than 100 distribution companies a generation ago.

"People who remain independent want to be," Longyear noted. "They've had offers."

mathematical There is still a role for personal sales, the panelists agreed.

"People still buy from people," Dyer observed, though she acknowledged the Internet and other factors are decreasing "brand loyalty."

"I'm a business relations guy," Davis declared. "Get in front of people and build relationships."

By getting out to industry events, "You can get great connections," Yarborough said.

Today's biggest challenge is "educating those new to the industry," Dyer said. She advocated sending new employees to Fastener Training Institute

Taking FTI courses "opened my eyes as to what fasteners are." Before they were just products in boxes, she acknowledged.

Have new employees go see manufacturing and plating facilities so they understand fasteners, Dyer urged.

In calling for more training, Davis said he finds many fastener "buyers know only part numbers." Associations need to take new roles in providing training, he added.

"How many people go to college to sell bolts and nuts?" Longyear asked. A broader discipline of "industrial" distribution" is what they are studying.

You and your staff people need to "ask questions and listen to the answers," Davis advised.

Longyear agreed and recalled Metric & Multistandard started him in the warehouse to learn actual parts.

Though the panelists were talking about industry changes, Longyear observed that for all that has changed, the majority of products he handles are identical to when he entered the fastener industry in 1972.

For information contact SFA executive director John Elsner. Tel: 713 952-5472 Email: swfa@swbell.net Web: sfa-fastener.org

SFA Panelists & Their Companies

John Longyear started in the fastener industry with Metric & Multistandard Components Corp. in New York in 1972. He was transferred to Texas in 1976 to open a branch in Dallas and been with Metric & MultiStandard his entire career. Metric & Multistandard was founded in 1963 in New York to import metric fasteners.

Web: metricmcc.com

Jake Davis started in the fastener industry in 1996 in inside sales for ISSCO Inc., which was founded in 1974 by his parents, Joe and Margaret Davis. He moved on to purchasing and when his mother passed away in 2000 became president. Distributor ISSCO acquired BTM Manufacturing in 2013. BTM was founded in 1961 as Belton Tool & Machine in 1961.

Web: btm-mfg.com and ISSCOInc.com

Tricia Dyer is a senior account executive for All America Threaded Products. She started in the fastener industry in 2010 as a receptionist for Stelfast's Houston branch. All America, began in 1994 when parent company Acme Manufacturing of Denver acquired BoltMaster Inc. (RediBolt) of Chicago. Headquartered in Denver, All America manufactures threaded rod, studs, U-bolts and anchor bolts. Web: aatprod.com

Panel moderator **Baron Yarborough**, director of sales for Spring Bolt & Nut Manufacturing, is third generation in the fastener industry. His grandfather and father were fastener machinists. He wanted avoid such a career and studied business management and started in sales for a data company. Houston-based Spring Bolt & Nut was formed in 2001 to manufacture bolts, nuts, studs, and machined components.

Web: Springboltandnut.com



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SFA SCHEDULES FALL EVENTS by John Elsner

The Southwestern Fastener Association has scheduled their Fall Networking Parties for November 13 in the Dallas/Fort Worth, Texas area. The theme will be focused on assisting the various Food Banks in the area as they approach the Thanksgiving Holiday Season. Following a successful launch in 2017, a second Holiday Party is scheduled for Houston, Texas on Tuesday, December 4. The cost to attend will be an unwrapped toy that will be given to a local organization that focuses on assisting under privileged families in having a happy Christmas Holiday. Specific locations for each event will be announced in the Summer SFA Newsletter.

SFA recently concluded the 2018 Spring Conference and Expo at the The Westin DFW Airport Hotel in Irving, Texas. The conference featured several networking opportunities. The first being a welcome reception on Wednesday evening, May 2. Thunderstorms danced around the DFW Airport during the Thursday morning conference program on Cyber Security, presented by Mr. Peter Gailey, a Cyber Security expert that gave attendees an insight on methods to protect their proprietary information from the many cyber attacks that members have experienced and ones that we have read or heard about in the news.

It was touch and go on getting the golf outing in at Tour 18 as heavy thunderstorms continued to move through the DFW area Thursday morning. The forty-one golf participants came out on the right side as the Sun came out and even though the course played cart path only had an enjoyable afternoon on the links. The Team of Bobby Salome, El Paso Bolt & Screw; David Morgan, Vertex Distribution; Kevin Chavis, Star Stainless Screw and Dave Kujanek, Vertex Distribution shot an 8 under 64 to capture first place. Second place finishers were the team of Rusty Wicks, All-Spec Sales; Rene Gutierrez, Bolts & Nuts El Paso; Don Kubkowske, Sems and Specials and Mike Kanaval, Sems and Specials carded a 4 under 68 to come in second. Heavy thunderstorms continued to



FIRST PLACE WINNERS

plague the DFW area on Friday, May 4. The conference program kicked off with an informative panel discussion Moderated by Baron Yarborough, Spring Bolt and Nut and President of the YFP titled "The Past, Present and Future." Panel participants were Tricia Dyer, All America Threaded Products, Jake Davis, BTM Manufacturing and John Longyear, Metric and Multistandard.



SECOND PLACE

SFA SPING CONFERENCE & GOLF OUTING DALLAS, TX - MAY 2-4, 2018













more photos on page 177

SFA SFA SCHEDULES FALL EVENT from page 148

The impact on U.S. Tariffs was one of the topics that garnered a lot of attention from the panel. All panel members agreed that they were seeing a hike in Steel Prices as a result of the Tariffs. The panel discussed the changes that have taken place in the fastener industry over the last fifty years. Longyear recalled that "that there was no online" when he started in the industry in 1972. "Nobody had computers. You ran back and forth in the warehouse and physically looked at shelves for inventory", noted Longyear. The panel discussed the consolidation that has happened in the industry and Jake Davis noted the "recalling the Mom & Pop history of the industry, we just have to pivot to stay in business. An advantage of consolidation is that the fear of consolidation should make us better. Mine Yucel, Federal Reserve Board-Dallas followed with an Economic Forecast the future trends we can expect for energy industry in the Southwest. Her main point was that as long as crude oil prices remain above \$60 a barrel we will see and expansion in the Energy Industry. Following Ms. Yucel's presentation, a Deli Lunch Buffet was served prior to the opening of the Expo at 12:30 p.m. The Expo closed out the 2018 SFA Conference at 4:00 P.M.

SFA Welcomes New Members

Midland Metal MFG., 3145 Oak Street, Kansas City, Missouri 64111, Brett Powell, National Sales Manager. Phone: 800.821.5725; Fax: 800.877.5391. email: brett@midlandmetal.com.

All America Threaded Products, 4661 Monaco Street, Denver, Colorado 80216. Tricia Dyer represents All America in the Southwest. Phone: 346.201.4720. Fax: 303.355.1499. Cell: 832.799.9494. email: tdyer@aatprod.com.

EDSCO Fasteners LLC, 2200 Worthington Dr.., Denton, Texas 76207. Mike Delesandri, Director of Business Development, represents EDSCO. Phone: 940.380.8000. Fax: 940.380.1118.email: mdelesandri@EDSCO.com.

Finally, 2018 scholarship applications are currently being graded by the SFA Board of Directors and 2018 Winners will be announced in the Summer Newsletter.

For additional information about the SFA, contact John Elsner, Executive Director, 292 Sugarberry Circle, Houston, Texas, 77024. Phone: 713.952.5472, Fax: 713.952.7488; email: swfa@swbell.net.

BRYCE AUSTIN WHAT IS MY PLAYBOOK IF I HAVE A CYBERSECURITY INCIDENT? from page 86

Doing so took extra time and might have led them to miss obvious steps.

- The company did not have documents outlining how to bring operations back online if the hack had been successful, nor did they have procedures to follow if it was determined that any sensitive data had been stolen.
- Their IT services vendor wasn't well trained in how to get to the bottom of the technical issues quickly, which lengthened the incident by hours.
- mathemath The client didn't have a list of whom to call if a cybersecurity incident was suspected, which made the phone number to their cybersecurity advisor the only number they thought to use. What if he was unavailable when this took place?

In a nutshell, they didn't have their act together, and it showed.

After an incident occurs, your company will be judged on the following criteria:

- [1] Before the incident, did your company take all actions to prevent the incident that one would expect of a prudent organization?
- [2] Did your company respond to the incident using procedures that one would expect of a prudent organization?
- [3] Are there any ways that the media could portray your actions around steps 1 and 2 to make your company appear to be culpable or incompetent? If true, expect that they will. It attracts more readers to their publication.

A robust playbook that includes the CEO, Chief Legal Counsel, and all other senior leaders will do immeasurable good in your ability to respond to an incident.

An incident response playbook needs several key elements to be effective. It must:

- Identify who in your organization has the authority to declare a cybersecurity incident. Who can initiate the playbook?
- Spell out how much money that person can authorize to be spent to have an incident investigated or remediated.
- m Have a list of the types of scenarios that it is designed to cover. Examples include the loss of sensitive data, a ransomware attack, the loss of a critical system, natural disasters, law enforcement contacting your organization about a warrant or subpoena, and the loss of the use of one or more of your sites due to a natural disaster or because of other issues (such as a crime taking place in the building and the police barring your employees from entering the premises).

- Have a call tree that includes which people or groups to call when an incident takes place.
- Define the people or groups responsible for making the decision on when to bring in law enforcement.
- East the people authorized to speak to the media about a cybersecurity incident, and what those who are not authorized to speak to the media should say if they are approached by a reporter.
- " List all of your critical systems, the location of the data in those critical systems, and the location of the backups of the data for those systems.
- ^a Outline your general incident-response process. While every scenario is different, this process normally follows these steps: preparation, detection/analysis, containment, eradication, recovery, incident closure/rootcause analysis, and preventative measures.
- Be reviewed on a frequent basis. These plans get stale quickly, and need to be reviewed whenever a significant change in your organization takes place.

If the above points are reviewed as a group, an interesting trend emerges. Most of them are nontechnical. The majority are operational and financial in nature. That is a critical misstep in many incident response plans. If your technology team manages your incident response plan, they are making business and financial decisions that should be made by CEOs and COOs and CFOs and legal counsel.

Above all, your incident response plan needs to be tested. Unless you have rehearsed an incident response procedure, you're only able to guess if it will work. This is too important to be left to guesses.

The takeaway messages from this article are easy to list:

- Your company needs an incident response playbook.
- " The incident response playbook should be owned by a non-technical member of your executive team.
- Your company needs to periodically test your incident response capabilities.
- Your company needs to update the playbook from lessons learned as a result of tests, whenever significant changes occur to the operational or technical aspects of the company, or when merger/acquisition activity occurs.

Questions to explore this topic further with your company's leaders:

- [1] How do we test our incident response playbook?
- [2] How often do we test it?
- [3] What did we learn from our last test?





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distributor**news**

ZaGO Manufacturing's Self-Sealing Fasteners take a deep dive as manufacturers of subsea products have learned that using ordinary fasteners on robotics and sophisticated machinery intended for the ocean depths is hazardous.

exploration Undersea expanding rapidly as scientists investigate environmental concerns, states navigate strategic issues and as private companies explore subsea resources. And the sophisticated technology that goes into underwater equipment needs to be protected. ZaGO's selfsealing fasteners protect critical high-value subsea assets from the encroachment of salt-water in the highly pressurized underwater environment.

While underwater technology continues to evolve and become



ever more sophisticated, ZaGO's products continue to withstand the test of time. Manufactured from highly corrosion resistant metals, ZaGO's self sealing fasteners are engineered with a groove to accommodate a rubber o-ring that seals out the hazards posed by the undersea environment . ZaGO's fasteners can be manufactured with a wide variety of rubber o-rings that are also particularly well-suited for salt water and pressure resistance.

ZaGO's fasteners are uniquely designed to meet the challenging

distributor news

scientific and engineering problems posed by undersea exploration. ZaGO's fasteners are capable of protecting high value equipment including sonar systems, advanced computers and inertial navigation systems that are required to survey ocean bottoms for days at a time or to trace meteorological and ocean conditions from the surface over long periods of time. The information provided by ocean exploration is critical to our understanding of our atmosphere and resources.

Not only is the ocean full of information, the ocean is full of power as well. ZaGO's fasteners can be found on the most sophisticated equipment harvesting wave energy for transfer to power grids as well as ocean going solar arrays that power subsea exploration and information gathering. ZaGO's fasteners allow ocean going and subsea robotics to withstand the harshest conditions while promoting the discovery of new insights and opportunities. In addition protecting equipment to from the encroachment of environmental hazards, ZaGO's fasteners also prevent damage to the ocean ecosystems by preventing the leakage of hazardous fluids and other chemicals into the environment.

For more information contact ZaGo Manufacturing by Tel: 973-643-6700, Fax: 973-643-4433, Email: info@ ZaGO.com or online at www.ZaGO.com.

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BENGT BLENDULF FASTENER FRICTION - FRIEND OR FOE? from page 94

$$k = \frac{0.16 \times 1.5 + 0.58 \times 9.03 \times 0.11 + 0.5(16 \times 0.11)}{10} = 0.17$$

FIGURE 4

The impact on the tightening torque is enormous if we are basing it on the first example (Fig 3) and switching to the second (Fig 4). This can be done by accident or by purpose.

If we want to reach a preload of nominal mean 22.7 kN and our k-factor is 0.31 the torque value would be 70.4 Nm according to figure 3. If the fastener is according to our example in figure 4, the required torque value would be only 38.6 Nm to reach the 22.7 kN. If we by mistake put the higher torque value on the fastener with coating the preload would be 120 kN or more than twice the tensile strength of the fastener. In that case the friction coefficient is not a friend but a foe. The fastener would fail long before we reached the projected torque

value. I would suggest that you get the Torque Book for Fasteners from IFI if you are dealing with tightening of fasteners. It is not a perfect book, but will give you some control of the tightening issues. Our goal must be to get the best possible preload on the joint without killing the fastener.

Let me also give you a few words about torsional stresses in the fastener. It would make an article by itself so let me just give you couple of hints about torsion. When you have a cylindrical body of any kind and you twist it, its capacity of carrying load through its axis is limited by the twisting. The limiting factor here is the friction between the internal and external threads in the fastener. If we can limit the coefficient of friction in the threads we will also limit the torsional effect. So, a good lubrication of the fastener is always a positive and "friendly" thing to do, just make sure that it is properly understood by the people holding the torque wrench.

BENGT BLENDULF

GUY AVELLON WHAT FASTENER DISTRIBUTORS NEED TO KNOW ABOUT SUBSTITUTIONS from page 96

Because of RoHS, the gold colored cadmium plated nuts were discontinued. These nuts produced a consistent and low torque-tension relationship. The replacement silver colored nuts are zinc with a wax coating, which requires a greater torque for assembly. Therefore, using a cadmium torque on a zinc coated nut produced lower clamping loads.

Bolts: Aside from the thread length differences and some head dimensional differences, many ASTM bolts may be substituted among themselves or with SAE bolts. However, regardless of the grade, make sure all of the fasteners in a multiple assembly joint are the same grade and torqued the same.

This is by far the most important item to remember:

If a multiple bolt connection mixes different strength grades in the assembly, even if all the fasteners in a

multiple bolt connection are torqued to the same value, the higher strength fasteners will produce less clamp load than the others. Not the same clamp load, but less. Arguments have ensued with mechanical engineers and metallurgists about all steels (fasteners) have the same slope on a tensile graph. This is true, but not during assembly where instead of all tension, there is torsion. Simply stated; it takes more force to stretch a higher grade than a lower grade. Therefore, if you stretch the higher grade fastener to the same amount or distance as the lower grade, the higher grade has not been stretched the same distance and will consequently not produce the same clamp force but instead, a lower clamp force than the lower bolt grade. The difference is torque, not tension.

Always ask to be sure. A phone call is less costly than a law suit.

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ANTHONY Di MAIO USING THE CORRECT SIZE BLIND RIVET from page 76

Using the correct length closed-end blind rivet the upset side will look like this:

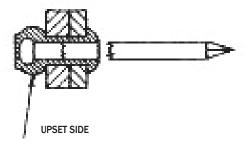


FIGURE 4 - PROPERLY SET RIVET

When the blind rivet is too short:

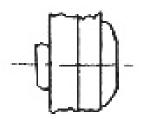
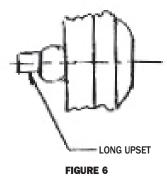


FIGURE 5 - BARREL LENGTH TOO SHORT

When the blind rivet length is too long:



Hole diameter is also very important. I receive calls telling me that the mandrel head is setting deep in the rivet body. This is caused by the diameter of the hole in the work piece is too large. But users tells me that they need to have oversize holes in order to line up the holes in the two work pieces that they are riveting together. If it is necessary to have oversize holes for the hole line up, they should make the hole larger in the work piece that is on the flange side of the blind rivet and the correct diameter hole size on the upset side of the blind rivet. Having the correct hole size on the upset side, the mandrel head will

be in the correct position after setting the blind rivet. In this application a large flange blind rivet should be used. The large flange of the blind rivet will cover the oversized hole and will give the user a tight riveted joint. If it is necessary to have an elongated hole in the work piece to line -up the rivet upset hole in the work piece, a large flange blind rivet will cover the elongated hole and will again give the user a tight riveted joint.

The blind rivet is a mechanical device that can join component parts in an assembly where access for the fastener installation and activation is available from only one side. Specifically a blind rivet is a blind fastener having a self-contained mechanical feature, which permits formation of an upset on the blind side of the work pieces. The expansion of the blind rivet body during rivet setting joins work pieces to form an assembly. This expansion is created by the head of the mandrel being pulled into the blind rivet body by the rivet setting tool. The mandrel has a break point just below the mandrel head. This is where the mandrel will break when the setting tool is pulling the mandrel with a force greater than the tensile strength of the mandrel break point. When the mandrel breaks at the break point, the blind rivet is properly set and gives the riveted point the tensile and shear values listed in the (IFI) Industrial Fasters Institute specification No. 114 or the tensile and shear values that the blind rivet manufacturer lists in their catalog. The setting speed of the blind rivet has been the major user consideration for using blind rivets. A blind rivet properly used, regarding rivet length, diameter of the blind rivet holes and thickness of the work., it is the quickest way to fasten together an assembly.

I have been asked many times "The blind rivet setting tool is cutting the mandrel too soon and the blind rivet is not set. The blind rivet setting tool is not cutting the mandrel. The mandrel breaks at the breaking point, but the tensile strength of the mandrel breaking point is too low. The user should contact the blind rivet manufacturer informing them of the condition.

The setting speed of a blind rivet is fast and effective and has been the major user consideration for using blind rivets. When using the correct size blind rivet, regarding length, diameter of the rivet holes and proper work thickness, you are using the fastest method to fasten an assembly together.

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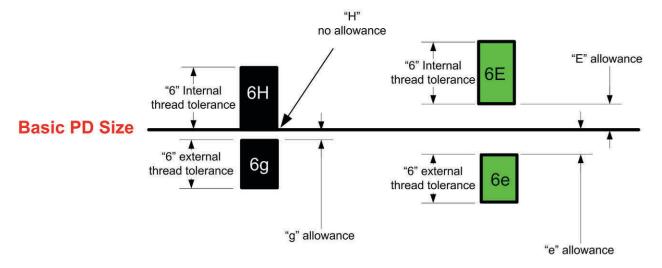




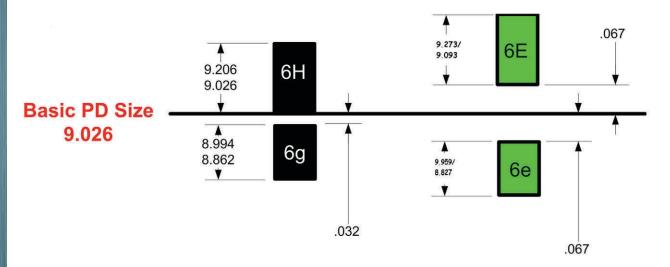




RELATIONSHIP OF PITCH DIAMETER TOLERANCES AND ALLOWANCES



M10 X 1.5 PITCH DIAMETER TOLERANCE AND ALLOWANCE



Internal thread class "6E" provides a plating allowance where as the more common thread class "6H" does not provide any. The external thread class "6e" provides approximately twice the plating allowance than does the "6g" thread class. The illustrations that follow show the size relationships of the thread classes "6E" to "6H" and "6e" to "6g".

Additionally, they show that the external thread pitch diameter size must always remain smaller than the "basic" pitch diameter size, as well as the internal thread pitch diameter size must always remain larger than the

"basic" pitch diameter size to avoid an interference fit during assembly. Hopefully the example of M10 X 1.5 providing exact pitch diameter sizes makes the exact nature of these relationships more clear for the reader.

Unfortunately, neither the American Society of Mechanical Engineers (ASME) or the International Standards Organization (ISO) provide tables for the pitch diameter sizes for internal thread class "6E" or external thread class "6e". That leaves the task of using the thread formulas to determine the "6E' and "6e" pitch diameter sizes to every individual thread component manufacturer.

distributor**news**

Distribution One is now offering Shipping Manifest Service. The distribution process doesn't stop at the warehouse dock. Knowing this, Distribution One offers shipping solutions necessary for distributor and wholesaler success.

Supplementing the productivity improvements fueled by ERP-ONE+ software, Distribution One integrates with providers FedEx and UPS using ODBC with mapped data. Distributors can also integrate with other shipping options like Endicia (aka USPS) utilizing ODBC drivers as well as Clippership, ADSI, and ConnectShip after acquiring the interfaces, ODBC, and the Distribution One Shipping Manifest Service.

A Windows based solution. the Distribution One Shipping Manifest Service utilizes thirdparty shipping data imports and returns freight price and shipment costs to the proper shipping record. In addition, Shipping Manifest the Services provides customers the ability to customize how costs are written back to the shipment. Several customizations include:

- using published charges vs negotiated rates
- Including handling charges
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ROBERT FOOTLIK EVALUATING YOUR FORKLIFTS AND OPERATORS from page 100

Supplementing this with physical observations that note unsteady gait, weaving while driving or awkward maneuvers might be indicative of a number of conditions, none of them compatible with driving a fork lift. Perhaps it's time to invoke that mandatory random testing clause in their employment contract.

Ever go to YouTube and search on "forklift" accidents?" As of this writing over 256,000 videos are available. Narrowing the search to "forklift accidents in a warehouse" results in 25,200 suggestions. Taking it down to one requires clicking on a "Top 10 Compilation" which includes cascading glass bottles, loading dock incidents and the ever popular Russian vodka warehouse where impacting a single pallet rack upright has a domino effect that takes down the entire warehouse. This leads to watching for the second most dangerous creature in the warehouse, the idiot operator.

Often identified in retrospect with the phrase, "How could he...?" Drivers who are just plain careless or trying to do a "stunt" while their buddies record it on their cell phones are a clear menace to the safety of those around them and the health of the company's financial bottom line. There should be zero tolerance for any reckless driving or horse play in the warehouse. This policy should also include those individuals who encourage, condone or record the dangerous behavior. It might hurt short term, but getting these individuals out of the warehouse before they destroy it is the only sensible approach. Telematic data showing impacts or conditions way out of the norm indicate that observation and physical review is overdue.

Motorsports on television now feature a driver's eye view of the racing. Ignore the track and watch the driver's hands on the steering wheel. The real professionals are quick, but very smooth. Even in high speed emergency conditions their hands will slide fast and without back and forth "sawing." This is also true for the best forklift operators. They don't cut corners literally or figuratively. When entering or leaving an aisle they follow a consistent line that minimizes the centripetal forces on their loads

and vehicle. And they maintain both situational and vehicle awareness at all times.

Anyone who comes too close to racks, pallets or people is being over confident or reckless. It doesn't matter which technique is prevalent, they are just plain dangerous in your operation. Watch the operator's hands on the wheel and you will have a reliable indication of whether they should even be driving. If this is true while working, it is even more important during training. Data collected showing lateral forces on the truck will point to this driver shortcoming.

Data and observation also converge on productivity and pallet rack entry. The right way to place a pallet in a rack starts with the centerline of the vehicle approximately 2/3 of the aisle away from the target position. Using a smooth turn the pallet front corner should pass over the front rack beam as the load is maneuvered in a single pass that ends with the forklift backrest parallel to the rack beam. With a pantograph reach mechanism the load should also be moving away from the mast as the turn is being made. This will result with full extension of the reach just as the load is being lowered in place.

Drivers who use this technique will easily outperform their untrained or oblivious peers and the productivity data will show it. Anytime two operators on similar vehicles have widely differing productivity rates it's time to watch them in operation. The differences might be due to lack of training or the faster person has no place in your facility. Observation plus data will verify reality.

There are many ways to similarly identify problem operators if you know what you are look at. Ham fisted drivers who consistently drop loads on pallet racks fatigue the beams and risk the loads. High speed, drag racers on straight runs to the docks menace everyone. Individuals may be oblivious, or blind due to vision problems or corrections, especially those who have cataract surgery or "mono-vision" contact lenses. And of course daredevils who push the equipment past all rational limits are candidates for employment elsewhere.

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2018 MAFDA GOLF AND SCHOLARSHIP OUTING

by Lee S. Johnson, Jr.

Change can be a good thing...this years annual MAFDA Golf & Scholarship outing had a new venue, menu, and agenda. Applecross CC- a Jack Nicklaus designed golf course was the host of the 15th annual fundraiser for young adults of the fastener industry. Thanks to Barb Traum and her team for all their help with the Scholarship portion of the event.

Scholarship Winners Included

\$3,500.00 - Brianna Pearson - Brighton Best

\$2,500.00 - Alexander Beard - Specialty Resources Inc.

\$2,500.00 - John Insinga - ND Industries

\$2,500.00 - Kayla Radel - Solution Industries

Golf Winners Included

1st Place

Ken Wilson - Lee S. Johnson Associates, Inc.

Ralph Barone - RAB Components

Phil Over - Lubker Distribution

Billy Banoske - AALL American Fasteners

Tie for 2nd Place

Phil Johnson - Johnson American Fasteners Andrew Johnson - Johnson American Fasteners Ed Johnson, Jr - Johnson American Fasteners

Trish Murty - Murty Associates

Rob White - SB & W

Eric Peterson - Guidon Corp.

Tim Bozarth - Guidon Corp.

3rd Place

Lee Johnson, **Jr.** - Lee S. Johnson Associates, Inc.

John Conte - Fall River Manufacturing

Rick Lubker - Lubker Distribution

Rick Yanni- McCormick & Associates



Skill Prizes

Closest To The Pins

Ken Wilson - Lee S. Johnson Associates, Inc.

Phil Over - Lubker Distribution

Mark Warner - Mutual Screw & Supply

Longest Drive

Phil Over - Lubker Distribution

Pot of Golf Winner

Mark Warner - Mutual Screw & Supply

Special thanks to David Myers for all his help in assisting me with the Golf portion of the event. We would like to thank the following:

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MAFDA 2018 MAFDA GOLF AND SCHOLARSHIP OUTING from page 162



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The board did a great job making this annual event another success. If you would like to serve on the board or join MAFDA please visit our website. www.mafda.com for more information. We have 3 more events planned for this year. If you're not a member but have interest in seeing if MAFDA is a good fit for you or your company, please reach out to me and we will waive the fee for you to attend one of these upcoming events.

leejohnsonjr@comcast.net

LAURENCE CLAUS THREE THINGS THAT DISTRIBUTORS MUST DO WELL - PART I from page 102

As a result, when I set-up the new account I had to work with two different company's representatives and well into the process discovered that I apparently wasn't eligible for the special pricing. When I voiced my disappointment in this development and that I had been told by the representative from the first company that I would receive the price special, the second company's representative relented and agreed to honor the price. To do so, however, they had to apply a reoccurring credit. This worked for two billing cycles and then mysteriously dropped off. I discovered this quickly enough and contacted my provider's customer service to remedy the problem. The first individual I spoke with was a friendly young man (although I couldn't understand half of what he was telling me) who expressed a desire to help. Unfortunately after at least 45 minutes on the phone with him, he finally admitted to me that he couldn't help me as he did not have the authority to make these changes. When I asked if I could speak with a supervisor, I was told that was impossible. We discontinued the call and I called right back. This time I got a helpful young woman, but after another half hour she was unable to help. By this time, resolving this issue was now my new mission in life and I called back again. This time I got a slightly more seasoned individual. When I explained the problem, she very quickly acknowledged that she could not resolve it and that I needed to speak with Customer Care. She transferred me to a representative, an older and empowered woman. Within ten minutes the problem was resolved and I had even received a sizeable credit for the frustration I had just received in this run around leading up to getting to her. It was obvious she was empowered to solve the problem and did. The other representatives I spoke with, although friendly and expressing a desire to be helpful, could not, so that the only purpose they served was to get me very frustrated and angry. I imagine that if I had not taken this up as a mission, I probably would have asked the first individual to just cancel my service, so that I could take my business to someone that cared.

Providing Value

I recall an old Three Stooges skit where the Stooges

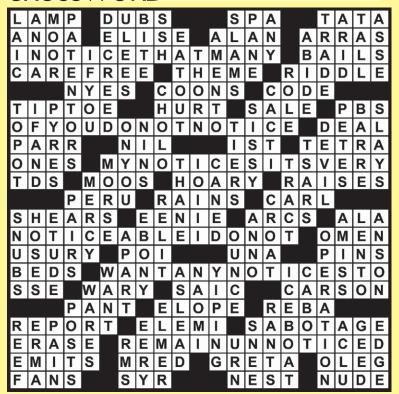
were auto mechanics asked to fix a rattle in a car. However, instead of identifying and fixing the rattle, they disassemble the entire vehicle. When they put it back together they are left with a pile of unused parts. The stooges are providing a service, but unfortunately not the one needed by this customer. In the same way, we should assess our customer's wants and needs and provide services that ring value to them. As distributors your value proposition is what will separate you from your competition. In fact, you should never let yourself be lulled into believing that you are irreplaceable by your customer. You should always be asking questions and listening for clues to how you can bring greater value to your customer.

It is important not to underestimate importance of adding value. To illustrate this point simply reflect on some of your own personal experiences. Take for example servicing your car at the dealer. Car dealerships generally make their money by providing services and not by selling new cars. Therefore, dealer's service activities have become exceptionally competitive and to attract and retain customers, dealers have had to increase the level of value they add to these services. A couple of examples include getting your car washed or vacuumed after the service, providing drinks and snacks while you wait, access to free Wi-Fi, providing loaner vehicles, providing shuttle service, and having a kid's play area in the waiting room. I know that, I for one, very much appreciate the popcorn our dealer makes available to these waiting for their cars to be serviced. As silly as it sounds, this little amenity is one of the reasons that I will drive a couple of extra miles to have my car serviced at this dealer.

Bottom line, train your people "on the street" to keep their ears open for ideas that will bring greater value to your customer. It really doesn't need to be significant activities, small, almost seemingly inconsequential, things can pay back big dividends. A couple of items that I believe are often not given enough importance in the distributor arena, but are big value differentiators are providing application engineering, doing value analyses, and conducting training sessions for your customers.

PUZZLE SOLUTIONS

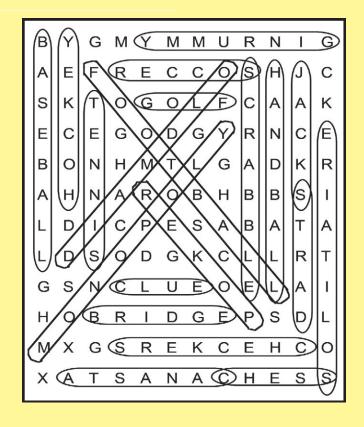
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WORD SEARCH

1. Baseball	11. Handball
2. Bridge	12. Hockey
3. Canasta	13. Jacks
4. Checkers	14. Monopoly
5. Chess	15. Old Maid
6. Clue	16. Poker
7. Darts	17. Scrabble
8. Football	18. Soccer
9. Gin rummy	19. Solitaire
10. Golf	20. Tennis



SEFA SPRING CONFERENCE SUCCESS!! from page 104





Congratulations To This Year's Scholarship Winners

Slater Jones Memorial Scholarship \$4,000*

Kelly Penland - Eurolink FSS

Em Webb Memorial Scholarship \$1,500

Ariel Graveen - Elgin Fastener

Gilchrist Foundation Scholarship \$1,000

Rachel Edge - Ameribolt

SEFA Scholarship \$2,500

Mackenzie Black - Elgin Fasteners

SEFA Scholarship \$1,500

Madilyn Bartusch - XL Screw Corp.

Alyssa Young - Elgin Fasteners

SEFA Scholarship \$500

Kaleb Newton - Falcon Fastening Solutions Alexander Cottone - Kanebridge Corp. Robert Austin May - Martin Fastening Solutions

Kayla Radel - Solution Industries

*We thank the Slater Jones Family for funding this scholarship, in memory of their son, which will continue for the next few years. Their generosity during a tragic time is amazing.

Thank you to the Scholarship Committee for all their time in reviewing and scoring the applications: Don Nowak/Falcon Fastening Solutions, Terry Windham/Dixie Industrial Finishing Co., and Lee Parker/Vulcan Threaded Fasteners.

Panel Discusses Supply Chain Management Crisis

Sessions following the business meeting proved to be very interesting, informative and entertaining. A panel consisting of Scott Camp (with over 20 years experience in global product management, sourcing, procurement and supply chain disciplines and currently President/ Owner of Atlas Distribution Services, Ltd in Taiwan), Don Haggerty (in the fastener business since 1971, currently President of the Commercial Division for Stelfast Inc., Tom Sulek (began working for Star while in H.S. and later, after a brief career in in Sales with the Hilton returned to Star in 1991 an is now Branch Manager in the Norcross, GA branch) and Mike Veech (after working professional sports with positions in media and public relations decided to change career paths and eventually began working for Nucor Fastener responsible for the sales and marketing for North America.



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CARMEN VERTULLO HYDROGEN EMBRITTLEMENT IN FASTENERS CASE STUDIES - PART 3 from page 108

As an alternative to electroplated zinc, suppliers should offer mechanical zinc plated spring pins. One major supplier of spring pins provides this technical information regarding coatings for spring pins:

Vogelsang has taken the initiative in offering mechanically plated pins. The Vogelsang standard is mechanically applied, commercial zinc plating. Mechanical plating minimizes the possibility of hydrogen embrittlement, which is a common concern when parts are subjected to electroplating. Mechanically plated pins are commonly available from stock. Other platings are available as special orders. www.vogelsangfastener.com

Should you ever encounter a zinc coated spring pin and wonder if it is electro plated or mechanically plated, electroplated spring pins will appear as bright and shiny, silver or gold in color; while mechanical zinc coated spring pins will appear dull grey. I recommend that electroplated spring pins be avoided as they pose an unnecessary risk. Spring pins are usually well buried in the assembly, so appearance should not be an issue. Where appearance is an issue, consider using stainless steel. Be aware that stainless steel may not be compatible with some other materials, such as aluminum.

Fast forward to today and we see why this failure from the past was brought to mind.

I recently received an email from a client with this and some other photos of failed electroplated spring pins. Again, all of the indications of IHE were present. A few questions were answered and we were easily able to conclude that this was an IHE caused failure.

The root cause of this failure is currently under investigation, but leaning towards lack of awareness for the need to properly bake this product after plating. If we ask enough "why" questions we eventually land at something that sounds like "management's failure to provide the resources and training necessary for the staff to understand and mitigate the risks associated with electroplating high hardness fasteners". This root cause could be applied to both the user and the supplier. This failure will likely have implications of a more serious nature than the safe spring pin failure from the past.

A good component of the preventive action for this root cause would be for management to send some staff – sales, purchasing and quality, to a good hydrogen embrittlement training program. The Fastener Training Institute© provides the best and most comprehensive fastener hydrogen embrittlement training programs in the industry. Go to www.fastenertraining.org for a schedule of fastener training programs.

Another necessary component of an effective preventive action is the implementation of a risk management strategy aimed directly at hydrogen embrittlement prevention. This strategy requires careful consideration and includes training, testing, process control, QMS integration and appropriate risk assignment. The Carver FACT (Fastening Applications Consulting and

> Training) Center can help you with your HE prevention risk management strategy. www.carverfact.com.

> We do not often think of non-threaded fasteners when hydrogen embrittlement comes to mind. I have worked on IHE cases that involved lock washers, spring pins, conical washers, and coil springs. A few of these cases will be the subject of a future HE case study article.



distributor news

Earnest Machine is now offering domestic hex nuts in response to increased demand for U.S.-made products.

"The federal Surface Transportation Assistance Act of 1982 requires the use of domestically made products in transit projects that receive more than \$100,000 in federal money," said Patrick Ginnetti, marketing director for Earnest Machine. "As the country's infrastructure ages, maintenance and repair spending on transportation infrastructure continues to grow in the U.S., which means increased demand for products made here."

While domestic nuts are required for federal transit-related projects, Ginnetti noted that they're also specified in many other federally funded projects, such as energy, water works and military.

Earnest Machine will carry nine sizes of domestic hex nuts-ranging in size from 1/4inch to 7/8-inch-in fine and coarse threads and a variety of finishes. Ginnetti said the company will also offer a variety of value-added services, including custom plating, drilling and slotting rework, broken case quantities, kitting and packaging, and branded drop shipping.

"One of the big issues with domestic hex nuts is that it's extremely difficult to find them in low quantities," said Ginnetti. "We can help smaller distributors get into the domestic nut market because we offer broken case quantities and can accommodate special selling requirements with custom kitting and packaging. And like everything we sell, they'll be backed by our industry leading service guarantee."

Ginnetti added that Earnest Machine is taking pre-orders now for domestic hex nuts and will begin shipping product in June.

Earnest Machine was founded in 1948 and is a global importer, distributor, and manufacturer of large diameter and hard-to-find fasteners for the agriculture, construction equipment, heavy transportation, mining, structural construction and wind industries.

For more information contact Earnest Machine Products at 1250 Linda Street, Suite 301, Rocky River, OH 44116. Tel: 1-800-327-6378 or visit them online at www.earnestmachine.com.





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NCFA HALL OF FAME DINNER MEETING STRONGSVILLE, OH - MARCH 15, 2018 PHOTOS COURTESY OF FASTENER NEWS DESK

























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HALL OF FAME DINNER MEETING

by Marty Nolan, NCFA Trustee

On March 15, 2018, the North Coast

Fastener Associations inducted two of its founding members into the NCFA Hall of Fame. Don "Doc" O'Connor and Nick Viggiano were two of the original founders of the organization over 30 years ago! They spoke to our group about how the organization was founded.

for years in Columbus, Ohio, were returned to family members of the Hall of Fame

> Inductees. Bricks were returned to family members of:

Richard Kerr

Kerr Lakeside. Inc.

David Tuttle

Spencer Products

James, John and

Paul Zehnder

Earnest Machine

Bill Ziegler

Ziegler Bolt



FROM LEFT TO RIGHT: GEORGE HUNT (BRIGHTON BEST) MARTY NOLAN (R.L. ENGLISH CO.), DON O'CONNOR (RETIRED), NICK VIGGIANO (BRIGHTON BEST), CHARLIE KERR (KERR LAKESIDE) **KEN GRAHAM (NATIONAL THREADED)**

PHOTO CREDIT: FASTENER NEWS DESK

The NCFA was established in 1982, as a not-for-profit organization made up of volunteers to help inform and educate affiliates of the fastener industry.

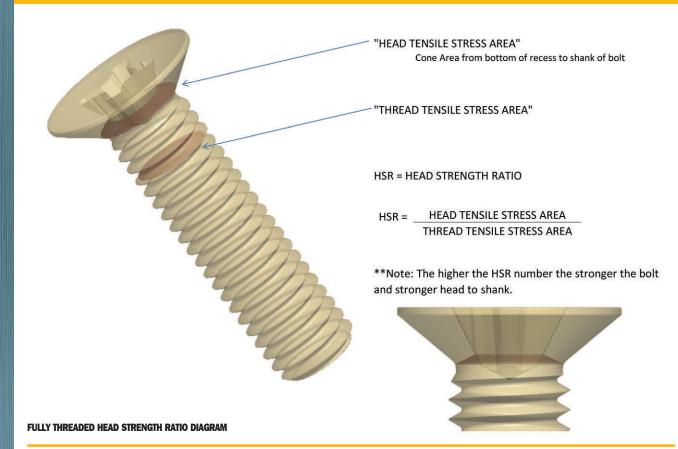
Additionally, at the same meeting several bricks from the National Fastener Hall of Fame walkway located



At the end of the ceremonies, I was beyond surprised when I was presented a plaque on behalf of my late father, Gil Nolan. Both O'Connor and Viggiano recognized him as also having been instrumental in the early founding of the organization. It truly was a memorable and historic night for so many.

For more information on the NCFA and our upcoming events, please visit our website www.ncfaonline.com.





The calculation of the Head Strength Ratio then becomes a comparison of the Stress Cone effective tensile area with the full shank diameter for a bolt or the thread pitch effective tensile area for a fully threaded screw. Ideally the Head Strength Ratio will always be 1 or greater so that a tensile failure of the fastener will always be at or above the minimum tensile strength of the thread pitch diameter. This assures that there is enough strength in the head to shank juncture to avoid "popping" the head off the fastener and failing the joint.

The diagram above shows the tensile stress areas (shaded areas) in the thread profile and in the head to shank juncture area for a fully threaded fastener. Note in the head cross section that the stress area goes from the under head diameter that is approximately the thread pitch diameter to the nearest point of the bottom of the recess. In this case the recess is actually cruciform in the cross sectional area nearest to the head shank juncture. For the purpose of comparison with other recess fastener drive systems we will ignore the minute amount of added material between the wings of the recess and only use a circular area based on the outer diameter of the wings at the cross section.

Calculating the Head Strength Ratio:

Now that we have an agreed upon set of criteria that we will use for the calculations it is important to select whether the minimum or maximum of each dimensional variable should be used to determine the "worst case" scenario in which head to shank failure is most likely at levels below the thread pitch effective diameter tensile failure levels. We have already determined that for a fully threaded fastener the cross sectional area under the head is determined by the blank diameter and that for a fastener with a full body the larger body diameter will be used for the calculation. We should therefor use the minimum under head diameter as the base line for the calculation. Looking at the following diagram it is easy to see that the maximum recess depth should be used as the base line for the calculation since it yields the smallest cross sectional area between the blank diameter and the nearest intersection with the recess. Typically, fully threaded fasteners are not used in critical applications and in these circumstances it is often acceptable to allow a Head Strength Ratio that is less than 1.0 based on analysis of the application.

distributor**news**

Suncor Stainless is looking to expand their line of cast shackles to offer their customers an even larger selection. They announced their new shackle program with added styles and new sizes. Suncor introduced the Bow Shackle with Captive Pin in sizes ranging from 5/32" to 15/32", the Long D Shackle with No Snag Pin in sizes ranging from 1/4" to 1/2", the Twist Shackle with Captive Pin in sizes ranging from 1/4" to 3/8" and the Twist Shackle with No Snag Pin in sizes ranging from 1/4" to 1/2".

"We took a long look at the styles and sizes of cast shackles that we were offering and agreed that we could add more" says David Morgan, Vice President of Sales and Marketing for Suncor Stainless. "We wanted all of our cast shackles to come in a variety of sizes along with options of screw, captive and no snag pin styles for each body type."

Suncor is also looking to save their customers some money as well as ship product faster and reduce backorders. They will be offering volume discounts on cases along with duel inventory maintenance which will allow large quantities of shackles to be stocked in both Plymouth and Las Vegas warehouses. This will make product readily available with little wait time to meet the increasing demand.

Suncor Stainless, Inc. is a leading manufacturer for stainless steel hardware in the industrial, marine, government, architectural, OEM and commercial industries. Suncor's modern facilities manufacture the highest quality stainless steel chain, wire rope assemblies and custom parts. The in-house capabilities include a product development staff whose tireless efforts, along with valuable input from clients, work to continuously improve and perfect their ever-expanding product line.

For more information contact Suncor Stainless at 70 Armstrong Road, Plymouth, MA 02360. Tel: 1-800-218-7702, Fax: 508-732-9798, Email: info@suncorstainless.com or visit them online at www.suncorstainless.com.

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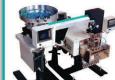
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- Piece Count
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Bulk Count/Weigh Bagging System

- Vibratory Parts Counter
- Check-Weigh Scale
- Net-Weigh Counting Scale



Rotary Check/Weigh Scale



- Fast Check/Weighing
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- Flips to accept or reject bin

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SPIROL COLD HEADED VS MACHINED SOLID PINS from page 144

The purpose of a chamfer is to allow for ease of assembly. A chamfer angle between 25° – 40° is suitable for the vast majority of Solid Pin applications and allows for maximum pin engagement.

From a manufacturing standpoint, the optimal cutting angle (machining) is 45°, while the optimal forming angle (cold heading) is 30° or less.

EXAMPLES OF COMMON MATERIALS						
Material	Benefit	Cold Heading	Machining			
Austenitic (nickel) stainless steel	Excellent corrosion resistance	305, 302 HQ	303			
Martensitic (chrome) stainless steel	Corrosion resistant High shear strength High hardness	410	420			
Low carbon steel	Versatile Low cost	1022	12L14			
Alloy steel	High shear strength High hardness	6150, 4037	4150			
Aluminum	Corrosion resistant Lightweight Lead free	5056	2024, 6061			

TARIF 3 NOTE: THIS LIST CONTAINS SOME OF THE COMMON AVAILABLE **MATERIALS (OTHERS ARE AVAILABLE)**

Material

The most common materials for Solid Pins are carbon and stainless steels. Raw materials are available in different forms depending on whether pins will be machined (rod) or cold headed (wire). Commercially available material grades for rod and wire can differ. Rod is available in material grades best suited for machining, while wire is available in material grades suited for cold heading. Although material grades may differ, the important take away is that there are equivalent materials available for headed and machined Solid Pins. Hence, best engineering practices dictate that material specifications on drawings be relatively general if possible

(i.e. carbon steel with hardness rating RC 27-33).

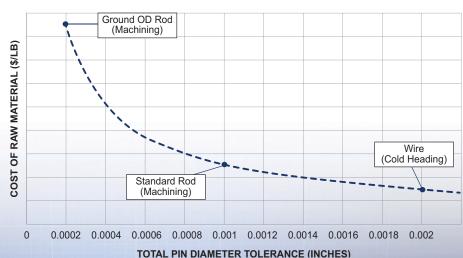
Table 3 shows examples of several common materials for cold heading and machining for reference.

Cost Comparison -Cold Headed vs Machining

Machined Solid Pins are typically about ten times the cost of cold headed Solid Pins. Why are cold headed Solid Pins so much more cost effective?

- Cold heading produces Solid Pins at a rate of about 300 parts per minute (ppm), while machining yields approximately 4 ppm.
- Machining generates scrap. Hence, more raw material is needed to machine a Solid Pin than to cold head the same part. The only scrap generated during cold heading is that which is produced during set up.
- Ground OD rod can cost more than three times as much as standard rod used for machining.

PIN DIAMETER TOLERANCE VS RAW MATERIAL COSTS



GRAPH 1

MAFDA GOLF & SCHOLARSHIP OUTING APPLECROSS COUNTRY CLUB, DOWNINGTOWN, PA



In an effort to make the use of the "6E" and "6e" thread classes easier for manufacturing "before coating" threads with greater allowance I have compiled the tables for those thread classes (right).

ASME B1.13M does however contain tables for the "E" and "e" allowances, where additional sizes not shown in the tables above can be easily calculated. Table 12 shows the "6" positional tolerance, Table 13 shows the external thread "e" allowance, and Appendix F shows the internal thread "E" allowance. The easiest way to achieve the correct calculation is to simply add or subtract the "e" or "E" allowances from the standard 6g or 6H PD sizes. A more fundamental approach using internal threads as an example would be to start with your basic size and add the "E" allowance. This becomes your "LO" or Go pitch diameter. Then you add your "6" allowance to the LO PD to get your "HI" or NoGo pitch diameter. External threads work the same way, only you subtract your "e" allowance rather than add.

Similar values can be found in ISO 965/1, Section 13.4.2, however a 1.32 multiplier is utilized for grade 6 which calculates out to slightly different values, less than .002mm difference which can be considered insignificant.

The final acceptance of threads after coating should be determined by using 6H GO plug gages for internal threads and 6h GO ring gages for external threads. The use of these class gages for final thread acceptance assures that thread interference will not occur during product assembly.

External Threads -6e					
Size	Basic	"e" es	"6" tol	High PD	Lo PD
M5 X 0.8	4.480	-0.060	0.095	4.420	4.325
M6 X 1.0	5.350	-0.060	0.112	5.290	5.178
M8 X 1.0	7.350	-0.060	0.112	7.290	7.178
M8 X 1.25	7.188	-0.063	0.118	7.125	7.007
M10 X 1.0	9.350	-0.060	0.112	9.290	9.178
M10 X 1.25	9.188	-0.063	0.118	9.125	9.007
M10 X 1.5	9.026	-0.067	0.132	8.959	8.827
M12 X 1.25	11.188	-0.063	0.132	11.125	10.993
M12 X 1.5	11.026	-0.067	0.140	10.959	10.819
M12X 1.75	10.863	-0.071	0.150	10.792	10.642
M14 X 1.5	13.026	-0.067	0.140	12.959	12.819
M14 X 2.0	12.701	-0.071	0.160	12.630	12.470
M16 X 1.5	15.026	-0.067	0.140	14.959	14.819
M16 X 2.0	14.701	-0.071	0.160	14.630	14.470
M18 X 1.5	17.026	-0.067	0.140	16.959	16.819
M18 X 2.5	16.376	-0.080	0.170	16.296	16.126
M20 X 1.5	19.026	-0.067	0.140	18.959	18.819
M20 X 2.5	18.376	-0.080	0.170	18.296	18.126
M24 X 2.0	22.701	-0.071	0.170	22.630	22.460
M24 X 3.0	22.051	-0.085	0.200	21.966	21.766
		0000			

Note: Corrected March 7, 2006

Internal Threads 6E					
Size	Basic	"E" es	"6" tol	High PD	Lo PD
M5 X 0.8	4.480	0.060	0.125	4.665	4.540
M6 X 1.0	5.350	0.060	0.150	5.560	5.410
M8 X 1.0	7.350	0.060	0.148	7.558	7.410
M8 X 1.25	7.188	0.063	0.160	7.411	7.251
M10 X 1.0	9.350	0.060	0.150	9.560	9.410
M10 X 1.25	9.188	0.063	0.160	9.411	9.251
M10 X 1.5	9.026	0.067	0.180	9.273	9.093
M12 X 1.25	11.188	0.063	0.180	11.431	11.251
M12 X 1.5	11.026	0.067	0.190	11.283	11.093
M12X 1.75	10.863	0.071	0.200	11.134	10.934
M14 X 1.5	13.026	0.067	0.190	13.283	13.093
M14 X 2.0	12.701	0.071	0.212	12.984	12.772
M16 X 1.5	15.026	0.067	0.190	15.283	15.093
M16 X 2.0	14.701	0.071	0.212	14.984	14.772
M18 X 1.5	17.026	0.067	0.190	17.283	17.093
M18 X 2.5	16.376	0.080	0.224	16.680	16.456
M20 X 1.5	19.026	0.067	0.190	19.283	19.093
M20 X 2.5	18.376	0.080	0.224	18.680	18.456
M24 X 2.0	22.701	0.071	0.224	22.996	22.772
M24 X 3.0	22.051	0.085	0.265	22.401	22.136

SFA SPING CONFERENCE & GOLF OUTING DALLAS, TX - MAY 2-4, 2018



LAURENCE CLAUS THREE THINGS THAT DISTRIBUTORS MUST DO WELL - PART I from page 164

Honesty

In the context of customer service, this is not so much about outwardly lying to your customer (although that is never advisable) but rather being true to your word. One of the biggest frustrations of any customer is to be promised something, prepare for it, and then not have it happen. Again, from personal experience you likely can attest to how frustrating being stood up is. Take for example the repairman that tells you he is going to show up at an appointed time, but ends up coming three hours late. How frustrating when you took work off specifically to accommodate their schedule. In the same way, every time we tell the customer something that isn't exactly correct or give them the expedient but incorrect answer, we open ourselves and our organization up to criticism and shame.

I recall a Quality Engineer I once had working for me. She consistently promised customers things she could not fulfill. Often this would go along with a promise to follow-up. Unfortunately, when she could not fulfill the promised action, she was ashamed to follow-up. This heaped new problems on an already bad situation because now the actions the customer was expecting to happen weren't happening and because we were not filling them in on what was happening, they assumed we also didn't care.

I also recall the story of one of our salesmen. We sold a line of proprietary thread forming screws for plastics. One advantage of the design of this screw was that it exerted less radial stress on the plastic, so that the plastic bosses could be designed smaller. This hapless salesman went around claiming that this revolutionary screw would allow you to reduce the boss size by 100%. Although I'm sure an honest error, engineers don't take too well to such blatantly errant claims and his reputation (and the company's) suffered greatly as a result.

Don't Settle on Good When You Can Offer the Best

Everyone has a story or two of receiving exceptional customer service. In fact, when you receive over the top service, you intrinsically know it and seem to go about on a "high" for a while. No one desires poor customer service. Therefore, we are all programmed to expect good, if not excellent customer service. This is why,

when we receive service that goes beyond our actual expectations, we are truly delighted.

Going back to the example of the car dealer, all of the little extras and comforts that get provided have become sort of expected. Therefore, offering them and doing them well get you in the "good" club but not necessarily the exceptional club.

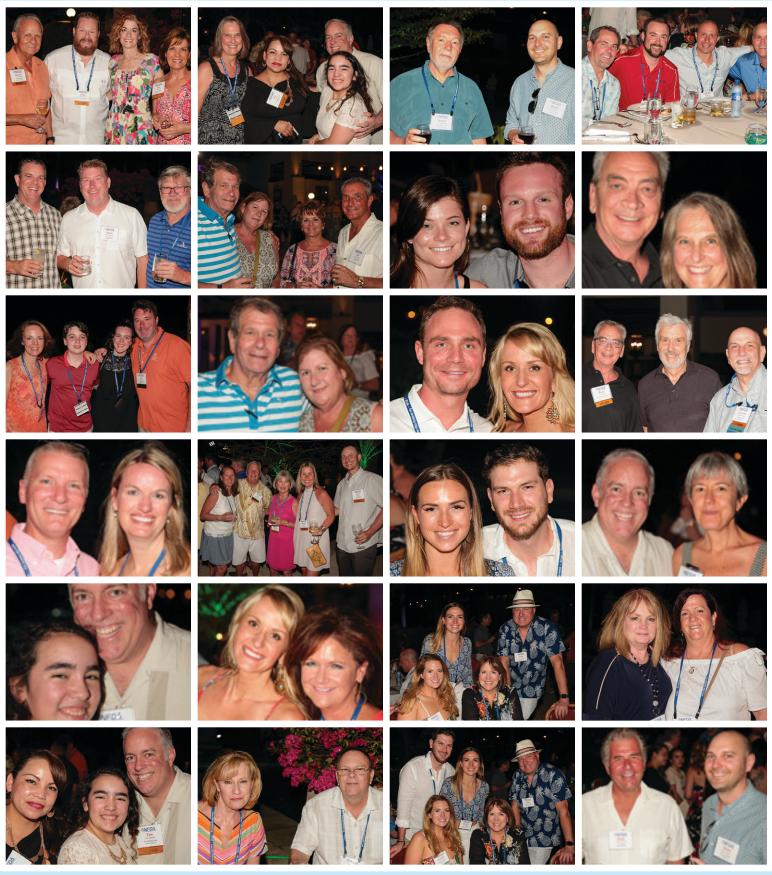
I recall hearing a number of years ago a talk by Patricia Fripp, a customer service expert and business consultant, in which she told the following story. She related that an elderly woman needed to make a withdrawal from one of her bank accounts. She called up the bank and inquired when they were closing. They told her that they would be closing in about 15 minutes, but asked how far away she was. She lived about twenty minutes away. What would the "good" customer service action have been in this case? If you were like me you probably would have said, to stay open another five minutes to allow her time to get to the bank. But that not what they did, they told her to stay put and one of their staff would bring the withdrawal to her. That elevated "good" service into exceptional service. As it turned out, apparently this woman was quite wealthy and this was not her primary bank. After seeing how much they cared about serving her, she moved a much larger stake of her wealth into this bank.

As Patricia Fripp concluded, "Exceptional customer service is very good for business." Do everything within your power to not settle for "good" but to be even better.

Conclusion

Having poor customer service is a short path for disaster. It reflects poorly on your reputation and on your bottom line. To express the sentiment as simply as possible, poor customer service is not affordable or sustainable. Just as organizations should be investing in activities that bring better quality results, so they should also be working to improve customer service. Several important ways they can do this is to train team members to think entrepreneurially, always be honest and not make promises that can't be kept, empower the team, add value, and always strive for something better than "good". Fastener distributors that combine these actions with their own specific actions will find themselves ahead of the competition.

NFDA 50th ANNIVERSARY MEETING & CELEBRATION GUANACASTE, COSTA RICA - MARCH 14-16, 2018 PHOTOS COURTESY OF GREG CHRISTENSEN



more photos on page 188

SEFA SPRING CONFERENCE SUCCESS!! from page 166

The panel was addressed with various questions. When asked about strategies being implemented to assist with increasing logistics costs some plans included going back to rail and less trucking, also consolidating shipments so full containers are being shipped.

When asked about supply issues not experienced in the past it was noted China is changing rapidly due to their aggressive EPA standards. The EPA often shuts down factories, or move and suppliers aren't aware. Some countries do not have the quality of labor that is found in the U.S. resulting in some poor quality parts.

When Nucor was asked how they feel about the steel tariff, Mr. Veech responded that it's not a time to take advantage of customers; they have to service their longterm customers first. Taking care of your customer base is important.

How is quality affected? Some suppliers find quality issues aren't found in China but India is a different story. Some suppliers find that the first two P.O.'s out of some factories in China are great but then the quality slips. While other suppliers agree with this, they have also found that the quality level in China is improving because of the crackdowns.

How are you dealing with longer lead times domestically and from China? While having partnerships with Chinese factories, it is still important to source new ones so lead times won't be affected. Mr. Camp stressed, plan, plan, plan is key for distributors importing. We are too reactionary as an industry. If you know things are coming, you must plan. For the domestic manufacturer, lead times for the long term customers won't be affected; however, others may see longer lead times.

What other issues are there, that we are not aware of? It is beneficial to overbuy when the price is right but still pay attention to expected needs. The disruptions in the supply chain are here to stay. Upper management needs to be involved. For manufacturers the biggest challenge is skilled labor, there is a shortage. Taiwan changed their labor laws stopping overtime, and if they don't abide by the laws, they can be penalized. Also be prepared for E-commerce. Mr. Camp noted: Worry about what you can control. Focus on your customers.

When asked about the proposed steel tariffs Mr. Haggerty believes the tariff is likely to go through. There will be better indicators' in May. When product clears customs is the date to watch for as far as when a tariff goes into effect. Suppliers need to have an understanding on how logistics and brokers operate. Mr. Sulek noted with exchange rates you could try to negotiate.

How can consumers/distributor better prepare for ever-changing issues in our supply chain? Sales and operation planning should be utilized. To sell right, you must buy right. Upper management needs to be involved in purchasing and sales. What we see is the new model. There will be knee jerk reactions and longer lead times. Mr. Veech noted price is not the issue-it's availability. You need to have relations with your suppliers now or you may not be able to get product later. Relations build value and trust. The days of just expecting product to be on the shelf are gone.

When asked if you would hire a millennial with a college degree or an experienced middle age person, answers went from the "brightest-wiling to hustle, to both, to best candidate."

FBI Discusses Cyber Security

Special Agent Darren Mott of the Birmingham FBI addressed SEFA speaking of the increase in Cyber Threats. The first cyber crime was in 1988 but by 2000 there were Ecommerce attacks. In 2002 due to the increased threats and vulnerability there was a need for cyber squads. The DOD can't use thumdrives due to a 2008 hack were thumbdrives were dropped in parking lots. When put into the computers viruses were spread.

Agent Mott warned the more social media/Wi-Fi you are involved in the more susceptible you are to hackers. 90% of computer intrusions start with a spear phishing email.

Be careful what you click on. Clicking bogus emails and sending money overseas will most likely not result in the return of the funds. The key to passwords is the longer the better. The old standard was characters, capitals, symbol, number, but longer is better. It is easy to figure out company emails.



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SEFA SPRING CONFERENCE SUCCESS!! from page 180

When traveling overseas, be aware searches can be done without warrants. Hotel rooms are sometimes searched or cameras set to watch.

Windows users are more of a target for hackers because 80% of computer users use Windows. You should update your computer every time prompted to. Be aware anti virus programs are only 40% safe. You should have a router not just a modem. Routers can be set to allow certain devices. Always use a VPN.

Often the FBI knows of intrusions before the company attacked. Cell phones are the most targeted piece of software., gadgets add vulnerability. Data breaches are getting larger. The average cost to mitigate an intrusion is \$11 million. Companies should invest in Risk Management Framework.

Some key suggestions were: think before you click, use different passwords, update software, back up everything.

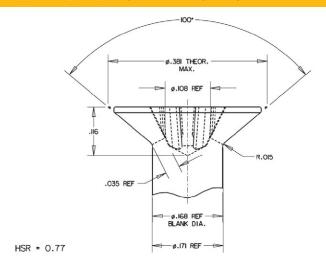
Jack McCall - Closing Speaker

The day closed with motivational humorist Jack McCall sharing his strategies for breaking through the barriers that holds us back, showing how to tap truest sources of motivation and humoring the audience with his insights through story telling. The audience enjoyed Jack's life stories. He reminded attendees that relationships are very important as life takes a lot out of us.

Jack closed with his tips for life: Exercise, take care of yourself physically, Spend time with people who make you feel good/selective association, Be sure to step outside the arena and recharge your batters/ focus part of your mind by freeing another part, Read something inspirational every day, Stay in touch with who you are and where you came from.

While he told many humorist stories, his messages were inspirational.

MICHAEL MOWINS FASTENER HEAD STRENGTH WHITE PAPER from page 172

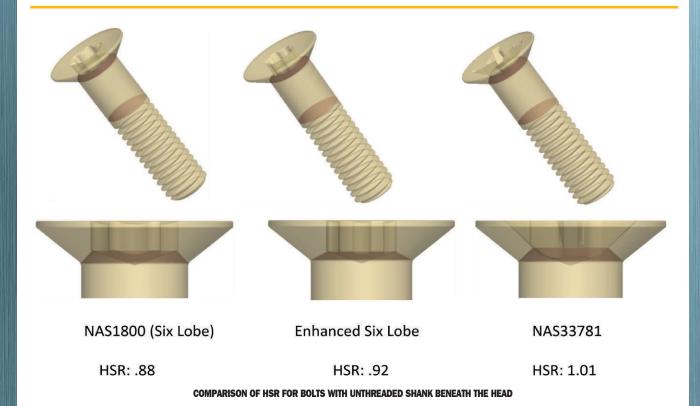


RANGE OF TOTAL RECESS DEPTH: 0.093 MINIMUM TO 0.116 MAXIMUM

Influence of Recess Geometry on Head Strength Ratio

The last factor to consider when analyzing the head strength in the head shank juncture area is the geometry of the recess drive system itself. Cruciform drive systems like Type 1 (PHILLIPS), NAS33781 (TORQ-SET), Type 1A (POZIDRIV), etc. have a defined cruciform shape for most of the recess depth from the top of the head to the bottom of the recess. In calculating the head strength ratio we typically will ignore this shape and use a basic circular cross section based on the outer wing diameter at the closest intersection to the under head transition radius for ease of calculation. Straight walled drive systems like Six Lobe (TORX) and others have a constant outer shape from the top of the fastener head to the tapered bottom of the recess. In these cases the distance from the head transition radius to the closest intersection with the recess shape is still used except that the nearest intersection is often a circular area in the bottom of the recess inside below the plane where the recess outer form has transitioned to a circular cross section.

Fasteners with unthreaded shanks are typically used in higher stress structural applications and in these situations an HSR of 1 or greater is recommended. Ideally the maximum recess depth will be shallow enough to provide a Head Strength Ratio greater than 1 especially if the fastener is in an application that is deemed critical or semi-critical. While the configurations shown above show an HSR below or near 1 at maximum recess depth, if the parts are manufactured with the recess depth closer to the minimum allowed in the part standard the Head Strength Ratio will increase as the recess depth approaches this minimum limit.



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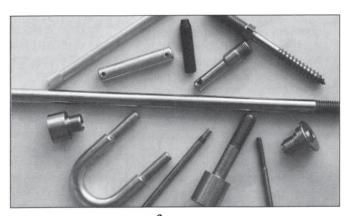
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SPIROL COLD HEADED VS MACHINED SOLID PINS from page 174

TOP VIEW: COLD HEADED PIN VS MACHINED PIN



COLD HEADED PIN



MACHINED PIN

Although machining is more costly than cold heading, setup costs are significantly lower for machining. Companies that standardize on Solid Pin sizes are able to mitigate setup costs so there is a negligible cost impact to customers. However, setup costs can be significant for custom designs, especially at low volumes. Table 4 outlines general differences between cold heading and machining setup.

SETUP COMPARISON New Solid Pin Design				
	Cold Heading	Machining		
Setup time	6 - 12 hrs	2 - 4 hrs		
Tooling costs	~\$5,000	~\$200		

TABLE 4

Case Study

The case study illustrates the differences between cold heading and machining a 3mm OD x 30mm long headed Solid Pin (blank dowel). As highlighted in Table 5, raw material quantity and production rate (ppm) are the major factors for the drastic cost difference between cold heading and machining.

MANUFACTURING COMPARISON 25,000 pcs of 3mm x 30mm Headed Solid Pin				
Manufacturing Method		Cold Heading	Machining	
Parts produced	#	25,000	25,000	
Raw material description	-	Wire	Standard rod	
Raw material needed (weight)	kg	8.6	26.3	
Setup time	hrs	6 - 12	2 - 4	
Total production time	hrs	1.4	104	
Scrap	%	< 1%	65%	
Diameter tolerance	mm	± 0.025mm	± 0.0125mm	
Cost	-		X	

TABLE 5

When to Use a Machined Solid Pin

- Low volume custom parts
- Highly critical alignment applications
- When functional requirements dictate complex pin geometry

When to Use a Cold Headed Solid Pin

- Majority of applications (as most do not require machined tolerances)
- Free fit axles / hinge pins where the pins are slip fit into place

Conclusion

Designers can optimize the performance and total manufactured cost of a joint by understanding the differences between cold headed and machined Solid Pins. Both manufacturing methods produce high quality, consistent parts. However, there are significant cost and capability differences between cold heading and machining. This paper can serve as a reference tool to assist designers with Solid Pin design specifications. However, it's recommended that manufacturers partner with industry experts in joining and assembling to identify the lowest cost solution for their assembly.

For more information visit the Application Engineering portal at www.SPIROL.com.



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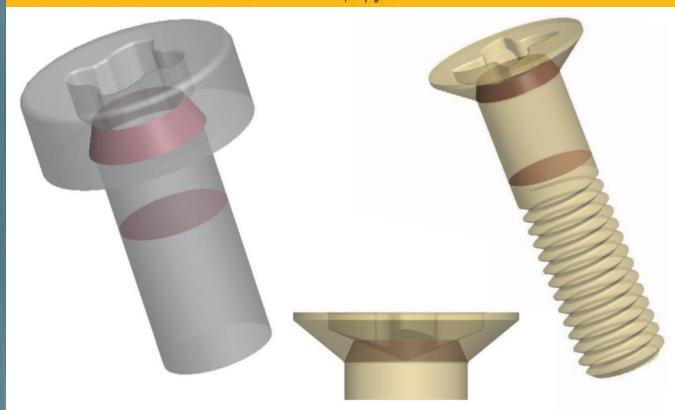
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MICHAEL MOWINS FASTENER HEAD STRENGTH WHITE PAPER from page 182



Fillister Head HSR: 1.4

> AS6305/EN4609 HSR: 1.11

While we have used 100° countersunk aerospace fasteners for our discussion the Head Strength Ratio should be evaluated for any other head configuration (pan head, fillister head, button head, etc.) during the initial design evaluation. While protruding heads like these will often have a higher HSR the move to lighter weight and tighter tolerances has begun to require lower protruding head height designs and the recess depth may not always be considered when head height reductions are done to accommodate tighter clearances.

Higher head strength is achieved with protruding head configurations where the bottom of the recess has significant distance from the head to shank juncture as in the Fillister head shown above. Increases in head strength can also be achieved in thin head designs if a shallow recess can be used (AS6305 MORTORQ spiral drive, NAS33750 Dovetail slot, etc.), however in a bolt application where significant torque is required the drive system should have a very high contact area between the driver and recess to accommodate the high torque required to achieve the needed clamp load.

Conclusions

Recent failures of some fastener designs in tensile testing have highlighted the need for a better understanding of the dynamics of the head to shank juncture area. By developing a set of defined characteristics that can be evaluated to judge the Head Strength Ratio the design engineer can assure that there is sufficient strength in the head to shank area to at least equal the tensile capability of the threaded portion of the fastener.

SFA SPING CONFERENCE & GOLF OUTING DALLAS, TX - MAY 2-4, 2018



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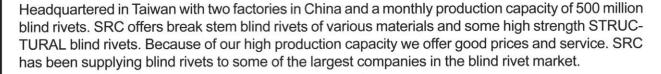
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more photos on page 192

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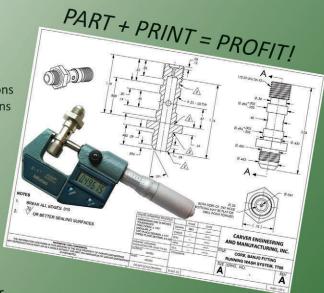
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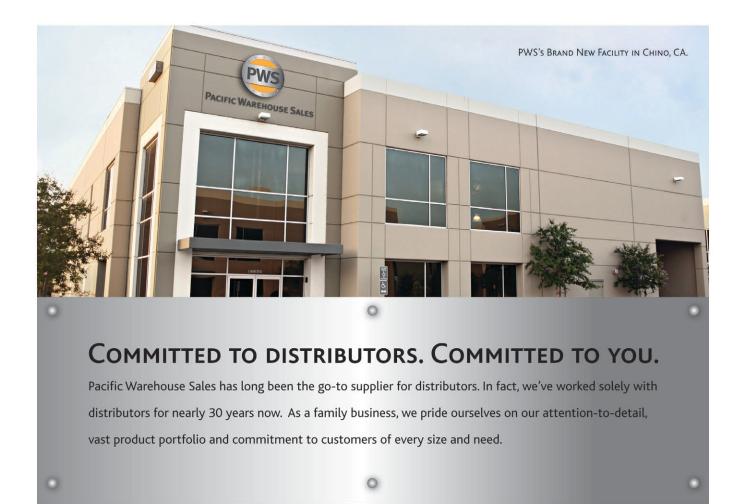
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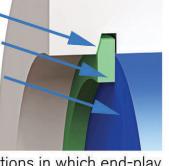
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